

External Support and Supply-Side Strategies for Sustaining Halal Tourism: An Integrated Analysis

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Halal tourism expanded rapidly as a specialized segment of the global tourism industry; however, sustaining halal-oriented businesses remained challenging from the providers' perspective. This study examined the effects of entrepreneurs' attitudes and perceived risk on halal tourism product design and business sustainability, as well as the moderating role of external support. Data were collected from 317 halal tourism entrepreneurs in the Special Region of Yogyakarta, Indonesia, using purposive non-probability sampling and analyzed through PLS-SEM. The results showed that attitude positively affected product design ($\beta = 0.358$, $t = 8.292$, $p = 0.000$) but did not significantly influence sustainability ($\beta = 0.058$, $p = 0.298$). Perceived risk did not significantly affect product design ($\beta = -0.046$, $p = 0.282$) but negatively affected sustainability ($\beta = -0.103$, $t = 2.589$, $p = 0.010$). External support significantly moderated the relationship between attitude and both product design ($\beta = -0.098$, $p = 0.000$) and sustainability ($\beta = -0.109$, $p = 0.000$), but did not moderate the effects of perceived risk. These findings indicated that institutional support reinforced positive managerial orientation but did not offset risk-related pressures on sustainability.

Keywords: Attitude; Business Sustainability; External Support; Halal Tourism; Perceived Risk; Product Design

INTRODUCTION

Halal tourism has emerged as a significant and rapidly expanding segment within the global tourism industry, primarily driven by the growing demand among Muslim travelers seeking products and services that comply with Islamic principles (Yulitasari et al., 2021). According to the Mastercard CrescentRating (2023a), the number of Muslim travelers was projected to reach 140 million in 2023 and is expected to increase to 230 million by 2028. Furthermore, the Mastercard CrescentRating (2023b) estimates that the halal tourism market will reach a value of USD 300 billion by 2026, underscoring its potential as a major economic driver for countries aiming to diversify their tourism portfolios.

In capturing this market, the perception of value becomes a crucial determinant in shaping a destination's reputation. As noted by Salhuteru et al. (2021), a good destination image is built through a high perceived value, where tourists feel that the costs incurred are proportional to the beauty and services received. This growth is increasingly intertwined with broader sustainability trends; as highlighted by Hong et al. (2025), strategies for sustainable tourism development are now heavily influenced by consumer behavior within the retail sector, suggesting that ethical consumption, such as that found in fast fashion, is becoming a vital component of the modern traveler's experience.

Indonesia possesses considerable potential to develop the Muslim-friendly tourism market through a wide range of tourism products and experiences. In support of this initiative, the Ministry of Tourism has actively collaborated with the tourism industry to strengthen the halal tourism market in Indonesia. In November 2015, the Ministry of Tourism and Creative Economy launched the Muslim Visitor Guide to Indonesia (Sutono et al., 2019) and has since undertaken several promotional campaigns, including collaborations with social media influencers to position Indonesia as a Muslim-friendly destination. These initiatives have enhanced Indonesia's competitiveness, earning recognition as the Best Muslim-friendly Destination in both 2023 and 2024 (Mastercard-CrescentRating, 2023a).

Despite this impressive growth, ensuring the long-term sustainability of halal tourism remains a critical challenge, particularly from the supply-side perspective, which involves service providers, entrepreneurs, and destination managers. Maesaroh et al. (2024) emphasized that sustainability in halal tourism encompasses not only environmental and socio-cultural dimensions but also economic resilience through product innovation and the design of meaningful travel experiences that appeal to both Muslim and non-Muslim tourists. The supply-side actors play a pivotal role in this process through appropriate halal product design, strategic business operations, and the effective utilization of external support mechanisms such as government policies, financial assistance, and community engagement.

While previous studies have primarily explored demand-side factors, including tourists' motivations, needs, and behavioral characteristics (Maesaroh et al., 2024), research focusing on supply-side dynamics that contribute to halal tourism sustainability remains relatively limited. Some studies, such as those by Aysan & Syarif (2025), Selvira et al. (2024), and Sharin et al. (2024), have examined supply-side perspectives, yet these works largely employ descriptive or qualitative approaches. A systematic literature review by Alam et al. (2024) also revealed that most halal tourism studies from the supply-side perspective adopt qualitative designs, indicating a gap in empirical and quantitative investigations.

Furthermore, research by [Dewi \(2023\)](#) and [Maesaroh et al. \(2024\)](#) suggested that the development of halal tourism in Indonesia must be contextualized within regional dynamics. Certain provinces may be suitable for promoting halal tourism based on local readiness, perceptions, and socio-cultural compatibility. While some regions believe that “Sharia tourism” can coexist without disrupting existing industries or tourist segments, others remain cautious or skeptical. The key lesson from Indonesia’s halal tourism initiatives is that well-structured and inclusive planning communicated effectively across different social and community groups is essential for successful implementation.

However, the research by [Dewi \(2023\)](#) primarily focused on host community perspectives, leaving a research gap concerning the challenges and opportunities from the viewpoint of industry actors, those who directly provide tourism products and services that meet halal criteria. Although the supply-side plays a crucial role in halal tourism development, much of the existing literature still centers on themes such as marketing strategies, customer behavior, and service innovation ([Yuliviona et al., 2019](#)). Factors such as improved infrastructure, human resource readiness, and the hospitality of local communities also influence revisit intentions among Muslim travelers. Additionally, halal food and beverages remain among the most frequently studied supply-side attributes due to their essential role in shaping Muslim tourist satisfaction. From a business-process standpoint, several studies highlight the importance of collaboration between government and local communities for effective promotion and socialization ([Suryanto et al., 2022](#); [Susanti, 2021](#)).

To address these gaps, the present study aims to examine the effects of attitudes and perceived risks on halal product design and business sustainability, while also investigating the moderating role of external support, including assistance from government agencies, financial institutions, training organizations, and local communities. By doing so, this research seeks to offer a more comprehensive understanding of the interconnected mechanisms underlying the sustainability of halal tourism enterprises from the supply-side perspective.

To generate rich and contextually grounded insights, this study focuses on the Special Region of Yogyakarta (DIY), one of Indonesia’s most prominent tourism destinations. DIY was selected for three key reasons. First, it is the leading destination for domestic tourists and the second most visited region by international travelers in Indonesia ([Central Agency of Statistics of DIY \[BPS DIY\], 2024](#)). Second, the region has no documented history of conflict or public controversy related to the development of halal tourism, thereby minimizing potential influences of identity politics. Third, DIY offers a conducive setting for examining supply-side dynamics within a socially harmonious and tourism-oriented environment. Moreover, the region’s creative economy, particularly the fashion MSME sector, serves as a vital economic driver that continues to adapt through digital marketing and market orientation to remain competitive within this ecosystem ([Rifani et al., 2025](#)).

Within this context, the study aims to: (1) analyze the influence of attitudes toward halal tourism on halal product design and business sustainability; (2) examine the impact of perceived risk on halal product design and business sustainability; and (3) assess the moderating role of external support in strengthening or weakening the effects of attitudes and perceived risk on both product design and business sustainability among halal tourism enterprises.

