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-RESEARCH ARTICLE-

SUSTAINABLE BUSINESS PERFORMANCE MODEL OF HALAL FOODS and BEVERAGES' MSMES: THE MODERATING ROLE OF HALAL CERTIFICATION

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—Abstract—

This research investigates how digital marketing, digital payment, and spiritual entrepreneurship contribute to sustainable business performance among halal food micro, small, and medium-sized enterprises (MSMEs), while considering halal certification as a moderating factor. Drawing on Dynamic Capabilities Theory (DCT), the study conceptualises digital competencies and spiritual principles as organisational capabilities that support sustained business performance. Survey responses collected from 509 halal food MSMEs in Indonesia were analysed using structural equation modelling (SEM). The findings indicate that digital marketing, digital payment, and spiritual entrepreneurship each have a positive effect on sustainable business performance. In addition, halal certification enhances the relationships between digital

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marketing and sustainable business performance, as well as between spiritual entrepreneurship and sustainable business performance. Overall, the results demonstrate that combining digital capabilities, ethical principles, and institutional legitimacy can strengthen sustainability within halal food MSMEs.

Keywords: Digital Marketing; Digital Payment; Spiritual Entrepreneurship; Halal Certification; Sustainable Business Performance; MSMEs; Dynamic Capabilities Theory

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) constitute a fundamental component of economic development, particularly across emerging economies, owing to their substantial contributions to employment generation, income distribution, and economic resilience. The question of MSME sustainability has attracted growing academic interest as these firms increasingly operate under conditions of intensified market competition, accelerated technological developments, and changing consumer demands (Loo et al., 2023; Rosyidiana & Narsa, 2024). Accordingly, sustainable business performance, encompassing both economic viability and the capacity to remain competitive and adaptable over the long term, has become increasingly important for MSMEs seeking continued survival and growth in rapidly changing markets.

The halal food and beverage segment has emerged as a particularly dynamic area within the MSME sector, supported by the expanding global Muslim population and heightened consumer interest in halal compliance, ethical production, and product quality (Azizah et al., 2025; Hidayat et al., 2025). The significance of halal MSMEs now extends beyond meeting religious requirements, as these businesses have become increasingly associated with value creation, consumer trust, and sustainability Nevertheless, their considerable market opportunities are accompanied by persistent structural challenges. Restricted access to technological resources, financial infrastructure, and managerial expertise can limit the capacity of halal MSMEs to establish and maintain sustainable business performance (Rohafiz Sabar, 2024).

The adoption of digital transformation has consequently become an important strategic mechanism through which MSMEs can strengthen both competitiveness and sustainability (Kusuma, 2025; Martínez-Peláez et al., 2023). Through online platforms, social media, and data-informed promotional activities, digital marketing can enable firms to reach broader markets, develop stronger customer relationships, and improve operational cost efficiency (Mohammed T. Nuseir, 2023; Sharabati et al., 2024). Digital payment, meanwhile, can improve transaction processes, enhance financial transparency, increase customer convenience, and contribute to wider financial inclusion (Homburg & Wielgos, 2022). Existing empirical research has generally

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identified positive associations between the adoption of digital marketing and digital payment and firm performance. However, the evidence is not entirely consistent. Some studies have identified weak or statistically insignificant relationships with long-term business sustainability, suggesting that the adoption of digital technologies by itself may not necessarily translate into sustainable performance.

Within the contemporary digital economy, halal food and beverage MSMEs increasingly operate as participants in interconnected digital business ecosystems rather than treating digital devices as isolated business tools. Engagement in platform-based commerce and the development of e-commerce capabilities can allow micro-enterprises to reduce geographical constraints, improve supply chain efficiency, and access emerging market opportunities. Nevertheless, meaningful business digitalization maturity requires firms to progress beyond a basic social media presence and develop more advanced forms of digital customer engagement alongside integrated omnichannel marketing practices. For halal MSMEs, the strategic alignment of such digital capabilities with institutional legitimacy, particularly through halal certification, may provide an additional source of competitive advantage that supports long-term business sustainability.

Technological capabilities alone, however, do not fully explain sustainable business outcomes. Increasing attention has been directed towards value-oriented managerial approaches as important determinants of sustainable performance (Bekele et al., 2025; Lazarte-Aguirre, 2024). Spiritual entrepreneurship represents one such orientation, incorporating ethical principles, integrity, social responsibility, and a sense of spiritual purpose into entrepreneurial activities. Such an approach may enable MSMEs to cultivate stakeholder trust, strengthen customer loyalty, and develop greater long-term resilience. This perspective is particularly relevant to halal MSMEs because spiritual entrepreneurship corresponds closely with Islamic values centred on honesty, fairness, and accountability. Although previous research has identified the potential contribution of spiritual entrepreneurship to business performance, existing findings remain inconsistent, with its effects Halal certification represents another potentially important but comparatively underexamined element within the halal MSME ecosystem. Rather than functioning solely as a regulatory requirement, certification can serve as a market signal concerning product credibility, quality assurance, and adherence to religious standards. In particular, halal-certified products may generate greater consumer confidence and achieve stronger market acceptance in Muslim-majority and halal-conscious markets. Despite these potential benefits, relatively little empirical work has investigated whether halal certification acts as a moderating mechanism capable of altering the strength of relationships between digital strategies, spiritual entrepreneurship, and sustainable business performance (Md Wasim Raza, 2025).

