

Strategic Orientation and SMEs Performance: The Mediating Role of Halal Business Model Innovation

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ABSTRACT

This study addresses the connections between Halal Business Model Innovation (HBMI), Market Orientation (MO), Entrepreneurial Orientation (EO), and Business Performance (BP) in Indonesian halal-certified food SMEs. Data were obtained from 173 SMEs through purposive sampling and analyzed within a quantitative cross-sectional framework, and Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to conduct the analysis. The results reveal that EO significantly influences both MO and HBMI, while MO demonstrates a strong direct effect on BP. HBMI emerges as a notable direct predictor of Business Performance, underscoring its role in improving firm outcomes. HBMI does not serve as a primary mediator between strategic orientations and performance, whereas MO fully mediates the relationship between EO and BP. These findings imply that although HBMI directly enhances performance, its effectiveness as a transmission mechanism depends on further enabling factors. The study contributes to the body of literature on halal business strategies and provides actionable insights for SME managers and policymakers to reinforce orientation and innovation for greater competitiveness. Future comparative research across diverse national halal market contexts could employ these findings to validate and extend the results.

Keywords: Entrepreneurial Orientation, Market Orientation, Halal Business Model Innovation, Business Performance, Food SMEs

1. INTRODUCTION

SMEs in Indonesia play a pivotal role in driving economic growth, fostering innovation, and creating employment opportunities (Safitri *et al.*, 2022). As the halal economy becomes increasingly globalized, SMEs operating in halal sectors face both opportunities and challenges in sustaining competitiveness while adhering to Islamic principles (Latifah & Haq, 2022). SMEs need digital supply chain solutions to improve business sustainability and market performance as Halal product and service demand rises (Karim *et al.*, 2022). SMEs that build a culture of flexibility and innovation will be better positioned to take advantage of emerging opportunities. This will give them a competitive edge and ensure their viability in an ever-changing marketplace. Strategic orientation is defined as a multidimensional construct that includes Entrepreneurial Orientation, Market Orientation, and Operational Orientation (Abdulrab *et al.*, 2021; Jaaffar, Abd Majid, *et al.*, 2024). EO captures a firm's tendency toward innovation, proactiveness, and risk-taking, all of which drive business growth and competitiveness. (Abdulrab *et al.*, 2021).

MO emphasizes customer-centric strategies, competitor awareness, and value creation, ensuring that SMEs align their offerings with market needs (Habib *et al.*, 2020; Sultoni *et al.*, 2022). Meanwhile, operations orientation focuses on process efficiency, quality management, and cost optimization, all of which are crucial for maintaining Halal integrity in business operations (Ramadhani & Mahomed, 2026; Shou *et al.*, 2019; Syamsurizal *et al.*, 2026). Many studies have explored the influence of these orientations on BP, but few have examined

their aggregate impact on Halal-oriented SMEs. Efficiency streamlines operations without sacrificing Halal protocols, preserving integrity. Cross-contamination or delays between Halal and non-Halal source materials are prevented. A comprehensive control system is necessary to guarantee that every operational stage adheres to standards, which is why quality management can be a critical pillar. Maximising expenses or eliminating waste without cutting other budgets supports Halal integrity. This comprehensive approach boosts product competitiveness without sacrificing Sharia.

The integration of these strategic orientations is especially significant from the standpoint of operations and supply chain management (OSCM). The capacity for business model innovation and the operations orientation of a firm are the direct determinants of the end-to-end process integrity, Shariah-compliant sourcing, and rigorous traceability that are necessary for halal supply chain management (Shou *et al.*, 2019). The Halal Business Model Innovation (HBMI) framework looked at in this study is pertinent to OSCM since it includes halal-compliant value creation, process efficiency, and supply chain transparency as key parts of innovation. Moreover, the phenomenon of EO among Indonesian halal food SMEs poses a unique empirical difficulty. Indonesia's halal food industry, which is valued at over USD 135 billion and has the largest share of the global halal economy, has experienced rapid expansion.

However, a substantial number of halal food SME proprietors continue to operate in a reactive manner. Numerous entities comply with certification requirements without actively seeking innovation, changing their supply chains, or implementing market expansion strategies (Safitri *et al.*, 2022). Obstacles such as restricted access to financing for halal-compliant raw materials, insufficient digital literacy, and inadequate institutional support hinder risk-taking and proactivity among Indonesian halal SME businesses. In a highly regulated halal supply chain environment, the disparity between entrepreneurial potential and actual behaviour emphasises the necessity of empirically examining the interaction between EO, MO, and HBMI to drive BP in this context.

Indonesia has 64 million SMEs and is the largest Muslim-majority nation. Their contribution to the national GDP is greater than sixty percent. Empirically, this provides a highly relevant empirical context for this research. Food SMEs in Indonesia are increasingly required to obtain halal certification under the Product Assurance Law (Law No. 33 of 2014), yet many struggle to align their entrepreneurial and marketing strategies with halal compliance requirements. This regulatory and market environment creates unique conditions where EO and MO must be channeled through halal-specific business model innovation to generate performance outcomes. Empirically, the EO of SME entrepreneurs in the Indonesian halal industry presents a distinctive and pressing phenomenon. A significant proportion of halal food SME owners in Indonesia continue to operate reactively, responding to certification mandates without proactively pursuing innovation or market expansion strategies (Safitri *et al.*, 2022). The global halal food sector is expected to exceed USD 2 trillion by 2030, yet

many Indonesian SME entrepreneurs have yet to internalise EO as a driver of halal business model transformation. This gap between market opportunity and entrepreneurial behavior within the halal sector represents a critical empirical challenge that this study seeks to address. SMEs have unique characteristics that differ from large corporations. For example, with limited resources, SMEs face challenges in integrating halal into their supply chains (Firmansyah *et al.*, 2025). SMEs in developing countries typically lack formal strategic planning systems and must rely more heavily on behavioral orientations to navigate the complex requirements of the halal market. Understanding how SMEs in this context can leverage HBMI as a strategic mechanism is both theoretically important and practically urgent.

SMEs can strategically leverage the role of HBMI as a mediator. HBMI is the reengineering and adaptation of business models to meet Halal requirements through innovation for better value delivery. This will not only ensure that SMEs meet Halal standards but also create more market opportunities for them. Adopting HBMI can help companies stand out in a competitive landscape, driving customer loyalty and sustainable growth (Moradi *et al.*, 2021; T. Yang *et al.*, 2024). This requires integrating ethical sourcing practices, halal certification procedures, sustainable production approaches, and digital technologies to maintain compliance and strengthen competitiveness. Given the evolving landscape of the Halal economy, SMEs that embrace HBMI may achieve superior market positioning and operational resilience (Geissdoerfer *et al.*, 2018; Lee *et al.*, 2019; Nasyiah *et al.*, 2026; Usmanova *et al.*, 2022). However, the extent to which HBMI mediates the relationship between strategic orientation and SMEs' performance remains an empirical question that necessitates further investigation. This study examines how strategic orientation influences the performance of small and medium-sized enterprises (SMEs), with HBMI serving as the mediating variable. By this quantitative study, both the direct and indirect impacts of EO and MO on the performance of SMEs will be investigated to provide an explanation for how HBMI enhances business outcomes. The research on strategic management and Halal business practices will benefit from this study, which will also offer useful guidance to SMEs looking to participate in the expanding Halal market.

