THE EFFECT OF COMPETITIVE ADVANTAGE ON THE RELATIONSHIP BETWEEN ENVIRONMENTAL UNCERTAINTY AND HOTEL PERFORMANCE IN SAUDI ARABIA

Ibrahim ALSUBAIHI[*]

School of Housing, Building and Planning, Universiti Sains Malaysia, Penang, Malaysia;
Applied College, Jazan University, Jazan, Saudi Arabia, e-mail: ibrahimalsubaihi5@gmail.com

Suraiyati Binti RAHMAN

School of Housing, Building and Planning, Universiti Sains Malaysia, Penang, Malaysia, e-mail: suraiyati@usm.my

Diana Binti MOHAMAD

School of Housing, Building and Planning, Universiti Sains Malaysia, Penang, Malaysia, e-mail: diana_mohamad@usm.my

Abstract: The study explores the relationship between environmental uncertainty, competitive advantage, and hotel performance in the context of 1, 2, and 3-star hotels in Saudi Arabia. Quantitative methodology was chosen as the primary research approach. This approach systematically collects numerical data and statistical analysis to derive meaningful insights. The research collected comprehensive data from a specific target group, namely the 1, 2, and 3-star hotels in Saudi Arabia. The findings reveal a significant mediation effect of competitive advantage on the relationship between environmental uncertainty and hotel performance. This underscores the importance of developing and maintaining a competitive advantage to thrive in an uncertain environment by anticipating and adapting to market changes. This study emphasises the vital role of competitive advantage in bolstering hotel performance amidst environmental uncertainty. Future research should seek broader industry representation. Overall, it enhances our understanding of Saudi Arabia's hospitality sector, offering practical guidance for hotel owners and managers in navigating uncertainties.

Key words: Tourism, Hospitality, Market Uncertainty, Technology Uncertainty, Competitive Uncertainty, Saudi Arabia, Hotels

* * * * * *

INTRODUCTION

Saudi Arabia has been a sought-after destination for both Arab and international tourists, particularly in the realm of "religious tourism" (Assaf and Barros, 2011). The growth of the hotel and hospitality sector is highly competitive due to the increasing influx of tourists, placing Saudi Arabia among the top tourist destinations. With a shift from an oil-based economy to one centred around tourism and business, as emphasised in the new tourism policy developed in 2019 (Abuhjeeleh, 2019), the hotel industry has emerged as a pivotal player in this transformation. While historically specialised in accommodating religious tourists, there is now a need for Saudi Arabian hotels to focus on the luxury and travel segments (Assaf and Barros, 2011). Despite rising occupancy rates, several major regions in Saudi Arabia, such as Riyadh and Jeddah, grapple with performance challenges, primarily due to increased supply and heightened competition. This fierce competition has resulted in a significant drop in average daily rates, causing financial strain for hotels in the country. Notably, one-, two-, and three-star hotels in Saudi Arabia exhibit lower occupancy rates than their four- and five-star counterparts. Five-star hotels, in particular, boasted an impressive 75% average occupancy rate in 2019, outperforming other categories (Ministry of Tourism KSA, 2020). Adding to the complexity, the growing demand for furnished apartments has created a competitive challenge for the local hotel industry. Occupancy rates in furnished apartments, at 65.5%, are rising, posing direct competition to traditional hotels in Saudi Arabia. Consequently, the Saudi hotel industry grapples with market competition and lower overall performance.

The entry of foreign hotels into the Saudi Arabian market has intensified the competitive landscape. Six financially robust foreign hotels have heightened the rivalry among local hotels, bringing established brand names, management expertise, and access to international marketing channels. While this increased competition can raise customer awareness and demand for hotel services, it also pressures local hotels to enhance their services, amenities, and pricing strategies to remain competitive. Smaller or less-established hotels may face challenges in matching the offerings of foreign hotels.