From a dynamic capabilities' perspective, the sustainable performance of halal MSMEs

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can be understood as a consequence of combining technological capabilities, represented by digital marketing and digital payment, with a value-based entrepreneurial orientation, represented by spiritual entrepreneurship, and institutional legitimacy through halal certification. Digital capabilities allow firms to identify and exploit emerging market opportunities, whereas spiritual entrepreneurship influences ethical decision-making and the development of stakeholder trust (Panakaje et al., 2025). Halal certification may further strengthen these relationships by enhancing consumer trust and market legitimacy, thereby enabling digital capabilities and spiritual orientation to contribute more effectively to sustainable business performance.

Although the literature concerning MSME sustainability, digital transformation, and halal entrepreneurship has expanded considerably, relatively few empirical studies have incorporated digital marketing, digital payment, spiritual entrepreneurship, and halal certification into a unified analytical framework. This study responds to this limitation by examining the direct relationships of digital marketing, digital payment, and spiritual entrepreneurship with sustainable business performance among halal MSMEs. Particular attention is given to the moderating influence of halal certification, which may strengthen the contribution of digital strategies and spiritual entrepreneurship to sustainable business performance.

By addressing this underexplored relationship, the study proposes and empirically evaluates an integrated model in which the sustainability of halal food and beverage MSMEs is explained through the interplay of technological, value-based, and institutional capabilities. Focusing on halal food and beverage MSMEs in an emerging market context, this study extends the existing literature by examining the roles of digital and spiritual capabilities in achieving sustainable business performance and how halal certification strengthens these relationships.

LITERATURE REVIEW AND HYPOTHESIS

Theoretical Foundation: Dynamic Capabilities Perspective

This study adopts the dynamic capabilities framework, which views organisational competitiveness as dependent on the capacity to continually integrate, reconfigure, and deploy internal and external resources in response to changing environmental conditions. Within this framework, digital marketing and digital payment constitute technological capabilities that assist MSMEs in identifying and exploiting emerging market opportunities (Erman Aminullah, 2924). In contrast, spiritual entrepreneurship reflects a value-oriented capability that influences ethical decision-making and the development of stakeholder relationships.

Halal certification contributes an institutional dimension by providing legitimacy that can reinforce the strategic relevance of both technological and spiritual capabilities.

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Accordingly, sustainable business performance is understood not as the outcome of individual capabilities operating independently, but as the result of their combined interaction with entrepreneurial values and institutional support. Consistent with the dynamic capabilities' perspective, firms can sustain performance by sensing emerging opportunities, seizing them effectively, and continually reconfiguring resources in response to environmental shifts (Teece, 2018). By bringing together dynamic capabilities theory, institutional legitimacy, and value-based entrepreneurship, this study develops a broader explanation of the mechanisms underpinning sustainable business performance among halal MSMEs.

Sustainable Business Performance of MSMEs

Sustainable business performance denotes an organisation's capacity to remain economically viable over the long term while sustaining competitiveness, adaptability, and stakeholder confidence amid changing environmental conditions. Rather than concentrating solely on immediate financial returns, this concept reflects the ability to generate enduring value, maintain strategic resilience, and preserve organisational viability over time. Such performance is particularly important for MSMEs, which frequently operate under intense competitive pressure and face constraints in accessing financial, technological, and managerial resources.

The literature indicates that sustainable business performance extends beyond financial results to include operational effectiveness, customer satisfaction, and the continuity of strategic activities. Firms demonstrating stronger sustainable performance are generally more capable of managing market uncertainty, technological disruption, and shifts in consumer preferences (Siefan et al., 2025). Within the halal food and beverage sector, this concept also incorporates dimensions associated with product credibility, ethical production practices, and adherence to religious requirements. Together, these factors can strengthen consumer trust and support continued acceptance of halal products in the marketplace.

Digital Marketing and Sustainable Business Performance

Previous research indicates that advanced digital technologies can contribute substantially to organisational performance and facilitate strategic renewal (D. Vrontis, 2021). For MSMEs, digital marketing provides a relatively cost-effective means of accessing markets, interacting with customers, and increasing brand visibility through social media, online marketplaces, and digitally delivered content. Viewed strategically, it can also function as a dynamic capability by enabling firms to identify emerging market developments and adjust their responses to changing customer requirements in a timely manner (Apasrawirote et al., 2022).