There are fundamental differences between BMI and HBMI that warrant explicit theoretical clarification. The mainstream management literature defines BMI as restructuring value creation, delivery, and capture to gain competitive advantage (Li, 2025; Teece, 2010; Zott *et al.*, 2011). In a religiously neutral context, BMI prioritizes efficiency gains, digitalization, or sustainability transitions without imposing normative ethical constraints on how those reconfigurations are achieved. HBMI, by contrast, represents a fundamentally distinct innovation pathway.

The results of the halal economic literature search, HBMI specifically integrates Islamic ethical principles, Sharia compliance requirements, and halal certification standards into every dimension of its business model. This

starts from procurement and processing to distribution and customer engagement (Moradi *et al.*, 2021; Yang *et al.*, 2022). As Trapp (2014) and Njeru *et al.* (2025) establishes, effective business model innovation in value-laden industries must embed domain-specific normative criteria into the core logic of value creation. Within the halal framework, these criteria are determined by permissibility standards and the institutional structures of certification authorities, including MUI in Indonesia and JAKIM in Malaysia. As a result, HBMI engages with a distinctive regulatory environment and trust dynamics across both Muslim-majority and minority markets, in which the credibility of certification and adherence to Sharia principles directly shape consumer confidence and determine market accessibility (Isa *et al.*, 2026; Wilson, 2012). The distinction between BMI and HBMI is fundamental and affects how innovation outputs affect corporate success. This distinction is consistently maintained across the Literature Review, Methodology, and Discussion sections of the study. The remainder of the paper is organized as follows: Section 2 presents the literature review and outlines the development of hypotheses. Section 3 delineates the research technique. Findings and discussion are in Section 4. The study's conclusions, practical consequences, and limitations are in Section 5.

2. LITERATURE REVIEW

2.1 Relationship Between Entrepreneurial Orientation and Market Orientation

EO together with MO represent key strategic perspectives that shape and impact BP. MO emphasises consumer demands, competitor monitoring, and market change, while EO emphasises risk-taking, innovation, and proactive market capturing (Abdulrab *et al.*, 2021; Arshad *et al.*, 2024). Companies with high EO use MO to align their innovations with market demand, hence these constructs are complementary in general management literature (Baker & Sinkula, 2009; Bima *et al.*, 2025). Organizations with a high level of EO are typically innovative and proactive in launching new products or services. Yet, in the absence of robust MO, such innovations risk misalignment with customer expectations and may suffer from weak market positioning. Conversely, a highly market-oriented firm without entrepreneurial tendencies may respond well to customer demands but lack the initiative to create breakthrough innovations. While established this EO–MO complementarity in the context of general SMEs, their framework does not account for the regulatory and ethical constraints specific to halal-based business environments (Baker & Sinkula, 2009).

This study extends their argument by contending that in halal food SMEs, the EO–MO relationship is not merely strategic but also normatively bounded: The proactive and risk-taking attitude driven by EO must be channeled through a MO that simultaneously responds to consumer halal preferences, competitors' halal positions, and MUI certification requirements. This dual constraint, including market responsiveness and Sharia compliance, adds a layer of complexity to the EO–MO dynamic that has not been

addressed by previous general frameworks. Moreover, unlike Abdulrab *et al.* (2021), who examined this relationship in the context of Saudi SMEs with a broader strategic orientation construct, this study isolates the EO–MO dyad within the specific institutional and cultural context of Indonesian halal food SMEs, where certification pressure and consumer religiosity introduce boundary conditions do not present in their sample. Thus, it is feasible to formulate that:

H1: There is a positive relationship between EO and MO in halal food SMEs.

2.2 Relationship Between Entrepreneurial Orientation and Halal Business Model Innovation

EO is pivotal in influencing HBMI, as it drives innovation, encourages proactiveness, and supports risk-taking within halal-oriented enterprises (Amin *et al.*, 2016; Becherer & Halstead, 2004; Khammadee, P. 2022; Luiz dos Santos & Vieira Marinho, 2018). EO reflects a company's capacity to innovate, pursue new market opportunities, and engage in strategic risk-taking - capabilities that are vital for enterprises in the halal sector. Within halal business settings, innovation extends beyond product creation to encompass adherence to Shariah principles, the cultivation of consumer trust, and the implementation of ethical business practices. Strong EO firms develop new halal-certified products, embrace advanced halal supply chain processes, and use technology to compete.

Supply chain issues include fragmented collaboration, market access, and inventory coordination plague these SMEs. Such limits hinder sustainable corporate performance, especially in unpredictable times. These concerns demand operational improvements and durable, well-governed supply chains (Kaluku *et al.*, 2026). However, without a structured innovation model such HBMI, these efforts may lack direction and alignment with consumer expectations. HBMI ensures that EO-driven innovations align with market demand, regulatory frameworks, and religious values. Thus, integrating EO with HBMI enhances competitive advantage, ensuring that halal businesses remain innovative, sustainable, and compliant with industry standards. In consideration of this insight, the subsequent hypothesis is posited:

H2: EO has a positive impact on HBMI in halal food SMEs.

2.3 Relationship Between Market Orientation and Halal Business Model Innovation

Previous studies have positioned MO as an antecedent of innovation due to its capability to capture market signals and translate them into strategic responses (Narver & Slater, 1990). Within the halal industry context, however, consumer preferences are not solely shaped by conventional market considerations, but are also influenced by religious values, trust in halal certification authorities, and community sensitivity toward sharia compliance violations. Consequently, halal-oriented firms are required not only to understand customer needs and market trends, but also to ensure compliance with halal standards throughout their business processes (Sultoni *et al.*, 2022; Yang *et al.*, 2022). In halal markets, strong market orientation enables firms to

develop customer-driven value propositions through product quality improvement, ethical sourcing, halal-compliant logistics, and continuous innovation. Murillo-Oviedo *et al.* (2019) conceptualized MO as a long-term strategic capability involving the acquisition and utilization of market intelligence. This perspective is particularly relevant in halal business environments, where firms must continuously align business practices with evolving consumer expectations and regulatory requirements.