Local and domestic hotels need a well-crafted competitive strategy that utilises internal resources to compete with larger hotels effectively. This involves strategic approaches encompassing branding, technological advancements, niche promotion, pricing tactics, cost control, service quality optimisation, and employee relationships (Gursoy, 2018). However, previous research has often focused on specific external or internal components in their strategic planning approaches. While Porter's five forces and resource-based management theories dominate strategic management discussions, there

---

[*] Corresponding author

remains a concern about these frameworks in the literature. Like many sectors, the hotel industry faces uncertainty in today's global conditions. Environmental uncertainty can negatively impact hotel businesses, and a lack of understanding of how environmental factors influence organisational decisions can exacerbate the situation (Elaraby, 2021; Sunarta et al., 2020). Companies must navigate uncertainty caused by unpredictable environmental changes, including technology, market dynamics, and competition, as failure to do so can lead to declining performance.

Arasli et al.'s (2019) investigation delved into the influence of perceived environmental uncertainty (PEU) on hotel performance (HP), with a focus on the mediating role of balanced scorecard (BSC) adoption. They further explored the moderating effect of organisational structure in the direct and indirect connections between BSC adoption and HP and PEU and HP. The findings indicated that PEU and adopting BSC dimensions, including financial, customer, internal business processes, innovation, and learning, shaped HP. It was established that financial, customer, and internal business processes mediate between PEU and HP. Moreover, the study noted that high decentralisation amplified the impact of financial, customer, and internal business processes on HP. Building upon exploring organisational strategies, Abdulwase et al. (2020) contributed to the literature by examining the relationship between business strategy and its role in establishing a competitive advantage within organisations. The study emphasised the importance of business strategies across different organisational contexts. They identified that a robust business strategy played a crucial role in gaining a competitive edge in the market. Furthermore, the research established that the quality of the strategy had a significant impact on the organisation's market performance, underscoring the significance of effective business strategies for various stakeholders in an organisational context. Hossain et al. (2021) conducted a study in Malaysia to investigate the relationships between absorptive capacity, team culture, competitive intelligence awareness, entrepreneurial behaviour, learning capability, and sustainable competitive advantage within the hotel industry. Their research, founded on quantitative methods and data from Malaysian hotel management staff, revealed that absorptive capacity, team culture, and competitive intelligence awareness significantly influenced learning capability. Learning capability, in turn, significantly affected sustainable competitive advantage, although entrepreneurial behaviour did not exhibit a significant impact. Importantly, the study highlighted the moderating role of innovativeness in the relationship between learning capability and sustainable competitive advantage, providing valuable insights for enhancing long-term survival and competitive strength in the hotel industry.

Pereira-Moliner et al. (2021) delved into evaluating sustainability's impact on cost and differentiation competitive advantages, focusing on uncovering potential synergies between sustainability and overall performance in the hotel industry. Based on data collected from a range of hotels in Spain, their research incorporated Partial Least Squares Structural Equation Modeling (PLS-SEM) to unveil noteworthy positive associations. The study demonstrated the substantial influence of sustainability on cost and differentiation advantages, perceptual performance and key indicators like ADR and RevPAR. Moreover, it identified that hotels surpassing median values in these performance variables exhibited a robust relationship between sustainability and performance, highlighting the synergistic nature of sustainability-performance ties. This comprehensive analysis encompassed economic, environmental, and social sustainability pillars and offered practical insights to enhance sustainable management practices for hotel operators.

Despite numerous studies on performance and competitive advantage in the hotel industry, especially in Saudi Arabia (Al Hanini and Al Oqqaily, 2018; Sirmon et al., 2011), empirical research on this topic is limited. Few studies have focused on hotel performance and competitive advantage in Saudi Arabia. This study aims to address this gap by investigating the factors influencing the performance and competitive advantage of Saudi Arabia's hospitality industry.

While various studies have highlighted the importance of performance and competitive advantage in the hotel industry for achieving organisational goals (Al-Alak and Tarabieh, 2011; Alkhazali et al., 2015; Yaseen et al., 2015), limited research has explored the factors influencing both these aspects. Despite numerous studies on various aspects of the Saudi Arabian hotel sector, none have effectively isolated the factors impacting performance and competitive advantage (Matar et al., 2018). This study aims to fill a gap in the existing literature by investigating the intricate dynamics among environmental uncertainty, competitive advantage, and hotel performance within the specific context of 1, 2, and 3-star hotels in Saudi Arabia. Specifically, our primary objective is to explore the mediating role of competitive advantage in shaping the relationship between environmental uncertainty and hotel performance.