Empirical evidence has generally identified a positive association between digital

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marketing adoption and business performance, particularly in terms of sales growth, customer loyalty, and competitive positioning. Its contribution may also extend to service quality and customer experience, both of which are important for maintaining performance over the longer term. Nevertheless, existing findings are not uniform, with some studies identifying insignificant or context-specific effects on sustainability-related outcomes. This suggests that digital marketing may not independently ensure sustainable business performance and may require complementary organisational and institutional conditions to realise its full potential (Li, 2022).

Within Dynamic Capabilities Theory (DCT), digital marketing can be conceptualised as a key sensing and seizing capability through which halal F&B MSMEs identify changing market conditions and establish meaningful interactions with consumers. Its contemporary application extends well beyond conventional promotional activities, encompassing interactive digital customer engagement and coordinated omnichannel marketing across platforms such as social media, live-commerce, and e-marketplaces. Effective management of these digital touchpoints can strengthen e-commerce capabilities, enhance brand trust, and broaden market access. In turn, these capabilities can contribute to stronger and more sustainable business performance. Therefore, the first hypothesis is:

H1: *Digital marketing has a significant positive effect on sustainable business performance of Halal Foods and Beverages' MSMEs.*

Digital Payment and Sustainable Business Performance

Digital payment systems have become an important component of contemporary business operations, enabling electronic transactions through mobile banking, e-wallets, QR-based payment mechanisms, and other cashless platforms (Lennora Putit, 2023; Ramli et al., 2023). Among MSMEs, the adoption of such systems can streamline transaction processes, minimise operational frictions, and strengthen financial transparency (Abdul Waris, 2025). From a DCT perspective, digital payment represents a reconfiguring capability through which firms can redesign financial processes, respond to changing transaction requirements, and reach a wider customer base.

Existing evidence suggests that digital payment adoption can improve MSME performance by facilitating higher transaction volumes, enhancing customer convenience, and promoting financial inclusion (Rosnita Wirdiyanti, 2023). It may also strengthen record-keeping practices and provide more reliable financial data for managerial decision-making, thereby supporting longer-term business sustainability. However, its contribution is not consistently observed across all contexts. User resistance, concerns regarding transaction security, limited financial literacy, and cultural barriers may restrict the benefits associated with digital payment adoption. Such variations indicate that the relationship between digital payment and business performance may be contingent upon specific contextual and moderating conditions.

Consistent with DCT, digital payment adoption can further be understood as a reconfiguring capability that transforms financial operations by reducing transaction-related inefficiencies. The use of QR payment ecosystems and mobile wallets enables halal MSMEs to engage more effectively with platform-based commerce and participate in broader digital business ecosystems. When payment processes are both seamless and secure, firms can accelerate cash-flow management, improve the monitoring of financial transactions, and increase overall operational efficiency. Consequently, strengthening business digitalization maturity through digital payment adoption can contribute to both operational effectiveness and economic sustainability. Accordingly, the second hypothesis is:

H2: *Digital payment has a significant positive effect on sustainable business performance of halal foods and beverages' MSMEs.*

Spiritual Entrepreneurship and Sustainable Business Performance

Spiritual entrepreneurship refers to an entrepreneurial orientation in which ethical principles, moral obligations, and spiritual purpose are incorporated into business activities (Rashid & Ratten, 2021). Rather than focusing exclusively on financial objectives, this orientation promotes integrity, honesty, social responsibility, and purpose-driven conduct in organisational decision-making (Joseph H. Astrachan, 2024). Within MSMEs, such an approach can facilitate the development of trust-based relationships with customers and other stakeholders, creating conditions that favour long-term sustainability over short-term profit maximisation. Its relevance is particularly pronounced among halal MSMEs, where the principles underlying spiritual entrepreneurship correspond closely with Islamic values of fairness, transparency, and accountability (Raimi et al., 2024; Yasmeen, 2026).

Previous empirical research further indicates that spiritual entrepreneurship may strengthen customer trust, organisational reputation, and employee commitment, all of which can contribute to the maintenance of business performance over time (Xiaofei Yan, 2022). However, the empirical evidence remains inconclusive, as some studies identify significant positive performance effects whereas others report weak or statistically insignificant relationships. These differences suggest that the contribution of spiritual entrepreneurship may depend on industry-specific characteristics and the availability of appropriate institutional support. Therefore, the third hypothesis is:

H3: *Spiritual entrepreneurship has a significant positive effect on sustainable business performance of halal MSMEs.*

Halal Certification as a Moderating Mechanism

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Halal certification provides formal institutional assurance that products satisfy established halal requirements concerning ingredients, production procedures, and hygiene standards (Al-shami & Abdullah, 2023). Its significance, however, extends beyond regulatory compliance, as certification can operate as a strategic signal of product credibility, quality assurance, and reliability, thereby strengthening consumer trust (Adham et al., 2024). In competitive halal markets, this institutional recognition can enhance product acceptance and provide firms with greater opportunities for market differentiation. Despite these potential strategic benefits, comparatively little research has considered halal certification as a moderating mechanism within models of business performance. Existing research has predominantly examined certification as a direct predictor of outcomes such as consumer trust and purchase intention.