Empirical evidence also suggests that MO contributes to halal innovation development. Sultoni *et al.* (2022) argued that market-oriented firms are more likely to develop halal business innovations by adapting products and services to increasingly segmented Muslim consumer demands. However, the study did not clearly distinguish between demand-driven innovation and innovation triggered by regulatory compliance pressures, despite both representing fundamentally different strategic mechanisms for halal SMEs. Arshad *et al.* (2024) further demonstrated that interfunctional coordination within MO plays a more critical role in fostering halal innovation than competitor intelligence alone. This finding is theoretically reasonable because halal business innovation requires cross-functional alignment across procurement, production, storage, and distribution activities, all of which must comply with sharia principles.

Despite these contributions, an important gap remains unresolved in the literature. Most prior studies have examined MO as a predictor of product or process innovation rather than Business Model Innovation in a holistic sense. In contrast, HBMI, as conceptualized in this study, involves the reconfiguration of value propositions, value creation mechanisms, and operational architectures grounded in halal principles. Recent evidence from Indonesian halal food SMEs indicates that strong market sensing capabilities may encourage more radical business model transformation, particularly when combined with external pressures such as changes in halal certification regulations (Susiang *et al.*, 2026). This issue has become increasingly relevant following the implementation of Indonesia's Halal Product Assurance Law. Accordingly, this study seeks to address whether MO, when operationalized within halal food SMEs characterized by resource limitations and distinctive compliance pressures, consistently drives measurable HBMI. Based on these arguments, the following hypothesis is proposed:

H3: MO positively influences HBMI in halal food SMEs.

2.4 Relationship Between Market Orientation and Business Performance

MO is widely acknowledged as a key determinant of organizational performance; however, within halal SMEs its pathways of influence are more intricate compared to those observed in conventional business settings. Narver & Slater (1990) emphasized three main dimensions of MO (customer orientation, competitor orientation, and interfunctional coordination), which in the halal ecosystem should be expanded to include the dimension of Sharia compliance. Kohli & Jaworski (1990) highlighted the relevance of market

intelligence processes in halal SMEs, which rely on community networks, religious authorities, and informal mechanisms as sources of information, rather than simply formal surveys.

The findings of Al-Zubaidi *et al.* (2025) confirms that MO enhances SME performance, with innovation capability acting as a mediating factor. This supports the study's assertion that MO operates not merely as a market strategy but also as a mechanism reinforcing HBMI. However, most previous studies still operate within a secular framework and have not integrated Islamic values as independent explanatory variables. Akbar & Rohman (2023) and Amer (2024) show that halal research tends to focus on certification as a single variable, while the interaction between halal certification as an organizational value system and halal commitment has not been widely explored.

Furthermore, research by Kristanto & Kurniawati (2025) in Indonesia confirms that halal supply chain resilience and certification contribute to the financial performance of SMEs, strengthening the argument that halal- oriented halal certification can improve performance through operational dimensions and consumer trust. Findings from the literature review reinforce the hypothesis that halal certification exerts a positive impact on BP within halal SMEs. This relationship extends beyond a linear form and is inherently multidimensional, incorporating customer orientation, cross- functional collaboration, and Shariah compliance as distinguishing elements when contrasted with conventional business halal certification models.

Existing literature has not simultaneously tested MO as a multidimensional Narver– Slater construct within a unified structural framework that incorporates halal mechanisms and SME performance. Most previous studies operate within a secular framework, thus treating Islamic value dimensions solely as contextual background, rather than as independent explanatory variables. Within the halal SME context, this gap is substantial since MO covers not only customer orientation, competitor intelligence, and interfunctional coordination, but also intersects with Shariah compliance and the credibility of halal certification, both of which are pivotal in shaping consumer trust.

Theoretically, this study contributes by integrating MO with halal mechanisms into a structural model, enabling analysis of the link between MO and BP across financial and non-financial dimensions. On the empirical side, the research fills a literature gap by focusing on the Indonesian setting after the enforcement of BPJPH regulations, where halal SMEs encounter compliance challenges alongside substantial market prospects. Thus, this study broadens the understanding of MO within a halal framework and provides empirical evidence that MO can function as an organizational value system that drives HBMI and improves SME performance. Based on the literature synthesis and identification of these gaps, the following hypotheses are proposed to build an integrated structural model.

H4: Market Orientation (MO) positively influences Business Performance (BP) in halal food SMEs.

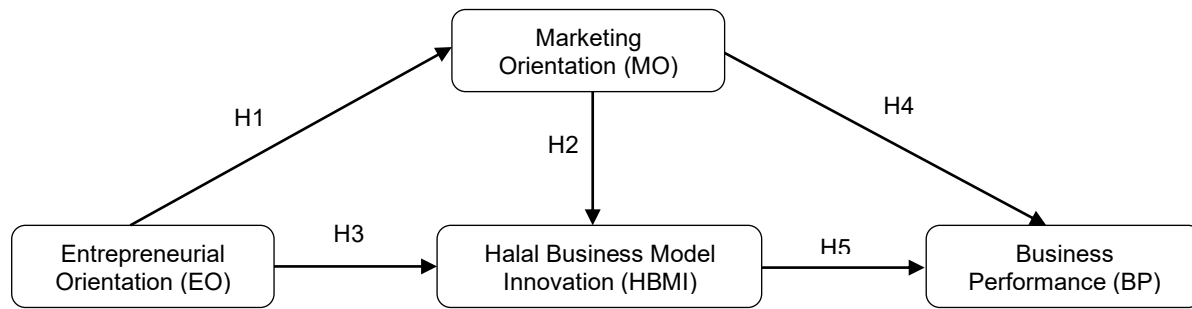


Figure 1 Conceptual Framework

2.5 Relationship Between Halal Business Model Innovation & Business Performance

HBMI substantially improves BP through product differentiation, consumer trust, and market competitiveness (Mahbubi, 2023; Rahman, 2022). Businesses that implement HBMI place a strong emphasis on the development of halal-certified products, ethical sourcing, and shariah-compliant procedures to meet the increasing demand for halal products and services (Deku *et al.*, 2023; Marianti *et al.*, 2022).

In regions where halal certification is a critical purchasing factor, the implementation of HBMI can result in enhanced brand reputation, consumer loyalty, and market expansion. Businesses can enhance operational efficiency, reduce regulatory risks, and delve into niche markets by aligning innovation with halal principles. Moreover, HBMI fosters sustainable business growth by encouraging process improvements, supply chain transparency, and compliance with halal standards. These factors contribute to higher profitability, increased consumer confidence, and a stronger competitive position, making HBMI a crucial driver of long-term BP in the halal industry.