LITERATURE REVIEW

The Supply-Side Perspective in Halal Tourism Development

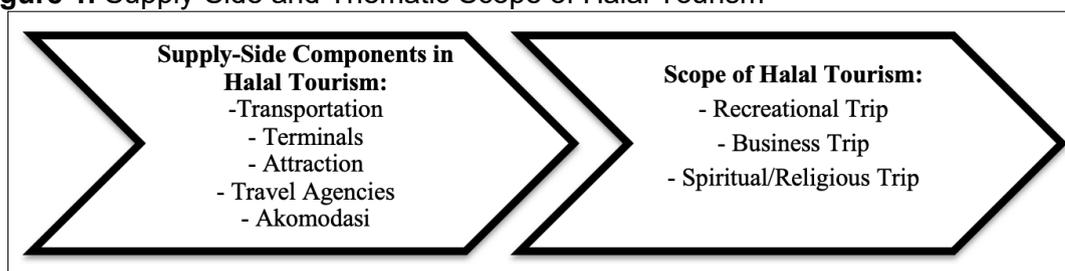
Over the past few decades, halal tourism has emerged as one of the fastest-growing segments in the global travel industry. The increasing number of Muslim travellers and their heightened awareness of Sharia-compliant travel needs have prompted both Muslim-majority and non-Muslim countries to strategically develop halal-friendly destinations. Several examples of best practices illustrate how various nations have enhanced their halal tourism potential. First, Malaysia's Halal Tourism Strategy integrates halal product development, halal certification systems, and institutional support from government agencies such as Tourism Malaysia and the Halal Industry Development Corporation. Second, in the United Arab Emirates and Saudi Arabia, halal tourism ecosystems have been strengthened through comprehensive regulations, infrastructure investments, and collaborations with private-sector partners. Third, Indonesia's Halal Tourism Initiatives focus on developing Muslim-friendly destinations, training micro and small enterprises in halal standards, and promoting halal tourism through international marketing campaigns supported by the Ministry of Tourism.

According to [Battour and Ismail \(2016\)](#), halal tourism encompasses the provision of services and facilities that comply with Islamic principles, such as halal-certified food, access to prayer spaces, and the absence of non-halal activities. Meanwhile, [Hall and Page \(2014\)](#) emphasize that development from the supply-side perspective involves service providers, human resource training, infrastructure readiness, and regulatory frameworks that enable the delivery of Sharia-compliant experiences. Within this framework, the role of the tourism industry becomes fundamental, as it serves as the primary actor responsible for operationalizing halal principles into tangible tourism offerings.

In predominantly Muslim countries such as Indonesia, most tourism enterprises already meet the criteria for halal or Muslim-friendly tourism due to cultural and religious alignment. The Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation ([COMCEC Coordination Office, 2016](#)) conducted a comprehensive study on Halal Tourism or Muslim-Friendly Tourism to examine both demand- and supply-side dynamics among OIC member countries. The findings revealed that tourism enterprises in these countries generally comply with halal tourism standards, particularly in accommodation and culinary services. Moreover, facilities supporting religious practices, such as prayer rooms and services during the month of Ramadan, are consistently provided across most tourism businesses.

These observations underscore the central role of the supply side in sustaining the halal tourism ecosystem. The integration of Sharia-compliant business operations, supportive regulations, and industry government collaboration serves as the foundation for strengthening competitiveness and ensuring the long-term sustainability of halal tourism destinations.

Figure 1. Supply-Side and Thematic Scope of Halal Tourism



Source: COMCEC Coordination Office (2016)

Analysis of the COMCEC Framework and Theoretical Foundation

The analysis conducted by COMCEC remains relevant, as studies on halal tourism in Indonesia continue to focus predominantly on the provision of halal accommodation and food services. [Wazin et al. \(2024\)](#) explain that halal accommodation, the availability of halal food and beverages, human resources, and continuous innovation are critical factors influencing the success of the halal tourism industry. Consistent with earlier findings by [Peristiwa \(2020\)](#), one of the fundamental objectives of halal tourism is the establishment of halal dining facilities. This indicates that tourism enterprises in Indonesia hold a positive attitude toward the development of halal tourism. However, COMCEC also emphasizes that within the recreational segment (see [Figure 1](#)), OIC member countries have not yet fully capitalized on their inherent strength, the possession of a Muslim-friendly environment. Untapped potential lies in the better development of Islamic historical and heritage sites and attractions. In fact, these are the distinctive strengths of OIC countries that could significantly attract Muslim visitors.

This study is grounded in several complementary theoretical perspectives that collectively explain the sustainability of halal tourism from a supply-side approach. These theories provide a coherent conceptual foundation for understanding how internal capabilities, adaptive strategies, stakeholder relationships, and behavioral mechanisms contribute to long-term business continuity in halal tourism.

First, the Resource-Based View (RBV) posits that sustainable competitive advantage is derived from resources that are valuable, rare, inimitable, and non-substitutable ([Barney, 1991](#)). Within the halal tourism context, resources such as halal certification, culturally authentic product offerings, and skilled human capital function as strategic assets that enable firms to differentiate themselves and sustain competitiveness ([Moshin et al., 2020](#)). Product strategy development, as an internal organizational capability, reflects the application of RBV by leveraging these unique resources to enhance performance and long-term sustainability.

Second, Dynamic Capabilities Theory extends RBV by emphasizing an organization's ability to integrate, build, and reconfigure internal and external competencies in response to environmental changes ([Teece et al., 1997](#)). In halal tourism, this perspective explains how businesses continuously adapt their product strategies and operational models to evolving market preferences, regulatory requirements, and competitive pressures. Such adaptive capabilities are crucial for innovation, resilience, and business continuity in a dynamic tourism environment.

Third, Stakeholder Theory highlights the importance of managing relationships with multiple stakeholders, including government agencies, certification bodies, local communities, customers, and suppliers ([Freeman, 2010](#); [Rowley, 1997](#); [Roloff, 2008](#)). From a sustainability perspective, halal tourism enterprises depend on external support and collaboration to create an enabling ecosystem. Active stakeholder engagement

facilitates compliance with halal standards, enhances product quality, improves market access, and ultimately supports sustainable business development.

Finally, the Theory of Planned Behavior (TPB) provides a behavioral lens to explain decision-making processes related to sustainability practices. TPB suggests that behavior is driven by intention, which is shaped by attitudes, subjective norms, and perceived behavioral control (Ajzen, 1985; Fishbein & Ajzen, 1975). Attitudes reflect individuals' evaluations of a behavior, while perceived behavioral control refers to the perceived ability to perform it (Chin, 1998; Perugini & Bagozzi, 2001). In the context of sustainability, individuals may hold positive attitudes yet fail to translate them into action due to limited resources or capabilities. Therefore, perceived behavioral control plays a critical role in strengthening behavioral intentions, including responsible environmental practices within halal tourism operations (Saleem et al., 2021).