Halal certification may nevertheless influence how other organisational capabilities translate into sustainable performance. In particular, formal certification can enhance the effectiveness of digital marketing by increasing consumer confidence in online promotional information and digitally mediated transactions (Fachrurazi et al., 2022; Nazir, 2024). It may similarly strengthen the contribution of spiritual entrepreneurship by connecting an entrepreneur’s ethical orientation with externally recognised institutional standards. From an institutional legitimacy perspective, certification therefore functions as a signalling mechanism that reinforces value-consistent dynamic capabilities. For digital marketing, formal halal verification can increase the credibility of promotional communication and strengthen consumer trust, thereby amplifying its contribution to sustainable performance. In the case of spiritual entrepreneurship, certification establishes greater consistency between internal ethical commitments and externally validated standards, which may further strengthen stakeholder confidence and business sustainability.

By contrast, halal certification is not expected to moderate the relationship between digital payment and sustainable performance. Digital payment primarily performs a utilitarian and transaction-enabling function, meaning that benefits arising from faster payments and greater operational convenience are not necessarily dependent on religious-compliance signals. The relatively limited empirical investigation of these differentiated moderating effects represents an important gap in the existing literature.

H4: *Halal certification moderates the relationship between digital marketing and sustainable business performance of halal MSMEs.*
H5: *Halal certification moderates the relationship between spiritual entrepreneurship and sustainable business performance of halal MSMEs.*

METHOD

Research Design

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This research employs a quantitative methodology based on a cross-sectional survey design to investigate the associations among digital marketing, digital payment, spiritual entrepreneurship, halal certification, and sustainable business performance in halal MSMEs (Maier et al., 2023). The quantitative design is suitable for the study because it facilitates the empirical evaluation of hypothesised relationships and the statistical assessment of the proposed structural framework (Hunziker & Blankenagel, 2024). SEM was subsequently applied using the two-stage procedure proposed by (Hair, 2019), whereby the measurement model is evaluated first, followed by assessment of the structural model.

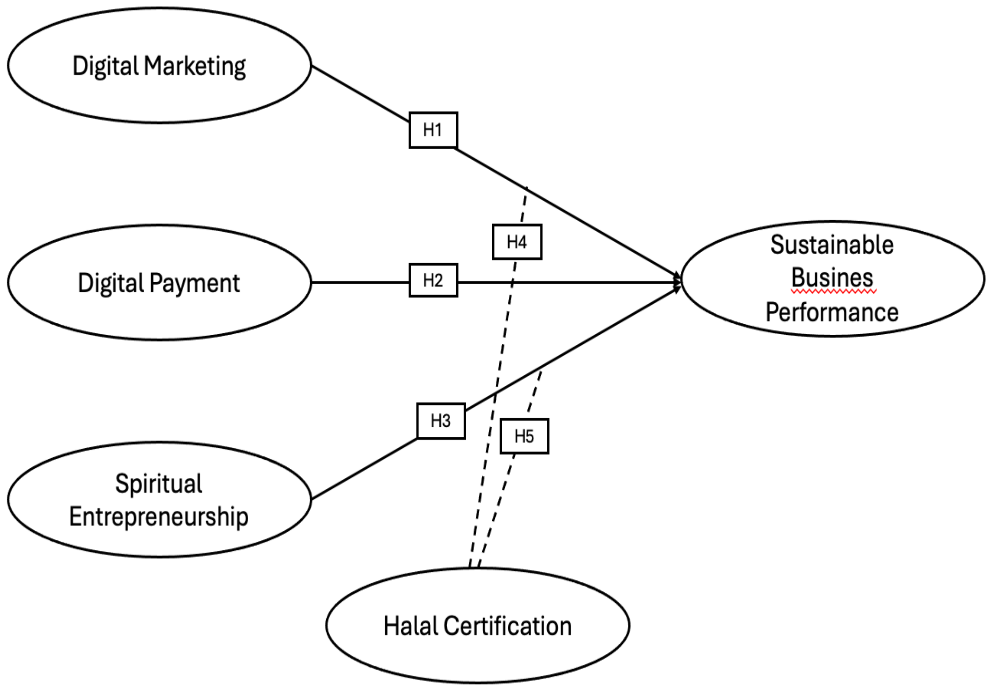

Figure 1: Research Model

Figure 1 illustrates the conceptual framework developed to examine how digital marketing, digital payment, and spiritual entrepreneurship contribute to sustainable business performance among halal food MSMEs. Within the proposed model, these constructs represent core organisational capabilities through which MSMEs can strengthen their competitiveness and maintain performance over the longer term. Halal certification is incorporated as a moderating construct, with its influence expected to strengthen the relationship between digital marketing and sustainable business performance and the relationship between spiritual entrepreneurship and sustainable business performance. As an institutional signal of compliance and credibility, halal

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certification can further reinforce consumer confidence in certified businesses. Overall, the framework assumes that sustainable business performance results from the direct contribution of digital and value-based capabilities as well as the moderating influence of halal certification. The proposed relationships are subsequently examined empirically through structural equation modelling.