Recent empirical studies further strengthen this relationship. Deku *et al.* (2023) demonstrated through a survey of 432 halal food SME managers in Ghana that entrepreneurial marketing innovation has a positive and significant impact on SME performance, including production and financial performance. This finding provides important cross-context validation of the HBMI-performance relationship outside of Muslim-majority countries. Similarly, Jaaffar *et al.* (2024) using PLS-SEM with 140 halal SMEs from the energy-intensive Malaysian sector, found that innovative behavior directly and significantly improves performance, which in turn generates competitive advantage. These findings collectively confirm that halal-oriented innovation is not limited to compliance but is a true driver of market differentiation and superior business outcomes. Furthermore, Salaheldeen & Battour (2024) demonstrated that innovation capability in the halal industry positively drives sustainable innovation and long-term performance, reinforcing the strategic importance of developing HBMI as an institutional capability rather than an ad hoc compliance response.

Specifically in the Indonesian context, Kristanto & Kurniawati (2025) found that halal supply chain resilience and certification positively impact the financial performance of frozen food MSMEs, underscoring the relevance of the performance dimensions of halal business models in the domestic MSME landscape. Furthermore, Yunus and Rosli

(2025) who studied halal MSMEs in Singapore, found that MO significantly and positively influenced MSME performance. However, strategic orientation alone cannot align with the findings of this study and highlights the important mediating role of market-driven behavior in translating strategic intentions into improved performance.

Trapp (2014) introduced a business innovation model that emphasizes key dimensions such as value creation, process efficiency, MO, and strategic flexibility. While this model provides a comprehensive framework for business innovation, it does not account for ethical and religious considerations that influence decision-making in specific markets, such as the halal industry. In response to the growing demand for halal-compliant business practices, this study extends Trapp's model by integrating Halal Business Innovation. The inclusion of halal principles ensures that innovation aligns with Islamic values, particularly in industries such as food, pharmaceuticals, cosmetics, and finance.

This study extends the framework by introducing four core dimensions of Halal Business Innovation. The first, Halal Value Creation, highlights the generation of value in compliance with Shariah principles, including the use of halal-certified inputs and ethical labor practices. The second, Halal Process Efficiency, emphasizes halal-compliant supply chain management that guarantees transparency and traceability from sourcing through production. The third, Halal MO, underscores the importance of understanding consumer preferences across Muslim-majority and minority contexts, with attention to religious sensitivities and certification demands. Finally, Halal Strategic Flexibility stresses adaptability while aligning with regional certification authorities such as JAKIM in Malaysia, MUI in Indonesia, and ESMA in the UAE. By embedding halal-specific attributes into Trapp's model, this research proposes an innovative framework for enterprises competing in the global halal market. This adaptation contributes to both theoretical development and practical business strategies, ensuring that innovation aligns with religious, ethical, and market-driven considerations. Considering the relationship described above, we hypothesize that:

H5: HBMI positively influences BP in halal food SMEs.

H6: MO mediates the relationship between EO and BP in halal food SMEs.

H7: HBMI mediates the relationship between MO and BP in halal food SMEs.

H8: ME and HBMI sequentially mediate the relationship between EO and BP in halal food SMEs.

Based on the eight hypotheses developed above, the conceptual framework of this study is presented in Figure 1. The framework posits EO as the primary antecedent that drives both MO and HBMI. MO in turn influences both HBMI and BP directly, while HBMI serves as a mediating mechanism through which EO and MO affect BP. This conceptual model also includes direct mediation paths through which EO affects BP via MO and via the chain EO-MO-HBMI-BP. This framework serves as the theoretical foundation for instrument development, hypothesis testing, and result interpretation throughout the study.

3. METHODOLOGY

This research adopts a quantitative design to investigate the influence of strategic orientation on SME performance, positioning HBMI as a mediating construct. Before the primary data collection, a pilot test involving 30 managers of halal-certified food SMEs was carried out to evaluate the psychometric robustness of the measurement instrument. Expert validity was established through a structured review by three academics specialising in halal marketing and strategic management, who evaluated each item for content relevance and construct alignment.

A survey-based cross-sectional study was conducted to collect empirical data from food SMEs engaged in Halal-certified businesses. Purposive sampling was adopted in this study for three interrelated reasons. First, from a theoretical matching perspective, the constructs under investigation are inherently specific to firms that actively operate within the halal certification ecosystem. Including non-certified SMEs would introduce construct-irrelevant variance and undermine the theoretical integrity of the model (Sekaran, 2014). Second, from a practical access standpoint, no comprehensive and publicly accessible registry of halal-certified food SMEs existed in the study region at the time of data collection, making probability-based random sampling operationally infeasible.

Purposive sampling allowed systematic identification of eligible respondents through official MUI certification records and the local Department of Industry and Trade database, ensuring that all selected units genuinely possessed the characteristics required to respond meaningfully to the study instruments (Creswell *et al.*, 2014). Third, from a methodological standpoint, PLS-SEM does not require large probabilistic samples; rather, it performs robustly with theoretically informed, criterion-based samples, provided that the minimum sample size threshold is met, and the sample adequately represents the diversity of the target population (Hair *et al.*, 2019).

The sample of 173 SMEs fulfils these requirements, ensuring representation from various business scales and levels of Halal compliance, and exceeds the minimum threshold recommended for the complexity of the structural model tested. The sample size aligns with PLS-SEM (Partial Least Squares Structural Equation Modeling) requirements, ensuring robust statistical power (Hair & Alamer, 2022; Hair *et al.*, 2019). Data was acquired from SME owners and managers using structured surveys. The questionnaire comprises verified multi-item scores derived from prior investigations, assessed using a five-point Likert scale.

Food SMEs with active halal certification from the Indonesian Ulema Council (MUI) and registration with the local Department of Industry and Trade in the study region are the sample frame. This study was conducted exclusively in Palu City, the capital of Central Sulawesi Province, Indonesia. The geographic scope was intentionally limited to a single city to ensure contextual homogeneity in terms of regulatory environment, local market conditions, and institutional access to MUI halal certification services. The total eligible population consisted of approximately 320 halal-certified food SMEs that were registered with the Palu City Department of Industry and Trade and held active MUI certification at the time of data collection. This population figure was verified through official records obtained from the local certification authority. From this population, purposive sampling was applied based on three eligibility criteria: (1) possession of active MUI halal certification, (2) a minimum of two years in operation, and (3) direct engagement in food production or processing (excluding traders and distributors). The qualifying SMEs received 220 surveys, 187 of which were returned, and 173 were viable for analysis after deleting incomplete replies, yielding a 78.6% useable response rate.

The demographic profile of respondents is presented in Table 1. As shown, respondents' range across micro (38%), small (43%), and medium (19%) enterprise categories, reflecting diverse organizational scales within the halal food SME ecosystem. Regarding business age, approximately 41% of respondents had been operating for 2–5 years, 36% for 6–10 years, and 23% for more than 10 years. All respondents held active MUI halal certification at the time of survey administration, confirming alignment with the study's sample criteria.