Together, the four core theories provide the primary foundation for developing the key constructs of this study, namely attitude, business sustainability, and external support. To further strengthen and contextualize the conceptual framework, several applied theories are also incorporated to capture dimensions that are particularly relevant to halal tourism.

First, Perceived Risk Theory is employed to assess the extent to which individuals perceive uncertainty or potential negative consequences when engaging in halal tourism. These risks may include financial, physical, health, social, or psychological concerns, all of which can influence attitudes and decision-making related to halal tourism offerings (Bauer, 1967; Jacoby & Kaplan, 1972; Roselius, 1971). Incorporating this perspective allows the study to account for risk perceptions that may hinder participation despite positive attitudes.

Second, Value Creation Theory is used to explain how halal tourism products generate value through the integration of sharia-compliant features. These include certified halal food, adequate prayer facilities, gender-segregated amenities, appropriate transportation services, culturally sensitive promotional materials, and the exclusion of non-halal elements. By emphasizing co-created value between providers and consumers, this theory highlights how well-designed halal tourism products can enhance satisfaction, trust, and long-term sustainability (Norman & MacDonald, 2004; Porter, 1985; Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2014).

Finally, the Triple Bottom Line (TBL) framework is adopted to conceptualize business sustainability across economic, social, and environmental dimensions. In the context of halal tourism, this framework is extended to incorporate a spiritual or religious dimension, reflecting the faith-based values that underpin halal practices and consumer expectations. This expanded TBL perspective provides a more comprehensive understanding of sustainability that aligns with the ethical and religious foundations of the halal tourism industry (Slaper & Hall, 2011; Norman & MacDonald, 2004).

Hypotheses Development

Attitude

In the context of halal tourism, attitude represents a general evaluation ranging from negative to positive toward a person, object, group, issue, or concept. Attitude toward halal tourism development signifies an individual's or organization's overall assessment of its importance and potential benefits. A positive attitude is expected to foster behavioral intentions aligned with halal tourism practices. Therefore, this study proposes that positive attitudes toward halal tourism development encourage the creation of halal tourism products or Islamic-themed attractions capable of attracting visitors.

H1: Attitude toward halal tourism development positively influences halal tourism product creation.

Furthermore, positive attitudes are also expected to enhance perceptions of business sustainability. When individuals or businesses maintain favorable views of halal tourism development, they are more likely to believe in its potential success and longevity.

H2: Attitude toward halal tourism development positively influences perceived business sustainability.

Perceived Risk

Perceived risk refers to an individual's subjective assessment of potential losses or adverse outcomes associated with a particular decision or action. It is shaped by personal experience, emotional factors, and contextual conditions, and may not always align with objective risk (Gopinath & Narayanamurthy, 2022). Perceived risk can influence decision-making processes, such as when choosing to purchase a product or service.

In the COMCEC Coordination Office's (2016) analysis, certain segments within the tourism industry expressed concern that advancements in halal tourism might alienate non-Muslim visitors seeking leisure activities such as sunbathing or beach relaxation. Similarly, tourists accustomed to consuming alcoholic beverages might feel uncomfortable in halal tourism destinations. Consequently, tourism enterprises may perceive business risks associated with the shift toward halal tourism development. Based on these arguments, the following hypotheses are proposed:

H3: Perceived risk negatively influences halal tourism product creation.

H4: Perceived risk negatively influences business sustainability.

External Support

External support refers to initiatives such as government policies, financial aid, training programs, and partnerships with local communities that strengthen halal tourism enterprises (Satriana & Faridah, 2018). These support mechanisms help lower barriers to market entry, improve organizational capacity, and provide easier access to halal certification and promotional channels (Maesaroh et al., 2024). Coordinated collaboration among stakeholders is crucial for the sustainable development of the halal tourism sector.

Empirical studies by Samori et al. (2016) revealed that even non-Muslim countries, such as Japan, have benefited from an increasing influx of Muslim tourists due to government initiatives providing Muslim-friendly facilities. Government support and policy incentives, including subsidies for halal certification, play a pivotal role in fostering halal tourism development (Adam & Alarifi, 2021).

Accordingly, this study proposes the moderating role of external support in the relationships between the main constructs, as follows:

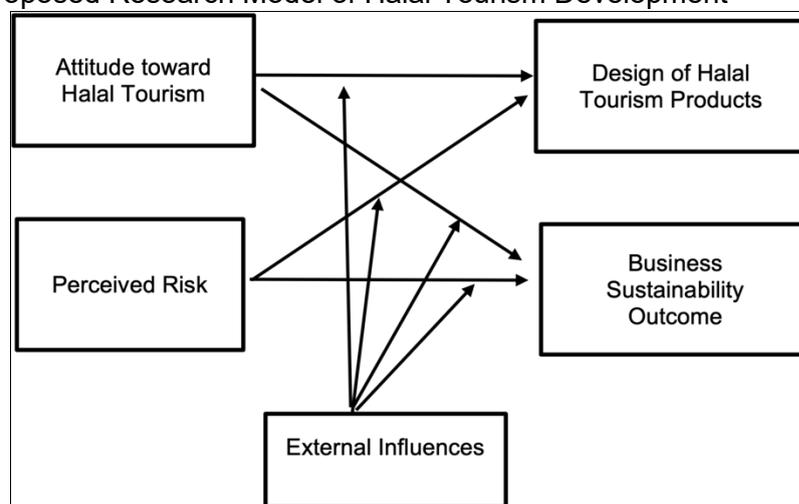
H5a: External support moderates the relationship between attitude toward halal tourism and halal product design.

H5b: External support moderates the relationship between attitude toward halal tourism and business sustainability.

H5c: External support moderates the relationship between perceived risk and halal product design.

H5d: External support moderates the relationship between perceived risk and business sustainability.

Figure 2. Proposed Research Model of Halal Tourism Development



The conceptual framework in [Figure 2](#) illustrates the relationships between key factors influencing halal tourism business sustainability. Attitude toward halal tourism reflects tourists' perceptions and acceptance of halal tourism, which can significantly shape the design of halal tourism products, including travel packages, halal accommodation, food, and prayer facilities. Perceived risk, such as concerns about food, safety, or comfort, may also influence product design, as higher perceived risks encourage tourism operators to enhance halal standards and services. In addition, external influences, including government policies, financial support, training programs, and community partnerships, can affect both product development and overall business outcomes by reducing market entry barriers and supporting capacity development. Ultimately, the design of halal tourism products, in conjunction with tourists' attitudes, perceived risk, and external support, impacts the business sustainability outcomes, encompassing revenue growth, customer loyalty, and the long-term reputation of halal tourism destinations. This framework highlights the interconnected roles of consumer attitudes, risk perceptions, and external support in promoting sustainable halal tourism businesses.

RESEARCH METHOD

Research Design

This study employed a quantitative research design to examine the relationships among attitude toward halal tourism development, perceived risk, halal tourism product design, business sustainability outcomes, and external support. The research focuses on the supply-side perspective of halal tourism development. The population consisted of halal tourism business actors operating in the Yogyakarta Special Region (Daerah Istimewa Yogyakarta/DIY), Indonesia. These actors included owners and managers of accommodation services, travel agencies, culinary businesses, and other tourism-related enterprises that identify with or implement halal-oriented practices.