Population and Sample

The study population consists of halal MSMEs operating within the food and beverage sector. These enterprises were selected because of their strategic relevance to the halal industry and their growing adoption of digital technologies. Data were obtained from MSME owners and managers who participate directly in business decision-making and have sufficient knowledge of their firms' digital practices and halal certification status. The sample size was established in accordance with SEM requirements, which suggest obtaining approximately 10–20 observations for each estimated parameter to achieve adequate statistical power and reliable model estimation. Accordingly, 509 valid responses were collected from owners and managers of halal food and beverage MSMEs across six provinces in Indonesia. A cluster random sampling technique was employed, resulting in a sample that exceeded the minimum requirement for SEM and was considered sufficient for hypothesis testing.

To strengthen methodological rigour, the measurement instrument was first reviewed by academic experts and subsequently subjected to a pilot study involving 30 MSME owners. This process was undertaken to improve item clarity and establish the appropriateness of the measurement constructs. Potential common method bias (CMB), which may arise from the use of self-reported survey responses, was examined using Harman's single-factor test. The results showed that the first factor explained less than 50% of the total variance, indicating that CMB was not a pervasive concern. Non-response bias was also evaluated by comparing early and late respondents through independent samples t-tests, with no statistically significant differences identified. Prior to conducting the structural equation modelling analysis, multivariate normality and variance inflation factor (VIF) diagnostics were additionally assessed. All VIF values were below the threshold of 3.3, indicating that severe multicollinearity was not present.

Data Collection Procedure

Data collection was conducted through a structured questionnaire administered to owners and managers of halal MSMEs. To broaden respondent coverage and improve participation, the survey was distributed using both online and offline channels. Before completing the questionnaire, participants received information regarding the study's purpose and were assured that their responses would remain confidential and that participation was entirely voluntary. Responses containing incomplete or inconsistent information were removed before analysis to maintain the quality and reliability of the

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final dataset.

Measurement of Variables

All study constructs were operationalised through multi-item measurement scales adapted from established literature and contextualised for halal MSMEs. Responses to the measurement items were captured on a five-point Likert scale, with values ranging from 1 (strongly disagree) to 5 (strongly agree). Digital Marketing was operationalised through indicators representing the extent to which MSMEs utilise digital platforms, social media, online promotional activities, and digital channels for customer communication. Digital Payment was assessed using measures capturing the adoption and utilisation of electronic payment methods, together with transaction convenience and financial efficiency. Spiritual Entrepreneurship was measured through indicators reflecting ethical orientation, integrity, social responsibility, and the incorporation of spiritual values into business activities. Halal Certification was specified as a moderating variable and assessed according to the certification status of participating MSMEs. Sustainable Business Performance was evaluated using indicators covering long-term financial outcomes, operational sustainability, customer retention, and the ability to maintain competitive resilience.

Data Analysis Technique

SEM was used to analyse the collected data through AMOS (Asmat Ara Shaikh, 2022). Following the recommended two-stage procedure, the analysis initially focused on evaluating the measurement model to establish the reliability and validity of the constructs. The measurement model was assessed using indicator loadings, composite reliability, and AVE. The structural model was then evaluated for hypothesised and moderating effects using χ^2/df, CFI, TLI, RMSEA, and SRMR. Hypotheses were assessed based on the significance and direction of the estimated path coefficients.

Ethical Considerations

Ethical standards were maintained throughout all stages of the research. Participants' anonymity and confidentiality were strictly protected, and the information collected was used exclusively for academic purposes. Participation was entirely voluntary, with respondents retaining the right to discontinue their involvement at any point without facing any adverse consequences.

RESEARCH RESULTS

Measurement Model Evaluation

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The measurement model was first assessed to establish the reliability and validity of the study constructs. All indicator loadings were above the recommended threshold, providing evidence of satisfactory indicator reliability. The composite reliability coefficients for each construct also exceeded the acceptable criterion, confirming adequate internal consistency. Furthermore, convergent validity was supported because the AVE values were above the recommended threshold. Taken together, these results indicate that the measurement model possesses satisfactory reliability and validity and is therefore appropriate for subsequent evaluation of the structural model. Table 1 reports the reliability and convergent validity results obtained for the measurement model. The CR coefficients for every construct exceed the 0.70 criterion, demonstrating satisfactory internal consistency across the measures. Likewise, each construct records an AVE value greater than 0.50, providing evidence of adequate convergent validity.