Data analysis employed the PLS-SEM technique using SmartPLS 4. The procedure was executed in two stages: first, the measurement model was assessed, focusing on discriminant validity through the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT), as well as reliability and convergent validity via Cronbach's alpha, Composite Reliability, and Average Variance Extracted (AVE). The second stage involved evaluating the structural model, where path coefficients and their significance were tested using bootstrapping with 5,000 resamples. Model fit was further examined through R^2 to capture explanatory power and Q^2 to assess predictive relevance. Following the guidelines of Hair *et al.* (2022), indirect (mediation) effects were analyzed using bootstrapped confidence intervals and p-values with 5,000 resamples. This methodological design provides a rigorous test of the proposed relationships and substantiates the mediating role of HBMI in linking strategic orientation to SME performance.

Table 2 presents the operationalization of the research variables used to measure latent constructs within the structural model, drawing upon empirically validated literature. The research instrument was developed using a multidimensional approach to ensure comprehensive theoretical coverage. The exclusion of several indicators was based on the preliminary pilot study to ensure the final instrument maintained high reliability and validity, thereby minimizing noise in the subsequent path analysis. Reliability was assessed using Cronbach's alpha and item-to-total

Table 1 Demographic Profile of Respondents

Category	Frequency (n)	Percentage (%)
Enterprise Size	66	38% (Micro)
	74	43% (Small)
	33	19% (Medium)
Business Age	71	41% (2–5 years)
	62	36% (6–10 years)
	40	23% (>10 years)
Halal Certification	173	100% (Active MUI)

Table 2 Research Variable Indicators

Variable	Indicators	Sources
Entrepreneurial Orientation (EO)	Risk-taking Propensity (EO1)	(Pulka <i>et al.</i> , 2021); (Viana <i>et al.</i> , 2018)
	Proactiveness (EO2)	
	Innovativeness (EO3)	
Market Orientation (MO)	Customer Orientation (MO1)	(Aziz & Yassin, 2010); (Becherer <i>et al.</i> , 2001); (Khammadee, P. 2022)
	Competitor Orientation (MO2)	
	Inter-functional coordination (MO3)	
	Cost control (MO4)	
	Quality management (MO5)	
Halal Business Model Innovation (HBMI)	Company Value Proposition (HBMI1)	(Trapp, 2014); (Njeru <i>et al.</i> , 2025)
	Corporate Value Creation (HBMI2)	
Business Performance (BP)	Financial performance (BP1)	(Kaplan & Norton, 1992); (Roxas <i>et al.</i> , 2017); (Salahuddin <i>et al.</i> , 2019)
	Market performance (BP2)	
	Operational performance (BP3)	

correlations, resulting in the removal of four indicators. EO3 (innovativeness) was excluded due to conceptual overlap with EO1 and EO2 in the halal business context, where innovation is constrained by Sharia compliance rather than representing a distinct behavioral dimension. MO4 (cost control) and MO5 (quality management) were removed because respondents interpreted them as operational rather than market-oriented constructs, compromising discriminant validity. BP3 (Operational Performance) was excluded due to a low item-to-total correlation ($r < 0.30$), indicating insufficient internal consistency. These exclusions are consistent with the item refinement criteria of Hair *et al.* (2019), and the final instrument retained only indicators meeting the minimum outer loading threshold of 0.70 in the subsequent PLS-SEM analysis.

4. RESULTS

Table 3 reports the assessment of the measurement model, covering convergent validity, internal consistency reliability, and checks for multicollinearity. The findings show that all retained indicators display outer loadings exceeding the recommended benchmark of 0.70, thereby affirming that each indicator sufficiently reflects its corresponding latent construct. The highest loading was

observed for HBMI2 (0.940), while the lowest was found for EO1 (0.876), suggesting that all indicators contribute substantially to their corresponding constructs. Convergent validity was further established through the Average Variance Extracted (AVE) results show that all constructs surpass the recommended cut-off of 0.50. The AVE values, ranging between 0.789 and 0.851, demonstrate that each construct accounts for more than half of the variance in its indicators, thus meeting the convergent validity criterion in PLS-SEM evaluation.

Internal consistency reliability was assessed using Cronbach's Alpha and Composite Reliability (ρ_a). All Cronbach's Alpha values exceeded the minimum threshold of 0.70, ranging from 0.733 for EO to 0.904 for Marketing Orientation. Similarly, all Composite Reliability scores exceeded the recommended threshold of 0.70, confirming satisfactory internal consistency across all constructs. Multicollinearity was assessed using the Variance Inflation Factor (VIF), with results showing all values below the critical limit of 5.0, ranging between 1.502 and 3.132. The highest VIF, observed for indicator MO1 (3.132), remained within acceptable bounds. These outcomes verify the absence of notable multicollinearity concerns, supporting the adequacy of the measurement model for subsequent

Table 3 Evaluation of the Outer Measurement Model & VIF for Multicollinearity

Instrument Measurement Items	Outer Loading	Cronbach's Alpha	Composite Reliability (rho_a)	Average Variance Extracted (AVE)	Variance Inflation Factor (VIF)
Business Performance (BP)		0.804	0.805	0.836	
BP 1	0.909				1.822
BP 2	0.919				1.822
Entrepreneurial Orientation (EO)		0.733	0.738	0.789	
EO 1	0.876				1.502
EO 2	0.900				1.502
Halal Business Model Innovation (HBMI)		0.827	0.857	0.851	
HBMI 1	0.905				1.992
HBMI 2	0.940				1.992
Marketing Orientation (MO)		0.904	0.911	0.839	
MO 1	0.929				3.132
MO 2	0.920				2.925
MO 3	0.899				2.722

Table 4 Cross Loadings

	Business Performance	Entrepreneurial Orientation	Halal Business Model Innovation	Marketing Orientation
BP1	0.909	0.581	0.226	0.484
BP2	0.919	0.565	0.309	0.491
EO1	0.560	0.876	0.364	0.542
EO2	0.554	0.900	0.409	0.599
HBMI1	0.256	0.342	0.905	0.248
HBMI2	0.284	0.452	0.940	0.261
MO1	0.457	0.668	0.292	0.929
MO2	0.492	0.610	0.279	0.920
MO3	0.525	0.474	0.176	0.899

structural analysis. Discriminant validity was further examined through cross-loading analysis, and as presented in Table 4, each indicator loaded more strongly on its designated construct than on alternative constructs, thereby meeting the recommended cross-loading criterion in PLS-SEM evaluation (Hair *et al.*, 2022). The distinct separation between indicator loadings and cross-loadings offers empirical confirmation that each construct represents a unique conceptual domain and remains adequately differentiated from the others in the model. As a result, the measurement model evidences satisfactory discriminant validity.