Population and Sampling

A non-probability purposive sampling technique was applied to ensure that respondents met specific inclusion criteria. Participants were required to (1) be actively involved in managerial or ownership roles, (2) operate within the halal tourism ecosystem in DIY, and (3) possess decision-making authority regarding product development and sustainability strategies. This sampling approach enabled the selection of respondents

with relevant knowledge and practical experience consistent with the objectives of the study.

Data Collection Procedure

Data were collected through a structured online questionnaire distributed via Google Forms between May and August 2025. The online format facilitated broader outreach and efficient data collection across multiple tourism clusters within the region. A total of 317 valid responses were obtained and retained for analysis after data screening procedures. The sample size satisfies the recommended criteria for Partial Least Squares Structural Equation Modelling (PLS-SEM). According to [Hair et al. \(2019\)](#), the minimum sample size in PLS-SEM should be at least five times the number of indicators used in the model and should exceed the minimum threshold necessary for stable estimation. Given that this study utilized 21 measurement indicators, the minimum required sample size was 105 respondents. The final sample of 317 substantially exceeds this requirement, ensuring adequate statistical power and reliable parameter estimation.

Measurement of Variables

The measurement instruments were adapted from established theoretical and empirical sources. Attitude toward Halal Tourism was measured based on constructs derived from the Theory of Planned Behavior and related frameworks ([Ajzen, 1991](#); [Fishbein & Ajzen, 1975](#); [Lee et al., 2018](#)). Perceived Risk was operationalized using validated scales developed by [Featherman & Pavlou \(2003\)](#), [Jacoby & Kaplan \(1972\)](#), and [Roselius \(1971\)](#), capturing financial, performance, social, and regulatory dimensions of risk. Halal Tourism Product Design was measured using indicators grounded in product development and marketing literature ([Cooper, n.d.](#); [Kotler & Keller, 2016](#); [Ulrich & Eppinger, 2016](#)). Business Sustainability Outcome was assessed using constructs adapted from [Baldwin & Gellatly \(2003\)](#), [Watson & Everett \(1996\)](#), and [Zimmerer et al. \(2008\)](#), reflecting long-term economic continuity and operational viability. External Support was measured using indicators adapted from [Chaston \(2000\)](#), encompassing governmental, institutional, and community-based assistance mechanisms.

All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Prior to full distribution, the questionnaire was reviewed to ensure clarity of wording and contextual relevance to halal tourism businesses in DIY.

Data Analysis Technique

Descriptive statistical analysis was conducted to summarize respondent characteristics and to calculate means and standard deviations for each construct. The hypothesized relationships were tested using Partial Least Squares Structural Equation Modelling (PLS-SEM). This method was selected due to its suitability for predictive-oriented research, its ability to accommodate complex structural relationships among latent variables, and its flexibility regarding distributional assumptions ([Chin, 1998](#)).

Data analysis was performed using SmartPLS version 4.0. The evaluation proceeded in two stages: assessment of the measurement model and assessment of the structural model. The measurement model was evaluated by examining indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. The structural model assessment involved analyzing path coefficients, coefficient of determination (R^2), and effect sizes.

Hypothesis testing was conducted using a bootstrapping procedure with 5,000 resamples to generate standard errors and t-statistics. Direct effects (H1–H4) were evaluated using a 5% significance level ($\alpha = 0.05$). However, moderating effects (H5a–

H5d) were assessed using a stricter 1% significance level ($\alpha = 0.01$) to ensure greater confidence in interpreting interaction terms, which are typically more sensitive to sampling variability. Under this criterion, interaction effects were considered significant only when p-values were below 0.01. This decision rule provides methodological consistency in interpreting moderation results, including the rejection of H5d despite its p-value being below 0.05 but above 0.01.

Through this analytical approach, the study systematically evaluated the direct and moderating relationships within the proposed model while maintaining clear statistical decision criteria aligned with the reported findings.

RESULTS

Demographic Profile of Respondents

Table 1. Respondents' Profile

Demographic Profile	Frequency (n=317)	Percentage (%)
Gender		
Male	161	51.00
Female	156	49.00
Age		
25–35 years	146	46.06
36–45 years	106	33.44
46–55 years	50	15.77
>55 years	15	4.73
Business Sector		
Hospitality/Accommodation	58	18.30
Restaurant/Food & Beverage Services	53	16.72
Travel Agency/Tour Operator	36	11.36
Tourism Transportation	47	14.83
Tour Guide Services	31	9.78
Tourist Attractions	27	8.52
Tourism Information Services	45	14.20
Tourism Consultancy/Research	20	6.31
Business Duration		
≤ 5 years	140	44.16
6–10 years	159	50.16
>10 years	18	5.68
Position		
Manager	67	21.14
Junior Staff	68	21.45
Senior Staff	91	28.71
Owner	52	16.40
Director	39	12.30
Educational Background		
High School	35	11.04
Diploma (D3–D4)	21	6.62
Bachelor's Degree (S1)	179	56.47
Master's/Doctoral Degree (S2–S3)	82	25.87
Religion		
Islam	161	50.79
Protestant	38	11.99
Hindu	40	12.62
Buddhist	20	6.31

Catholic	32	10.09
Confucianism	15	4.73
Indigenous Belief	11	3.47

The survey in Table 1 encompassed a total of 317 respondents, with a relatively balanced gender distribution: 51% male and 49% female. The majority of participants were within the 25–35 age group (46.06%), followed by those aged 36–45 (33.44%), suggesting that most respondents were in their economically active years. In terms of the business sector, hospitality/accommodation (18.30%) and restaurant/food service enterprises (16.72%) represented the largest proportions, reflecting a strong concentration on the core segments of the tourism and hospitality industries.

Regarding business experience, respondents with 6–10 years of operation constituted the largest share (50.16%), while 44.16% had been in business for less than five years. This indicates that most participants possessed substantial practical experience and operational familiarity within their respective fields. Senior employees made up the largest group by position (28.71%), followed by junior staff (21.45%) and managers (21.14%), revealing a diverse range of organizational roles across the sample.

In terms of educational attainment, the majority of respondents held a bachelor’s degree (56.47%), with a notable proportion also possessing postgraduate qualifications (25.87%). This reflects a generally well-educated profile among business actors in the halal tourism sector. Finally, the religious composition of respondents was predominantly Muslim (50.79%), followed by Hindu (12.62%) and Protestant (11.99%) participants, demonstrating the multicultural and multireligious character of the sampled population.