Table 1: Measurement Model Assessment

Construct	Composite Reliability (CR)	AVE
Digital Marketing	0.949	0.590
Digital Payment	0.910	0.520
Spiritual Entrepreneurship	0.943	0.540
Halal Certification	0.841	0.510
Sustainable Business Performance	0.773	0.504

Structural Model Evaluation

The structural model was subsequently evaluated to determine whether the hypothesised relationships among the constructs were supported. The obtained model fit indices indicated an acceptable correspondence between the proposed structural model and the observed data, demonstrating that the model provides an adequate representation of the underlying theoretical framework.

Table 2: Results of Hypothesis Testing

Hypothesis	Relationship Tested	Std. Estimate (β)	t-value	p-value	Decision
H1	Effect of Digital Marketing on Sustainable Business Performance	0.240	3.209	0.001	Supported
H2	Effect of Digital Payment on Sustainable Business Performance	0.275	3.043	0.002	Supported
H3	Effect of Spiritual Entrepreneurship on Sustainable Business Performance	0.472	6.447	<0.001	Supported
H4	Moderating Effect of Halal Certification on the Relationship between Digital Marketing and	0.090	4.185	<0.001	Supported

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	Sustainable Business Performance				
H5	Moderating Effect of Halal Certification on the Relationship between Spiritual Entrepreneurship and Sustainable Business Performance	0.100	4.610	<0.001	Supported

The structural model was subsequently assessed to test the hypothesised relationships between the study constructs. As reported in Table 2 the hypothesis-testing results include the standardised path coefficients (β), t-values, and p-values. Digital marketing demonstrates a significant positive association with sustainable business performance ($\beta = 0.240$, $t = 3.209$, $p = 0.001$), thereby supporting H1. This finding indicates that the effective application of digital marketing practices can contribute to stronger long-term performance among halal MSMEs. Digital payment also exhibits a significant positive relationship with sustainable business performance ($\beta = 0.275$, $t = 3.043$, $p = 0.002$), providing support for H2 and suggesting that digital payment adoption can enhance operational efficiency and facilitate sustainable business outcomes. Among the direct relationships, spiritual entrepreneurship records the strongest positive effect on sustainable business performance ($\beta = 0.472$, $t = 6.447$, $p < 0.001$), supporting H3. This result underscores the importance of ethically grounded and value-oriented entrepreneurial practices in strengthening sustainability among halal MSMEs.

The analysis further confirms the proposed moderating effects of halal certification. Its interaction with digital marketing has a significant positive effect on sustainable business performance ($\beta = 0.090$, $t = 4.185$, $p < 0.001$), supporting H4. This indicates that the positive contribution of digital marketing to sustainable performance becomes stronger when halal certification is present. Similarly, the interaction between halal certification and spiritual entrepreneurship is positive and statistically significant ($\beta = 0.100$, $t = 4.610$, $p < 0.001$), supporting H5. This finding further establishes halal certification as an institutional mechanism that enhances the effectiveness of value-based entrepreneurial strategies in promoting sustainable business performance.

Moderating Effect Analysis

The moderating effect of halal certification was assessed to establish whether it alters the strength of the relationships between the selected independent variables and sustainable business performance. The results demonstrate a significant moderating effect of halal certification on the relationship between digital marketing and sustainable business performance, thereby supporting H4. This indicates that the positive contribution of digital marketing to performance is more pronounced among halal MSMEs with formal halal certification. A significant moderating effect was also identified for the relationship between spiritual entrepreneurship and sustainable

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business performance, providing support for H5. Thus, the performance benefits associated with spiritual entrepreneurship appear to be greater when halal MSMEs hold formal halal certification.

Table 3 reports the estimated moderating effects of halal certification within the proposed model. The interaction term between halal certification and digital marketing is positive and statistically significant ($\beta = 0.090$, $t = 4.185$, $p < 0.001$), demonstrating that the positive contribution of digital marketing to sustainable business performance is more pronounced among MSMEs holding halal certification. Likewise, the interaction between halal certification and spiritual entrepreneurship is significant and positive ($\beta = 0.100$, $t = 4.610$, $p < 0.001$).

Table 3: Moderating Effect Analysis

Hypothesis	Interaction Term	Std. Estimate (β)	t-value	p-value	Conclusion
H4	Interaction between Halal Certification and Digital Marketing	0.090	4.185	<0.001	Supported
H5	Interaction between Halal Certification and Spiritual Entrepreneurship	0.100	4.610	<0.001	Supported

This result indicates that formal halal certification strengthens the performance benefits associated with value-based entrepreneurial practices, enabling spiritual entrepreneurship to contribute more effectively to sustainability-oriented business outcomes. The results provide support for all hypotheses proposed in the study. Digital marketing, digital payment, and spiritual entrepreneurship each demonstrate a direct positive contribution to sustainable business performance among halal MSMEs, while halal certification enhances the effects of digital marketing and spiritual entrepreneurship. Collectively, these findings reinforce the validity of the proposed conceptual framework and provide empirical evidence supporting the hypothesised relationships.