As presented in Table 5, the square root of the Average Variance Extracted (AVE) for each latent construct exceeded its correlations with other constructs, thereby satisfying the Fornell–Larcker criterion and indicating that each construct shares greater variance with its own indicators than with other constructs in the model. Furthermore, all HTMT values were below the recommended threshold of 0.85 Hair *et al.* (2022), confirming the absence of substantial construct

overlap and supporting adequate discriminant validity among the latent variables. Collectively, these findings demonstrate that the measurement model satisfies the recommended discriminant validity requirements and is therefore suitable for subsequent structural model evaluation.

Table 6 shows saturated and estimated model fit indices. SRMR values are below the 0.08 threshold, signifying an acceptable model fit. A respectable degree of model accuracy is suggested by the geodesic distance (d_G) and squared Euclidean distance (d_{ULS}). Model complexity is shown by the chi-square values, which show a little rise in the estimated model. The Normed Fit Index (NFI) values indicate a moderate model fit, albeit marginally below the optimal threshold of 0.9. The results indicate that the model exhibits an acceptable fit for structural evaluation.

The hypothesis testing results presented in Table 7 indicate that six out of the eight proposed hypotheses were empirically supported. EO was found to exert positive and significant effects on both MO ($\beta=0.643$, $p<0.001$) and

Table 5 Inter-Construct Correlations, the Square Root of AVE, and HTMT Results

Fornell-Larcker	Criterion				HTMT Results		
	1	2	3	4	1	2	3
Business Performance (BP)	0.914						
Entrepreneurial Orientation (EO)	0.627	0.888			0.817		
Halal Business Model Innovation (HBMI)	0.294	0.436	0.923		0.357	0.551	
Marketing Orientation (MO)	0.533	0.643	0.276	0.916	0.629	0.781	0.314

Table 6 Model Fit

	Saturated Model	Estimated Model
SRMR	0.062	0.086
d_ULS	0.175	0.331
d_G	0.239	0.286
Chi-square	258.207	283.873
NFI	0.716	0.688

Table 7 Hypothesis Test Results

Hypothesis	Structural Relationship	Beta β	(T-Value)	p (Value)	Results
H1	EO → MO	0.643	12.603	0.000	Accepted
H2	MO → HBMI	-0.008	0.092	0.926	Not Accepted
H3	EO → HBMI	0.442	5.559	0.000	Accepted
H4	MO → BP	0.490	8.975	0.000	Accepted
H5	HBMI → BP	0.159	2.717	0.007	Accepted
H6	EO → MO → BP	0.315	5.801	0.000	Accepted
H7	EO → HBMI → BP	0.070	2.067	0.039	Accepted
H8	EO → MO → HBMI → BP	-0.001	0.086	0.931	Not Accepted

Halal Business Model Innovation (HBMI) ($\beta=0.442$, $p<0.001$). In addition, both MO and HBMI demonstrated significant positive effects on BP, confirming their strategic roles in enhancing organizational performance within the halal business context.

However, H2, which proposed a positive relationship between MO and HBMI, was not supported ($\beta=-0.008$, $p>0.05$). This finding suggests that market-oriented practices do not necessarily translate into halal business model innovation within the observed firms. Similarly, H8, which proposed a sequential mediation pathway from EO → MO → HBMI → BP, was also not supported. The insignificant serial mediation result indicates that Halal Business Model Innovation does not operate as a continuation mechanism of Marketing Orientation in explaining BP. Instead, the findings imply that Marketing Orientation and Halal Business Model Innovation function as independent strategic pathways through which EO contributes to BP.

Figure 2 presents the results of the structural model estimation. The model assesses the impact of EO on MO and HBMI, along with their subsequent effects on BP. The visual representation illustrates strong structural linkages among the constructs, underscoring the the strategic role of EO in

shaping market-oriented behavior and fostering innovation capability within halal enterprises. The coefficient of determination (R^2) for the main endogenous construct, BP, is 0.308, signifying that the model accounts for 30.8% of the variance in performance outcomes. This result indicates that the model offers sufficient explanatory and predictive strength in capturing performance dynamics in the studied context. Moreover, the findings emphasize the critical role of strategic orientation and innovation capability as central drivers of organizational success in the halal business ecosystem.

Figure 3 presents the structural model assessment, showing the estimated relationships among latent constructs analyzed through the PLS-SEM algorithm. The diagram illustrates how EO significantly influences the mediating constructs—MO and HBMI—which in turn affect BP. Path coefficients (β) reflect both the magnitude and direction of these relationships. For example, the EO–MO path demonstrates a strong positive effect ($\beta = 0.643$), indicating that firms with pronounced entrepreneurial traits tend to adopt higher levels of MO. Conversely, the MO–HBMI path yields a coefficient near zero ($\beta = -0.008$), suggesting the absence of a meaningful direct linkage between these constructs.

Table 8 Predictive Relevance of the Model

Construct	f^2	R^2	Adjusted R^2	$Q^2_{predict}$	RMSE	MAE
HBMI → BP	0.034					
MO → BP	0.320	0.308 (BP)	0.300	0.330	0.829	0.700
EO → HBMI	0.141	0.190 (HBMI)	0.181	0.174	0.923	0.598
EO → MO	0.707	0.414 (MO)	0.411	0.406	0.784	0.632