Measurement Model

Table 2. Descriptive Statistics, Validity, and Reliability Result

Construct / Item		Loading Factor	Mean Values	SD	Cronbach’s Alpha	CR	AVE
Attitude toward Halal Tourism							
1	The development of Yogyakarta as a halal tourism destination is an appropriate decision.	0.769	0.765	0.043	0.902	0.928	0.722
2	I support the efforts to develop Yogyakarta as a halal tourism destination.	0.897	0.896	0.017			
3	I agree with the development of Yogyakarta as a halal tourism destination.	0.772	0.767	0.040			
4	Yogyakarta will become more resilient if it is developed as a halal tourism destination.	0.906	0.905	0.018			
5	In my opinion, developing Yogyakarta as a halal tourism destination will make it more	0.891	0.890	0.017			

	competitive than other destinations.						
Perceived Risk							
1	The development of halal tourism limits tourism development in Yogyakarta.	0.944	0.941	0.029	0.954	0.966	0.876
2	The development of halal tourism will not be relevant to all tourists.	0.946	0.944	0.027			
3	Developing halal tourism in Yogyakarta may restrict the diversity of tourists visiting the city.	0.930	0.926	0.022			
4	Developing Yogyakarta as a halal tourism destination may constrain innovation in new tourism products.	0.924	0.920	0.029			
Halal Tourism Product Design							
1	Our company consistently studies market preferences among tourists seeking halal tourism products.	0.725	0.718	0.047	0.805	0.866	0.565
2	Our company regularly launches new tour packages that comply with halal tourism standards.	0.852	0.848	0.028			
3	Our company is highly active in developing tourism products that meet halal tourism requirements.	0.740	0.738	0.045			
4	Our company currently targets the halal tourism market segment.	0.720	0.715	0.055			
5	Halal tour packages are now a primary focus of our company.	0.711	0.707	0.050			
External Support							
1	Government support determines the success of halal tourism destination development.	0.841	0.842	0.020	0.798	0.868	0.624
2	Government regulations will	0.675	0.666	0.060			

	effectively encourage the development of halal tourism destinations.						
3	Financial and non-financial assistance from the government is essential for the success of halal tourism destination development.	0.761	0.753	0.048			
4	Tourism industry actors should receive support from external parties to realize halal tourism destinations.	0.868	0.867	0.018			
Business Sustainability							
1	Our company will have a greater ability to attract more tourists if Yogyakarta becomes a halal tourism destination.	0.862	0.860	0.022	0.833	0.890	0.671
2	Our company will attract higher-quality tourists if Yogyakarta is developed as a halal tourism destination.	0.908	0.908	0.012			
3	Our company becomes more competitive as Yogyakarta develops into a halal tourism destination.	0.780	0.777	0.042			
4	Our company can gain customer loyalty if Yogyakarta is established as a halal tourism destination.	0.712	0.704	0.061			

Table 2 presents the descriptive statistics alongside the validity and reliability assessments for the five main constructs of this study: Attitude toward Halal Tourism, Perceived Risk, Design of Halal Tourism Products, External Support, and Business Sustainability. Overall, all constructs demonstrated strong psychometric properties in terms of both reliability and validity. This is evidenced by the Cronbach's Alpha and Composite Reliability (CR) values, all of which exceed the recommended threshold of 0.7, indicating high internal consistency. Similarly, the Average Variance Extracted (AVE) values for all constructs were above 0.5, confirming satisfactory convergent validity.

Among the constructs, Perceived Risk exhibited the highest CR (0.966) and AVE (0.876), suggesting that its measurement items strongly captured the underlying dimensions of perceived risk. The construct Attitude toward Halal Tourism also displayed excellent reliability and validity (CR = 0.928; AVE = 0.722), indicating that respondents generally hold a well-established positive perception toward halal tourism. Meanwhile, the design

of Halal Tourism Products and External Support achieved acceptable AVE values (0.565 and 0.624, respectively), with slightly lower CR values but still within the acceptable range of measurement robustness.

The mean scores of the observed items suggest that most respondents expressed positive agreement with the statements, while the relatively low standard deviations indicate a high level of response consistency. Collectively, these results confirm that all constructs possess adequate measurement quality, providing a solid foundation for subsequent structural model analysis.

Discriminant Validity Assessment

Table 3. Discriminant Validity Testing

Indicator	External Support	Sustainability	Product Design	Perceived Risk	Attitude
DE1	0.841	0.663	0.532	-0.182	0.454
DE2	0.675	0.397	0.456	-0.044	0.447
DE3	0.761	0.494	0.571	-0.068	0.509
DE4	0.868	0.663	0.631	-0.232	0.555
KB1	0.642	0.862	0.517	-0.165	0.445
KB2	0.678	0.908	0.548	-0.164	0.498
KB3	0.504	0.780	0.404	-0.157	0.369
KB4	0.494	0.712	0.558	-0.049	0.482
PER1	0.487	0.484	0.725	-0.055	0.552
PER2	0.574	0.510	0.852	-0.096	0.567
PER3	0.500	0.421	0.740	-0.083	0.473
PER4	0.449	0.479	0.720	-0.061	0.601
PER5	0.599	0.428	0.711	-0.062	0.495
RIS1	-0.161	-0.172	-0.101	0.944	-0.103
RIS2	-0.209	-0.189	-0.110	0.946	-0.038
RIS3	-0.187	-0.124	-0.073	0.930	-0.030
RIS4	-0.083	-0.111	-0.053	0.924	0.010
SK1	0.492	0.443	0.582	-0.032	0.769
SK2	0.556	0.481	0.644	0.000	0.897
SK3	0.475	0.398	0.532	-0.057	0.772
SK4	0.553	0.534	0.638	-0.040	0.906
SK5	0.558	0.463	0.639	-0.086	0.891

Table 3 presents the results of discriminant validity testing based on the cross-loading analysis among indicators and their respective constructs. Discriminant validity is established when each indicator demonstrates the highest loading on its corresponding construct compared to its loadings on other constructs. As shown in the data, all indicators meet this criterion. For instance, indicator SK2, belonging to the Attitude toward Halal Tourism construct, exhibits a loading value of 0.897 on its original construct, which is substantially higher than its cross-loadings with other constructs. A similar pattern is observed for other indicators, such as RIS2 (0.946 on Perceived Risk), PER2 (0.852 on Halal Tourism Product Design), DE4 (0.868 on External Support), and KB2 (0.908 on Business Sustainability), all of which display their highest loading values on their respective constructs.

Moreover, the results suggest a relatively consistent pattern of inter-construct relationships. Notably, External Support demonstrates moderate-to-strong positive correlations with other constructs, particularly with Business Sustainability and Halal Tourism Product Design. This finding reinforces the theoretical proposition that institutional and governmental backing play a crucial role in fostering halal tourism

development. In contrast, the indicators under Perceived Risk exhibit negative or weaker loadings on other constructs, emphasizing that perceived risks may counteract or diminish the positive influences of attitude and external support within the overall model structure.

Collectively, the findings presented in Table 3 confirm that the discriminant validity of the measurement model is well established. Each construct is empirically distinct and conceptually coherent, with indicators demonstrating strong convergence within their respective constructs and minimal overlap across latent variables. These results strengthen the measurement model's robustness and ensure that the structural analysis can proceed on a valid empirical foundation.