LITERATURE REVIEW
1. Competitive Advantage in the Hotel Industry

Competitiveness initially focused on nation-to-nation rivalry (Porter, 1998), but it has since become a central topic in management research, particularly within industries like hospitality (Sin and Jusoh, 2019). Hotel competitiveness studies aim to pinpoint influencing factors, with brand image, customer happiness, service quality, and productivity emerging as critical determinants (Al-Ababneh et al., 2018; Mohammed and Rashid, 2018; Tavitiyaman et al., 2018). Assessing hotel performance and competitiveness has employed various methods, from Data Envelopment Analysis (DEA) to Confirmatory Factor Analysis (CFA) and Grey Relational Analysis (GRA). Fuzzy numbers have even been used for service quality evaluation. However, there remains a need for a comprehensive system to evaluate multiple hotel attributes and their specific benefits. Given the significance of Saudi Arabia's hotel industry in the nation's economy, understanding competitive advantage is paramount in the face of intensified competition, with Total Quality Management (TQM) and responsible innovation identified as influential factors. Nonetheless, there is limited literature on competitive advantage within Saudi Arabian hotel businesses. This study fills this void by examining competitive advantage in the local context, considering environmental factors and competition's impact on hotel performance. In summary, while past research has highlighted factors affecting hotel competitiveness and assessed performance, a comprehensive framework for evaluating multiple attributes is

needed. The Saudi Arabian hotel industry plays a crucial role, and understanding competitive dynamics and drivers is essential. This study addresses these gaps, providing industry practitioners and policymakers valuable insights.

2. Environmental Uncertainty and Competitive Advantage
2.1. Technological Uncertainty and Competitive Advantage

Technological uncertainty is a critical factor that exacerbates information asymmetry between managers and shareholders (Drnevich and West, 2023; Song and Montoya-Weiss, 2001). In sectors characterised by high technological uncertainty, accurately predicting specific product and process technologies becomes increasingly challenging (Ragatz et al., 2002). Consequently, businesses struggle to select the most suitable strategic alternatives. Even if a company successfully enhances its service goods or process technologies, unforeseen shifts in the industry's technological landscape can rapidly diminish its competitive advantage (Kor and Mahoney, 2005). This underscores the vulnerability of businesses operating in uncertain technological environments. Additionally, uncertain technological landscapes present managers with additional challenges. Monitoring and evaluating managerial tasks become more complex and less predictable in such conditions. This complexity poses a dilemma for shareholders as they grapple with assessing whether managers could have anticipated changes in industry technology trends and adjusted the company's technology strategy accordingly. These challenges, coupled with bounded rationality and information asymmetry, contribute to shareholders' difficulties in evaluating the quality of strategic decisions and managerial performance (Williamson, 1996).

The rapid transmission of information facilitated by the internet plays a central role in transforming the hospitality industry, revolutionising services, organisational structures, and client-service provider dynamics. Consumers can instantly access information through fast connections, reliable networks, user-friendly interfaces, and immersive virtual reality experiences. Technologies like intelligent agents and advanced filtering mechanisms enable efficient processing of vast data volumes (Raghavendra, 2020). Organisations that adapt to technological advancements in this competitive environment gain a significant competitive edge (Ravichandran, 2018). Technological adaptability has become pivotal for hotels worldwide as customers increasingly gravitate towards easily accessible establishments. According to Ezzaouia and Bulchand-Gidumal (2020), information technology profoundly influences the hotel industry, impacting areas such as marketing, managerial and operational decision-making, employee communication, productivity enhancement, and competitive advantage.Therefore, this study aims to bridge the literature gap related to technological uncertainty by developing a model that links hotels' competitive advantage with technological uncertainty in Saudi Arabia. By combining the Resource-Based View (RBV) and contingency theory, this research sheds light on the intricate relationship between technological uncertainty and competitive positioning within the Saudi Arabian hospitality industry.

1. Competitive Uncertainty and Competitive Advantage

Firms facing ambiguity must decide whether to act immediately or wait for ambiguity resolution, particularly when significant "first mover advantages" are at stake in the industry. These advantages include learning curve effects, client loyalty, patent protection, and resource acquisition (Zhang and Song, 2020). Acting promptly entails higher risks, especially for risk-averse companies (Oliver and Velji, 2019). Hence, industry pioneers often attract venture capital funding and exhibit lower risk aversion than traditionally funded businesses. When substantial first-mover advantages are absent, a company should act when it prefers a particular alternative and can influence how uncertainty is resolved to make that alternative a reality. The motivation for swift action increases with more competitors. In scenarios with multiple competitors, the timing and amount of investment become crucial, especially in R&D races (De Waegenaere et al., 2017). As competition intensifies, there is a stronger incentive to focus rather than hedge. Therefore, companies achieving their goals in this competitive and unpredictable environment gain a competitive edge (Yasar and Kiraci, 2017).