Table 4: Summary of Hypothesis Testing

Hypothesis	Independent Variable	Dependent Variable	Type of Effect	Result
H1	Digital Marketing	Sustainable Business Performance	Direct	Supported
H2	Digital Payment	Sustainable Business Performance	Direct	Supported

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H3	Spiritual Entrepreneurship	Sustainable Business Performance	Direct	Supported
H4	Interaction between Halal Certification and Digital Marketing	Sustainable Business Performance	Moderating	Supported
H5	Interaction between Halal Certification and Spiritual Entrepreneurship	Sustainable Business Performance	Moderating	Supported

Table 4 reports the hypothesis-testing outcomes for the direct and moderating relationships specified in the proposed model. The results demonstrate that digital marketing, digital payment, and spiritual entrepreneurship each exert a significant positive effect on sustainable business performance, thereby supporting H1, H2, and H3. These findings indicate that the adoption of digital marketing practices, the use of digital payment technologies, and the incorporation of value-oriented entrepreneurial practices can individually contribute to stronger sustainability outcomes among halal MSMEs.

The analysis also provides evidence for the proposed moderating effects of halal certification. In particular, the interaction between halal certification and digital marketing produces a significant positive effect, indicating that certification strengthens the relationship between digital marketing and sustainable business performance and consequently supports H4. Likewise, the interaction between halal certification and spiritual entrepreneurship is significantly positive, confirming H5. Taken together, these results demonstrate that halal certification extends beyond its institutional function by reinforcing the effectiveness of digital marketing and ethical entrepreneurial practices in supporting sustainable business performance.

DISCUSSION

This study offers empirical evidence that sustainable business performance among halal MSMEs is shaped by the combined influence of digital capabilities, value-oriented entrepreneurial practices, and institutional legitimacy. The results demonstrate that digital marketing, digital payment, and spiritual entrepreneurship each make significant contributions to sustainability-oriented performance, while halal certification reinforces selected relationships. By bringing together technological, ethical, and institutional dimensions, the study extends existing research and provides a more integrated account of the factors underlying sustainable business performance within the halal MSME context.

The positive and significant relationship between digital marketing and sustainable business performance demonstrates the strategic value of digital platforms for identifying market developments, engaging customers, and communicating value. In

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terms of dynamic capabilities, digital marketing strengthens an MSME's capacity to recognise emerging opportunities and communicate its value proposition effectively within rapidly evolving markets. For halal MSMEs, these digital activities serve a broader purpose than simply increasing market exposure. They also provide channels through which firms can communicate product credibility and ethical commitments, both of which are important for maintaining competitiveness and sustainability over time. The finding is therefore consistent with previous research emphasising the contribution of digital engagement to sustainable performance, particularly among enterprises operating with limited resources.

The significant positive association between digital payment and sustainable business performance similarly demonstrates the importance of financial and operational agility. By facilitating faster transactions, greater transparency, and improved customer convenience, digital payment systems can support more efficient and resilient business processes. From the dynamic capabilities' perspective, their adoption reflects an MSME's ability to reconfigure internal financial processes in response to technological developments. The findings therefore indicate that the value of digital payment extends beyond immediate operational efficiency, as improved transaction management can also contribute to the longer-term stability and sustainability of halal MSMEs.

The significant influence of spiritual entrepreneurship further highlights the importance of ethical and value-based orientations in maintaining business success. By emphasising integrity, trust, and social responsibility, spiritual entrepreneurship can support the development of durable relationships with customers and other stakeholders. These characteristics are particularly relevant in halal-oriented markets, where expectations concerning ethical and religiously aligned business conduct are closely connected with market behaviour. The finding reinforces the argument that sustainable business performance cannot be explained solely through technological capabilities. Entrepreneurial values also play an important role by shaping organisational conduct and strengthening stakeholder trust.

The results concerning halal certification further demonstrate its strategic relevance as a moderating mechanism. The finding that certification strengthens the relationship between digital marketing and sustainable business performance indicates that digital strategies can generate greater benefits when reinforced by institutional legitimacy. In online environments, where information asymmetry can increase uncertainty regarding product claims, halal certification provides an externally verifiable signal that can reduce perceived risk and strengthen consumer confidence. This greater credibility enables MSMEs to convert digital visibility and customer engagement more effectively into sustained performance outcomes. Accordingly, the finding extends existing research by positioning halal certification as a strategic amplifier of digital capabilities rather than treating it solely as a regulatory requirement.