Hypothesis Testing

Table 4. Hypothesis Testing

Hypothesis		Original Sample (O)	t-Statistics	p-Values	Conclusion
H1	Attitude toward halal tourism development has a positive effect on halal tourism product design.	0.358	8.292	0.000	Accepted
H2	Attitude toward halal tourism development has a positive effect on business sustainability outcomes.	0.058	1.042	0.298	Rejected
H3	Perceived risk has a negative effect on halal tourism product design.	-0.046	1.078	0.282	Rejected
H4	Perceived risk has a negative effect on business sustainability outcomes.	-0.103	2.589	0.010	Accepted
H5a	External support moderates the relationship between attitude toward halal tourism and halal tourism product design.	-0.098	4.113	0.000	Accepted
H5b	External support moderates the relationship between attitude toward halal tourism and business sustainability outcomes.	-0.109	4.104	0.000	Accepted
H5c	External support moderates the relationship between perceived risk and halal tourism product design.	-0.105	1.685	0.093	Rejected
H5d	External support moderates the relationship between perceived risk and	-0.126	2.218	0.027	Rejected

	business sustainability outcomes.				
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The results of the hypothesis testing presented in Table 4 indicate that four out of the eight proposed hypotheses are supported, while the remaining four are rejected based on the established significance criteria.

The first hypothesis (H1) proposed that attitude toward halal tourism development positively influences halal tourism product creation. The findings reveal an original sample value of 0.358, with a t-statistic of 8.292 and a p-value of 0.000. As the p-value is below the 0.05 threshold, H1 is accepted. This result demonstrates that a more favorable attitude toward halal tourism development significantly enhances the likelihood of designing and developing halal-compliant tourism products.

The second hypothesis (H2), which posited that attitude toward halal tourism development positively influences perceived business sustainability, is rejected. Although the relationship is positive (original sample = 0.058), the t-statistic of 1.042 and p-value of 0.298 indicate statistical insignificance. This suggests that a positive attitude alone does not directly translate into improved business sustainability outcomes.

The third hypothesis (H3) examined whether perceived risk negatively influences halal tourism product creation. The results show an original sample value of -0.046, a t-statistic of 1.078, and a p-value of 0.282. Since the effect is not statistically significant, H3 is rejected. This indicates that perceived risk does not significantly constrain the development of halal tourism products.

The fourth hypothesis (H4) proposed that perceived risk negatively influences business sustainability. With an original sample value of -0.103, a t-statistic of 2.589, and a p-value of 0.010, the relationship is statistically significant at the 5% level. Therefore, H4 is accepted. This finding confirms that higher perceived risk reduces business sustainability performance.

The moderating effects were evaluated using a stricter significance level of 1%. For H5a, which tested the moderating role of external support on the relationship between attitude and halal product design, the interaction term shows an original sample of -0.098, a t-statistic of 4.113, and a p-value of 0.000. As the p-value is below 0.01, H5a is accepted. The negative coefficient indicates that external support weakens the strength of the positive relationship between attitude and product design, suggesting that strong external support may reduce reliance on individual attitudes in shaping product development decisions.

Similarly, H5b assessed whether external support moderates the relationship between attitude and business sustainability. The results (original sample = -0.109; t = 4.104; p = 0.000) are statistically significant at the 1% level. Thus, H5b is accepted. The negative interaction effect implies that external support reduces the magnitude of the relationship between attitude and sustainability outcomes.

In contrast, H5c, which examined the moderating effect of external support on the relationship between perceived risk and product design, is rejected. The original sample value of -0.105, t-statistic of 1.685, and p-value of 0.093 do not meet the required significance threshold. Therefore, external support does not significantly alter the effect of perceived risk on product design.

Finally, H5d tested whether external support moderates the relationship between perceived risk and business sustainability. Although the interaction term shows an original sample of -0.126, a t-statistic of 2.218, and a p-value of 0.027, the effect does not reach the stricter 1% significance criterion applied to moderation hypotheses. Accordingly, H5d is rejected. This suggests that external support does not significantly buffer the negative impact of perceived risk on business sustainability under the specified decision rule.

Coefficient of Determination (R²) Analysis

Table 5. R-Square Test

	R Square	R Square Adjusted
Sustainability Business	0.599	0.593
Product Design Halal Tourism	0.670	0.664

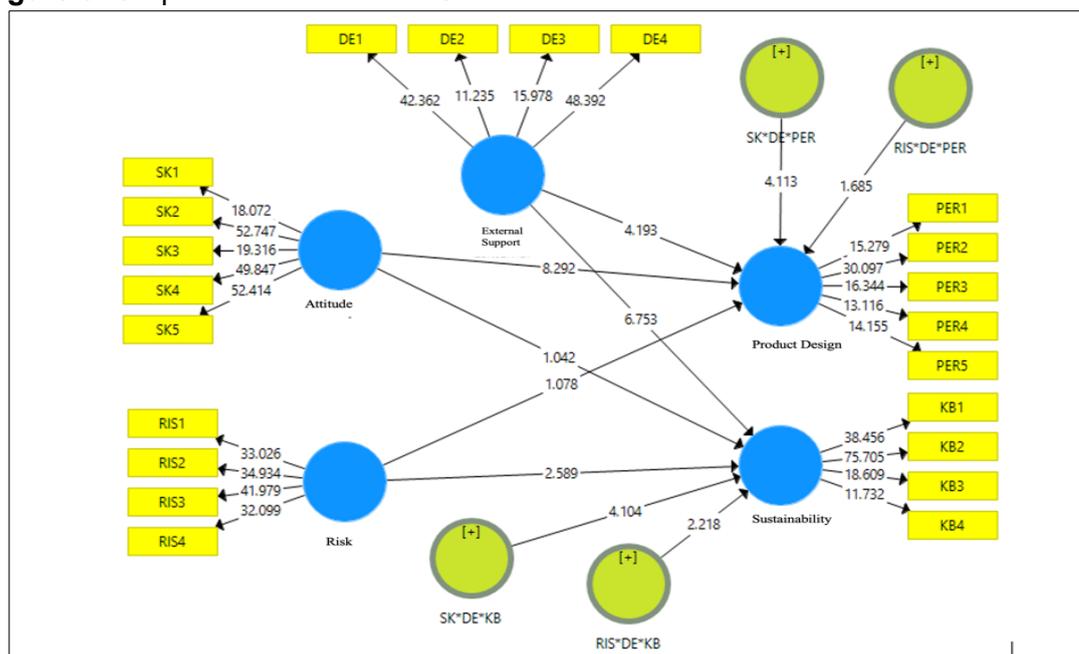
Table 5 presents the results of the coefficient of determination (R²) and adjusted R² analyses for the two dependent variables, Business Sustainability and Halal Tourism Product Design. The R² value indicates the proportion of variance in the dependent variable that can be explained by the independent variables in the model.

For the variable Business Sustainability, the R² value of 0.599 suggests that approximately 59.9% of the variation in business sustainability can be explained by the independent variables, namely Attitude toward Halal Tourism Development, Perceived Risk, and External Support as a moderating factor. The adjusted R² value of 0.593, which accounts for the number of predictors and sample size, remains relatively close to the unadjusted R². This demonstrates that the model possesses strong explanatory power and predictive capability in explaining the sustainability of tourism-related businesses within the halal tourism context.