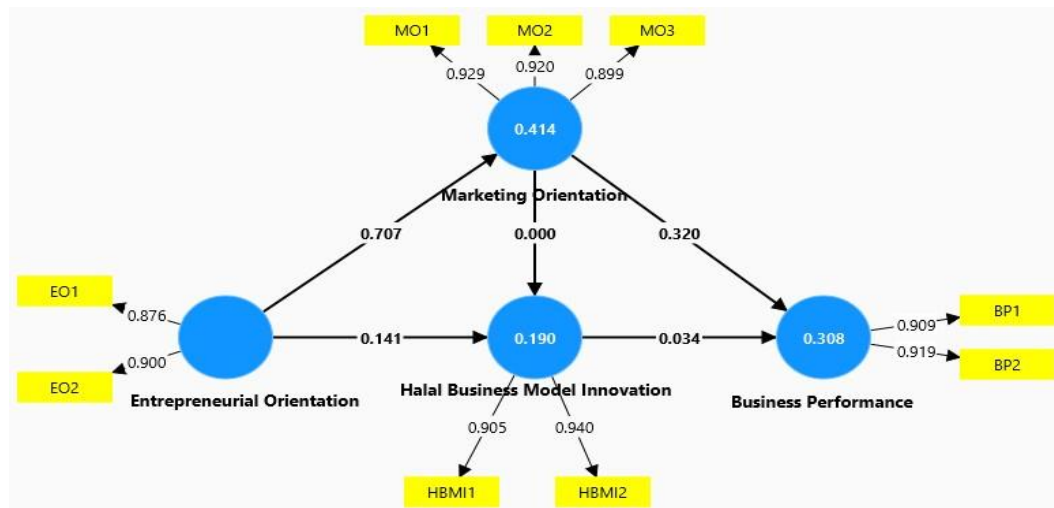


Figure 2 Measurement Model

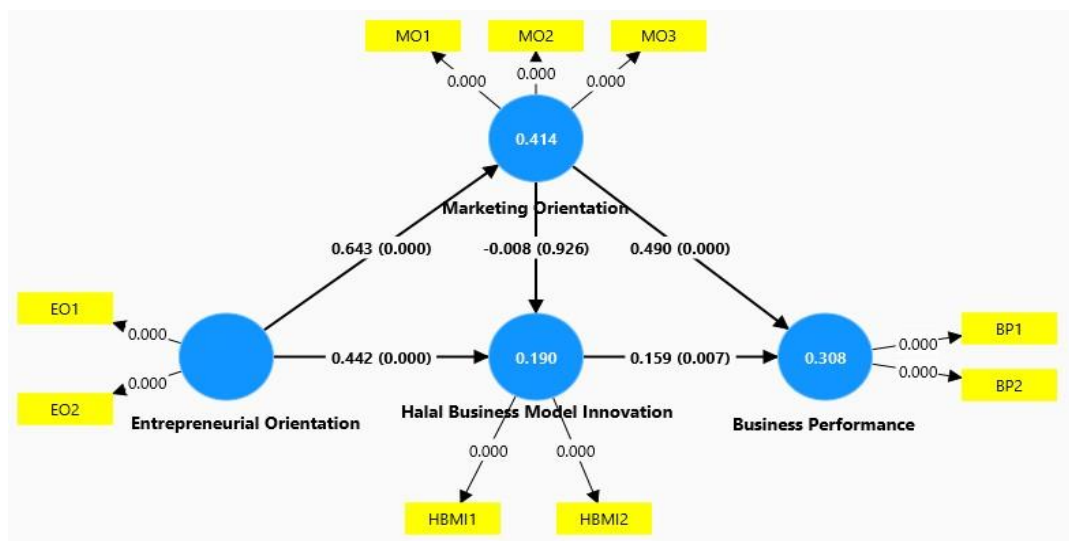


Figure 3 Structural Model

Table 8 shows that all endogenous constructs yield positive Q^2 predictive values (>0), confirming that the proposed model has sufficient predictive relevance. In addition, predictive error analysis using Root Mean Square Error (RMSE) and Mean Absolute Error (MAE) indicates that the PLS-SEM model generates more accurate predictions than the benchmark linear model. The effect size (f^2) analysis further validates that exogenous constructs contribute significantly to shaping endogenous variables within the structural framework. The strongest effect is observed in the link between EO and MO ($f^2 = 0.707$), underscoring the substantial explanatory role of EO in driving firms' market-oriented behavior. Path coefficients

(β) provide insight into the strength and direction of these relationships. For example, the EO–MO path demonstrates a strong positive effect ($\beta = 0.643$), suggesting that firms with pronounced entrepreneurial traits tend to adopt higher levels of MO. Conversely, the MO–HBMI path yields a coefficient near zero ($\beta = -0.008$), pointing to the absence of a meaningful direct association between these constructs. The R^2 values for the endogenous constructs (MO = 0.414; HBMI = 0.190; BP = 0.308) reflect the proportion of variance explained by the model. These results indicate that EO accounts for 41.4% of the variance in MO, while EO and MO together explain 19.0% of the variance in HBMI. Moreover, the model explains 30.8% of the variance in BP,

demonstrating moderate explanatory capacity in capturing performance dynamics within the halal industry. Overall, the findings highlight the pivotal role of MO in linking entrepreneurial initiatives to BP, while emphasizing the conditional and context-specific nature of HBMI as a mediating construct.

5. DISCUSSION

The findings reveal that EO strongly affects MO, supporting the idea that risk-taking, proactiveness, and innovation develop a market-oriented attitude. Prior studies, such as those by Pulka *et al.* (2021) and Viana *et al.* (2018), found that organisations with high EO are more likely to take innovative market actions, explore new possibilities, and adapt to consumer wants and market changes. In this study, organisations with a strong EO are more likely to have a strong MO, which helps them compete and adapt to the dynamic halal market. Entrepreneurship promotes a market-oriented perspective, which is vital for recognising client preferences and responding to competitive challenges.

The relationship between MO and HBMI also aligns with previous research. Scholars such as Aziz & Yassin (2010) and Becherer *et al.* (2001) have argued that firms with a strong MO are better equipped to innovate and adapt their business models to meet changing market demands. In the context of halal food businesses, the need to balance customer preferences with halal certification requirements makes MO a vital driver of HBMI. Firms that adopt a market-oriented approach are more likely to create innovative halal business models that are both competitive and aligned with consumer and regulatory expectations. This finding is consistent with Trapp (2014) who emphasizes the importance of market-driven innovation for the development of sustainable business models in specialized industries.

Furthermore, the study affirms the significance of HBMI in enhancing BP as a direct predictor, consistent with H5. The relationship between these variables supports the notion that innovation in business models is crucial for firms aiming to differentiate themselves in competitive markets. While the foundational work of Kaplan & Norton (1992) is retained here as a seminal reference that established the multi-dimensional measurement of BP, which encompasses financial, market, and operational indicators, that underpins the BP construct used in this study. Their framework is supplemented by more recent empirical evidence. Roxas *et al.* (2017) extends this performance measurement logic to SME contexts by demonstrating that innovative business practices translate into improved financial and market outcomes specifically for smaller firms, making their work directly applicable here. More recently, Deku *et al.* (2023) empirically confirmed in a sample of 432 halal food SME managers in Ghana that entrepreneurial marketing innovation positively and significantly impacts SME production and financial performance, providing cross-contextual validation of the HBMI–BP link in a halal-specific setting. Similarly, Salaheldeen & Battour (2024) demonstrated that innovation capability in the halal industry drives sustainable performance outcomes, reinforcing the finding that HBMI functions as a genuine performance driver rather than merely a compliance mechanism. For halal food businesses in Indonesia, the development of business models

that align with halal principles while responding to market needs enables firms to build consumer trust and maintain a competitive advantage in a certification-sensitive marketplace. This study therefore makes a significant contribution to the literature by not only confirming the HBMI–BP relationship in an Indonesian SME context, but also by confirming that this relationship operates as a significant direct effect rather than through mediation. This distinction has significant implications for the way halal SME managers should prioritise HBMI investments.