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The moderating influence of halal certification on the relationship between spiritual entrepreneurship and sustainable business performance also indicates an important interaction between internal ethical orientation and external institutional validation. Spiritual entrepreneurship reflects the entrepreneur's intrinsic commitment to ethical conduct, whereas halal certification offers formal recognition of compliance with established standards, thereby reinforcing organisational credibility and legitimacy among stakeholders. The observed interaction suggests that ethical commitment may generate stronger performance benefits when it is supported by a recognised institutional mechanism. Digital payment differs in this respect because it represents primarily a functional capability concerned with improving transactional and operational efficiency. Since halal certification principally communicates trust, credibility, and value-based legitimacy, its moderating influence is less directly connected to the relationship between digital payment and sustainable business performance.

Overall, the findings indicate that sustainable business performance among halal MSMEs emerges from the combined development of digital capabilities, ethical entrepreneurial orientation, and institutional support. The empirical validation of this integrated framework provides a broader understanding of how MSMEs operating in halal-oriented markets can strengthen sustainable performance while responding to increasingly dynamic and competitive business environments.

CONCLUSION

The findings of this study establish that digital marketing, digital payment, and spiritual entrepreneurship all play meaningful roles in strengthening sustainable business performance among halal MSMEs, while halal certification further shapes these relationships as a moderating factor. The positive effects observed across the three explanatory variables indicate that both technology-oriented capabilities and value-driven entrepreneurial practices are important in supporting sustainability-related outcomes within the halal MSME sector. A particularly important finding is that halal certification enhances the positive influence of digital marketing and spiritual entrepreneurship on sustainable business performance. This result demonstrates the strategic relevance of institutional legitimacy in reinforcing the value of both digital capabilities and ethical entrepreneurial orientations. Taken together, the findings suggest that sustainable business performance among halal MSMEs is more effectively understood as the outcome of an integrated combination of digital capabilities, ethical business practices, and formal mechanisms of halal certification.

THEORETICAL IMPLICATIONS

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This study makes several contributions to the existing literature. First, it broadens the application of the dynamic capabilities perspective by establishing digital marketing and digital payment as organisational capabilities that can facilitate sustainable performance among halal-oriented MSMEs. Second, it adds to the entrepreneurship literature by providing empirical support for spiritual entrepreneurship as an important predictor of sustainable business performance, particularly within contexts where business activities are strongly shaped by values and ethical considerations. Third, the study moves beyond viewing halal certification solely as a compliance mechanism by conceptualising it as a moderating factor. This perspective provides further insight into how institutional legitimacy can interact with technological capabilities and ethical entrepreneurial orientations to influence sustainable business outcomes.

MANAGERIAL IMPLICATIONS

The findings provide several practical implications for owners and managers of halal MSMEs. Firms should consider strengthening their investment in digital marketing and digital payment systems to improve operational efficiency, deepen customer engagement, and sustain competitiveness over the longer term. At the same time, incorporating spiritual and ethical principles into everyday business practices can foster stronger trust-based relationships with customers and other stakeholders, thereby contributing to sustainable performance. The findings also indicate that halal certification should be regarded as a strategic asset rather than merely an administrative obligation. By enhancing business credibility and consumer confidence, certification can increase the effectiveness of both digital initiatives and ethically oriented business practices.

POLICY IMPLICATIONS

From a policy standpoint, the findings emphasise the need for coordinated support mechanisms tailored to the needs of halal MSMEs. Policymakers should pursue digital transformation policies in parallel with initiatives that facilitate access to halal certification. Reducing procedural complexity in the certification process, together with strengthening digital literacy, could enable MSMEs to make more effective use of digital technologies while enhancing institutional confidence in halal products. The findings also provide several stakeholder-specific policy directions within the halal ecosystem.

First, the Indonesian Ministry of Cooperatives and SMEs should develop focused digital transformation programmes that combine foundational e-commerce training with requirements related to halal supply chain compliance. Second, halal certification authorities, including BPJPH, should improve the accessibility of digital certification platforms and reduce procedural barriers faced by micro-enterprises, thereby accelerating their transition towards formal halal legitimacy. Third, digital platform operators and FinTech firms should consider incorporating dedicated halal marketplace functions and affordable QRIS payment solutions designed specifically for small food and beverage businesses. Finally, Islamic financial institutions could utilise transaction records generated through MSMEs' digital payment activities as alternative credit-scoring information, thereby supporting greater digital financial inclusion and facilitating access to financing that is consistent with value-based business principles.

LIMITATIONS AND FUTURE RESEARCH

Several limitations should be acknowledged despite the contributions of this study. First, the cross-sectional research design provides a snapshot of the relationships examined and therefore cannot adequately capture how these relationships develop or change over time. Future investigations could adopt longitudinal designs to examine the evolving effects of digital capabilities and halal certification. Second, the empirical focus is restricted to halal MSMEs operating in the food and beverage sector, which may constrain the generalisability of the findings. Subsequent research could test the proposed model across other halal-related industries and in alternative national settings. Finally, further studies could incorporate additional moderating or mediating mechanisms, including organisational culture and innovation capability, to provide a more comprehensive understanding of the factors shaping sustainable business performance.

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