Meanwhile, the variable Halal Tourism Product Design exhibits an even higher R² value of 0.670, indicating that 67% of the variation in product design can be explained by the model. This relatively high value suggests that the combination of factors such as attitude toward halal tourism and external support exerts a stronger influence on product design decisions than on overall business sustainability. Furthermore, the adjusted R² value of 0.664 shows minimal reduction after accounting for the number of predictors, further reinforcing the robustness and validity of the model.

Taken together, these findings indicate that the proposed model demonstrates satisfactory explanatory strength, with both dependent variables showing substantial levels of variance explained. This provides empirical support for the model's suitability in capturing the dynamics between attitudinal, perceptual, and contextual factors shaping halal tourism development in the business sector.

Figure 3. Graphical Results of the Outer and Inner Model



The structural model in Figure 3 reveals a complex network of factors that collectively determine the long-term success of halal tourism enterprises. A pivotal finding is the powerful influence of Attitude on Product Design (8.292), which confirms that tourist perceptions are the primary drivers behind the customization of travel packages and specialized facilities. While Perceived Risk regarding safety or food quality serves as a motivator for higher standards, its direct statistical path to product design is relatively weak (1.078); however, it maintains a significant direct impact on overall Sustainability (2.589). External Support, encompassing elements like government policy and community collaboration, emerges as a critical catalyst with robust positive effects on both product development (4.193) and business longevity (6.753). Additionally, the presence of significant moderation effects (4.113) suggests that external interventions can effectively amplify the positive relationship between consumer attitudes and product innovation. When these elements, consumer sentiment, risk management, and external backing, are successfully integrated, they culminate in Business Sustainability, driving revenue, fostering loyalty, and securing the destination's reputation.

DISCUSSION

H1: Attitude toward Halal Tourism Development → Halal Tourism Product Design

The analysis revealed that attitude toward halal tourism development positively affects halal tourism product design ($p = 0.000$). This finding confirms that entrepreneurs who hold favorable perceptions toward halal tourism development are significantly more likely to engage in the creation and refinement of halal-oriented products and services. In the DIY context, SMEs with constructive attitudes are better positioned to align their offerings with Muslim traveler expectations, thereby encouraging innovation in tourism packages, accommodation arrangements, culinary services, and supporting facilities. A positive mindset toward halal principles appears to translate into proactive adjustments in product features, service standards, and branding strategies. These findings are consistent with previous studies demonstrating that positive entrepreneurial attitudes stimulate product adaptation, strengthen quality control mechanisms, and encourage continuous innovation in response to evolving market demands (Henderson, 2016). Practical illustrations, such as Hotel Tugu Yogyakarta, reflect this relationship through the provision of halal-certified food, accessible prayer facilities, and systematic staff training,

all of which enhance customer trust and reinforce destination credibility (Abdullah et al., 2023; Moshin et al., 2020). This evidence suggests that attitudinal readiness constitutes a foundational driver of halal product development within tourism SMEs.

H2: Attitude Toward Halal Tourism Development → Business Sustainability Outcomes

Contrary to expectations, attitude toward halal tourism development did not significantly influence business sustainability ($p = 0.298$). Although the estimated coefficient indicates a positive direction, the relationship lacks statistical significance, suggesting that favorable attitudes alone are insufficient to secure long-term sustainability outcomes. Business sustainability within halal tourism encompasses multidimensional components, including economic performance, environmental responsibility, social engagement, and spiritual alignment. While entrepreneurs may intellectually support halal tourism initiatives, translating such support into sustainable operational practices requires additional structural capabilities and resources. Many SMEs continue to face capital constraints, administrative complexities, limited managerial expertise, and insufficient institutional coordination. Field interviews further revealed that although business owners express enthusiasm for halal tourism policies, implementation of sustainable practices, such as systematic waste management, local supplier integration, and formal halal certification, remains uneven. These findings align with Lüdeke-Freund et al. (2024), who emphasize that positive attitudes must be accompanied by adaptive business models, stakeholder collaboration, and ecosystem-level support to generate measurable sustainability outcomes. Therefore, attitude functions as an enabling condition rather than a sufficient determinant of business sustainability.

H3: Perceived Risk → Halal Tourism Product Design

Perceived risk was found not to significantly influence halal tourism product design ($p = 0.282$). Although the coefficient is negative, indicating that higher perceived risk tends to reduce product development efforts, the effect is statistically insignificant. This suggests that concerns regarding market limitations, innovation barriers, potential exclusion of non-Muslim visitors, or regulatory uncertainty do not substantially deter SMEs from engaging in halal-oriented product design. Entrepreneurs appear to adopt a pragmatic and adaptive approach: while they acknowledge financial caution, operational challenges, and ambiguity in demand projections, these risks do not halt incremental product adjustments. Instead, SMEs often implement gradual modifications, such as offering halal-compliant menus or basic prayer facilities, without immediately pursuing full certification or large-scale investment. This finding contributes to the literature by indicating that perceived risk does not necessarily operate as a primary obstacle to innovation among halal tourism SMEs. Rather than withdrawing from product development, entrepreneurs manage uncertainty through staged implementation strategies and cost-sensitive adaptation.

H4: Perceived Risk → Business Sustainability Outcomes

Perceived risk significantly affects business sustainability ($p = 0.010$), indicating that risk considerations exert a stronger influence on long-term viability than on immediate product design decisions. The negative coefficient confirms that higher levels of perceived uncertainty, such as fluctuating demand, inconsistent policy enforcement, reputational concerns, or potential profitability constraints, reduce sustainability prospects. SMEs appear more cautious when evaluating strategic continuity than when modifying product features. Financial vulnerability, narrow profit margins, and limited access to credit intensify the impact of risk perception on sustainability planning. International experiences, such as Japan's development of Muslim-friendly tourism initiatives, demonstrate that inclusive and well-structured strategies can expand rather than restrict market reach, thereby mitigating perceived risks. These findings highlight

that while product-level adjustments may proceed under uncertainty, sustainability-oriented investments require greater confidence, institutional assurance, and long-term stability.

H5a: External Support Moderates Attitude → Product Design

External support significantly moderates the relationship between attitude and product design ($p = 0.000$). However, the negative interaction coefficient indicates that external support weakens the strength of the direct positive relationship between entrepreneurial attitude and halal tourism product design. This suggests that when formal support mechanisms, such as government regulations, financial incentives, structured training programs, and community facilitation, are strong, reliance on individual entrepreneurial attitudes becomes less decisive in shaping product innovation. In other words, external structures partially substitute for internal motivational drivers. Entrepreneurs operating within supportive ecosystems may follow regulatory frameworks or industry guidelines regardless of their initial attitudinal intensity. This interpretation remains consistent with studies emphasizing cross-sectoral collaboration in halal destination development (Henderson, 2016) and institutional facilitation mechanisms (Hakim et al., 2025). Rather than amplifying attitude-driven innovation, external support appears to standardize and formalize product development processes, thereby reducing variability attributable solely to personal disposition.