These results are consistent with Deku *et al.* (2023) who found that halal-oriented innovation in marketing and business model dimensions positively impacted production and financial performance among halal food SMEs in Ghana, even in the context of a Muslim minority market. Similarly, Jaaffar *et al.* (2024) empirically demonstrated that innovative behavior in Malaysian halal SMEs drives innovation performance and a competitive advantage. These research findings reinforce the view that HBMI operates through capability development rather than simply product-level changes. The findings of Salaheldeen & Battour (2024) further complement this interpretation by showing that firms with higher innovation capabilities in the halal industry achieve more sustainable performance outcomes. Overall, this growing evidence supports Hypothesis 5 and confirms that HBMI, when implemented as a holistic business model-level transformation rather than simply surface certification, can result in meaningful and measurable BP improvements.

Additionally, the mediation analysis in this study suggests that EO influences BP indirectly, through its effect on both MO and HBMI. This finding is consistent with the foundational argument of Covin & Slevin (1991) whose seminal conceptual model of entrepreneurship as firm behaviour established the theoretical foundation that EO-driven risk-taking, proactiveness, and innovation generate indirect performance benefits through market and innovation intermediaries. This foundational premise is directly applicable to the structural model tested here and continues to anchor EO research. This research connects EO to MO and business model innovation, reinforcing and contextualising this fundamental perspective within the halal SME context, demonstrating that entrepreneurial enterprises are more inclined to utilise market insights and innovate their business models, resulting in enhanced performance outcomes. This result also supports the mediation model proposed by Baker & Sinkula (2009) who assert that MO and innovation mediate the relationship between EO and BP. This is further supported by Yunus & Rosli (2025) whose study of halal SMEs in Singapore found that MO significantly mediated the effect of strategic orientation on performance, while the direct effect of strategic orientation remained insignificant. These results demonstrate a pattern analogous to the findings of this study regarding the indirect role of HBMI.

The finding that HBMI does not significantly and directly impact BP independently requires a deeper contextual interpretation. Several factors may explain the results of the HBMI relationship analysis in the context of halal SMEs. First, HBMI among Indonesian food SMEs may still be in its infancy, where companies have adopted halal-compliant business model elements but have not yet achieved the scale or consistency of implementation necessary for these changes to translate into measurable performance improvements. Second, consumer awareness

and demand for distinct halal business model features may not be sufficient to differentially reward innovation in the short term. Third, costs associated with the halal certification process and supply chain restructuring may create short-term financial burdens that mitigate the performance impact of HBMI.

The contextual factors indicate that the performance advantages of HBMI are likely dependent on complimentary elements such as institutional support, regulatory empowerment, and consumer education, which require further investigation in future study. Furthermore, it is important to mention that an exploratory, post-hoc observation, which was based on descriptive patterns in the data rather than formal statistical testing, indicated potential heterogeneity in the HBMI–BP relationship across firm size categories. Medium-sized SMEs appeared to exhibit somewhat stronger associations between HBMI and performance than microenterprises, which may be indicative of their comparatively greater resource capacity for implementing and sustaining HBMI. However, this observation was not subjected to formal multi-group analysis (e.g., PLS-MGA) and therefore cannot be treated as a statistically confirmed finding. It is reported here solely as a preliminary, exploratory signal to guide future inquiry. Future studies employing formal multi-group comparison methods across SME size categories are recommended to rigorously evaluate this pattern and determine whether firm size moderates the HBMI–BP relationship in the halal food sector.

6. CONCLUSION

This study contributes to the growing literature on EO, MO, HBMI, and BP in halal food businesses. Business outcomes are improved by entrepreneurial behaviours, market information, and business model innovation. Studies show that EO boosts MO. High-risk, proactive, and inventive firms are more likely to have a strong market-oriented approach. In dynamic markets, enterprises must be aware of consumer wants and competition pressures through proactive market participation. Prior research has shown that EO positively affects organisations' market-related behaviours and tactics, reinforcing the need of developing entrepreneurial behaviours to create a market-responsive culture. The report also emphasises MO's importance in HBMI. Strong MO helps organisations reinvent their business models to meet halal food sector consumer preferences, competitive dynamics, and regulatory criteria. Market intelligence in business model innovation helps organisations create consumer-friendly halal value propositions. The innovation literature emphasises the need of a market-driven approach to business model development.

The study shows that HBMI improves BP. Innovating company models to satisfy market demands and halal standards improves financial, market, and operational performance. This confirms that business model innovation drives performance, especially in industries that require distinction and regulatory compliance. These findings provide managers and policymakers with practical advice. Risk-taking, proactiveness, and creativity are entrepreneurial traits for SMEs. Market focus and innovation in halal company models are greatly encouraged. To better translate HBMI into performance outcomes, policymakers, and halal

certification authorities like the Indonesian Ulema Council (MUI) should provide tiered certification support and financial incentives to help SMEs overcome halal compliance expenses. HBMI designs capacity-building programs, not compliance tools. HBMI can strategically serve as a platform for value creation and market differentiation. This study has several limitations. First, purposive sampling limits the external validity of the findings to halal-certified food SMEs in the study area. Studying numerous regions or provinces with probability-based sampling might improve generalisability.

However, this is an external validity concern, not the study's hypotheses' internal validity. The non-significant mediation paths involving HBMI (H6 and H8) reflect genuine empirical outcomes of the structural model. Under the parameters that were examined, the results show that HBMI is currently playing a significant role in this context. However, they do not indicate that the study's methodology was inadequate or that it was not robust enough. Secondly, the emphasis on HBMI exclusively omits other forms of innovation (digital, green, operational) that could potentially influence SME performance. Third, longitudinal research is advised since the cross-sectional design makes it difficult to determine causality. Fourth, the findings should be interpreted with caution in the context of other halal markets (e.g., the Middle East, Africa, Europe) where regulatory frameworks and consumer behavior differ substantially. Comparative analysis of halal versus non-halal SMEs is also recommended in future research.

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CONFLICTS OF INTEREST

The author(s) affirm with absolute certainty that no conflicts of interest, of any nature whatsoever, exist in relation to the publication of this paper.

DATA AVAILABILITY STATEMENTS

Data supporting the conclusions of this study are available from the corresponding author upon reasonable request. Due to privacy and ethical considerations involving SME owners and managers who participated, the dataset cannot be made publicly accessible.

USE OF ARTIFICIAL INTELLIGENCE

This manuscript was refined and edited using artificial intelligence (AI) methods for grammatical checking and phrasing improvement, according to the authors. The authors conducted all intellectual content, including research design, data collection, analysis, interpretation, and conclusions. This paper's authors are responsible for its integrity and accuracy.

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