H5b: External Support Moderates Attitude → Business Sustainability

Similarly, external support significantly moderates the relationship between attitude and business sustainability, yet the interaction effect is negative. This indicates that strong external assistance reduces the magnitude of the relationship between favorable attitudes and sustainability outcomes. When SMEs operate within environments characterized by regulatory clarity, accessible financial instruments, certification guidance, and capacity-building initiatives, sustainability performance becomes less dependent on individual entrepreneurial enthusiasm. External support mechanisms provide structural direction and operational frameworks that guide sustainability practices independently of personal attitudes. Consequently, while positive attitudes remain beneficial, their direct influence diminishes under robust institutional arrangements. This finding underscores the structural role of policy and institutional actors in shaping sustainability trajectories and suggests that ecosystem-level governance may compensate for variations in entrepreneurial motivation.

H5c & H5d: External Support Moderates Perceived Risk → Product Design & Sustainability

External support did not significantly moderate the relationship between perceived risk and halal tourism product design ($p = 0.093$) nor the relationship between perceived risk and business sustainability ($p = 0.027$, evaluated under the applied significance criterion). Although the interaction terms display negative directions, they fail to meet the established threshold for moderation acceptance. This implies that external support mechanisms are insufficient to substantially buffer the detrimental influence of perceived risks. Financial uncertainty, reputational vulnerability, regulatory ambiguity, and operational unpredictability remain deeply embedded in entrepreneurial decision-making processes. Even in the presence of training programs, certification guidance, or promotional incentives, risk perceptions continue to shape cautious sustainability strategies. Limited institutional reach, fragmented policy implementation, and procedural complexity may reduce the capacity of external actors to alleviate entrenched risk concerns. These findings are consistent with Anggraeni (2025), Fawa'id et al. (2025), Gopinath & Narayanamurthy (2022), and Pratiwi et al. (2022), who emphasize that institutional support alone cannot fully eliminate perceived uncertainty without systemic coordination and market stabilization.

Theoretical and Practical Implications

This study offers three principal contributions to the understanding of halal tourism development among SMEs. First, entrepreneurial attitudes significantly enhance halal product design but do not independently secure business sustainability, indicating that attitudinal readiness must be complemented by structural capabilities. Second, perceived risk exerts a stronger influence on sustainability planning than on product innovation, demonstrating that long-term viability decisions are more sensitive to uncertainty than operational adjustments. Third, external support significantly interacts with entrepreneurial attitudes, yet it reduces the strength of attitude-driven effects and does not effectively neutralize risk-based constraints.

From a practical perspective, policymakers should establish coherent regulatory frameworks, transparent certification procedures, accessible financing schemes, and integrated capacity-building initiatives to foster both innovative halal products and sustainable business models. Strengthening institutional coordination, simplifying compliance processes, and improving market communication may help mitigate persistent risk perceptions. SMEs require not only motivational encouragement but also systematic guidance, structured collaboration networks, and stable policy environments to transform halal tourism potential into sustainable economic performance.

CONCLUSION

This study examines the role of supply-side factors in shaping the development and sustainability of halal tourism businesses. By integrating the RBV, Stakeholder Theory, Dynamic Capabilities Theory, and the TPB, the research develops a framework that explains how internal attitudes, perceived risks, and external institutional support interact in influencing business outcomes within halal tourism.

The empirical results offer several important insights. First, business actors' attitudes toward halal tourism significantly influence halal tourism product design. Entrepreneurs who view halal tourism positively are more inclined to adapt their products and services to meet halal standards and consumer expectations. However, these positive attitudes do not directly translate into business sustainability. Long-term continuity appears to depend on broader structural conditions, including financial stability, institutional guidance, and operational capacity.

Second, perceived risk does not significantly affect halal tourism product design, indicating that entrepreneurs remain willing to develop or adjust products despite uncertainty. Nevertheless, perceived risk significantly and negatively influences business sustainability. This suggests that concerns related to financial constraints, regulatory ambiguity, market volatility, and reputational issues weigh more heavily on long-term strategic decisions than on short-term product modifications.

Third, external support from government bodies, industry associations, and local communities significantly interacts with entrepreneurial attitudes in shaping both product design and sustainability outcomes. However, the negative interaction effects indicate that strong institutional support reduces the direct influence of individual attitudes. When regulatory clarity, certification assistance, and structured training are present, business outcomes become less dependent on personal motivation alone. At the same time, external support does not significantly moderate the relationship between perceived risk and either product design or sustainability. Risk perceptions, therefore, remain an influential factor that institutional mechanisms alone cannot fully neutralize.

Taken together, these findings suggest that halal tourism development requires more than positive entrepreneurial intentions. It depends on coordinated institutional frameworks, accessible financing mechanisms, regulatory consistency, and structured capacity-building efforts. For policymakers, accelerating halal certification processes and simplifying compliance procedures would reduce operational uncertainty for SMEs. Educational institutions, NGOs, and community organizations can contribute by strengthening halal literacy and managerial competencies among tourism actors. Financial institutions should consider expanding Sharia-based financing schemes tailored to the needs of halal tourism enterprises. Sustainable growth in halal tourism is therefore shaped by the interaction between entrepreneurial initiative and institutional environment rather than by either element in isolation.

Future research may extend this inquiry by examining perceived risk through a broader ecosystem perspective, including the roles of communities, NGOs, and inter-organizational collaboration in facilitating knowledge transfer, preserving cultural authenticity, and strengthening local economic resilience within halal tourism destinations.

LIMITATION

Several limitations should be acknowledged. First, the study focuses on halal tourism businesses in the Yogyakarta Special Region (Daerah Istimewa Yogyakarta). Although this region provides an appropriate context for examining halal tourism development, its cultural characteristics, regulatory environment, and market conditions may differ from those in other regions. As a result, the generalizability of the findings may be limited.

Second, the cross-sectional research design captures supply-side perceptions at a single point in time. Business attitudes, risk assessments, and institutional arrangements may evolve in response to policy changes, economic fluctuations, or shifts in tourism demand. Longitudinal studies would provide a clearer understanding of how these relationships develop over time and how sustainability outcomes are shaped by dynamic adjustments.

Third, the quantitative approach allows for statistical testing of hypotheses but may not fully capture the contextual nuances underlying entrepreneurial decision-making. Qualitative methods, such as in-depth interviews, case studies, or participant observation, could provide deeper insight into how SMEs interpret perceived risk, institutional support, and sustainability challenges in practice.

Finally, future studies should consider larger and more diverse samples, including cross-regional or cross-national comparisons, to assess the stability of the proposed model across different halal tourism ecosystems. Expanding the empirical scope would strengthen theoretical refinement and offer broader implications for supply-side development in halal tourism.

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DECLARATION OF CONFLICTING INTERESTS

The authors declare that there is no conflict of interest with respect to the authorship or the publication of this article.

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