Despite limited research on the relationship between competitive uncertainty and competitive advantage, evidence suggests that environmental uncertainty's negative aspects can hinder small business performance (Huang et al., 2023; Yan and Yan, 2017). Response uncertainty negatively correlates with firm performance, with distinct uncertainty affecting performance differently (Afshar Jahanshahi, 2016). In the hospitality sector, competition significantly shapes organisational competitive advantage (Darvishmotevali et al., 2020). This study aims to contribute to understanding competitive uncertainty's role as a predictor of competitive advantage in the Saudi Arabian hotel industry.

2. Market Uncertainty and Competitive Advantage

Global competition drives executives to adapt for a competitive edge amidst changing market dynamics (Huang et al., 2020; Sazegar et al., 2018; Westphal and Zhu, 2019). Executives often adjust strategies through downsizing, repositioning, niche targeting, portfolio changes, and strategic partnerships (Zairi, 1996). Such actions are prevalent, with reorganisation observed in over half of Fortune 500 companies in the 1980s. Market dynamics are explored through various frameworks like the resource-based view (RBV), strategic group approach, and customer or demand-side approach (Kim and Canina, 2011). RBV considers similar resource-equipped enterprises as competitive threats, while the strategic group approach focuses on fierce competition among similar-model businesses. The customer or demand-side approach defines markets based on consumer demands, characterising rivals by supply-side traits (Kim and Canina, 2011). Despite the uncertainty, these frameworks apply to the hotel industry across global and local market layers. Contingency theory highlights how organisations differ due to environmental factors, leading managers to choose context-appropriate tactics (Criado-Perez et al., 2023). Enz (2010) distinguishes between customer-oriented firms, prioritising customer satisfaction and retention, and competitor-oriented firms, emphasising competitor monitoring and outsmarting. Thriving in volatile markets requires balancing customer and supplier demands. Market uncertainty stemming from shifting consumer preferences, technological

advancements, and competitor positioning impacts management and performance goals (McMullen and Shepherd, 2006). This study seeks to enhance our understanding of how market uncertainty influences competitive advantage.

3. Competitive Advantage and Hotel Performance

Existing literature extensively highlights competitive advantage's positive impact on firm performance, enabling firms to surpass their competitors (Abdolshah et al., 2018; Enz, 2010). This study adds to the literature by asserting that competitive advantage indirectly boosts firm performance and elevates market performance in the hotel industry. Market performance refers to a business's ability to retain customers through superior products and services, commonly measured by customer loyalty, product/service quality, customer retention, and satisfaction (Salisu and Goni, 2019). Competitive advantage means offering customers innovative, cutting-edge, high-value products, leading to increased customer satisfaction and loyalty, as customers perceive the offering as high-quality when it delivers greater value (Zeithaml, 1988).

High service quality and customer satisfaction directly enhance customer loyalty (Porter and Millar, 1985), resulting in lower costs for serving existing customers and an enhanced company reputation. This, in turn, facilitates attracting new customers, introducing new products, and adapting to environmental changes. Interactions between staff and customers are particularly significant in-service industries like the hotel sector. According to Anderson et al. (1997), service quality and customer satisfaction are key drivers of the relationship between competitive advantage and performance, meaning that differentiation advantages indirectly enhance business performance.

4. Hypothesis Development

Ongoing changes in the volatile and uncertain business environment raise questions about how organisations can succeed and innovate under such conditions. Contingency theory suggests that organisations considering unstable environmental factors like competitors, technology, resources, and consumers are better equipped to make decisions amid uncertainty (Darvishmotevali et al., 2020). Strategies aligning with the environment's stability, complexity, and organisational challenges tend to be more effective (Donaldson, 2001). Flexible organisations outperform rivals and handle volatility by swiftly adapting to changes, emerging market opportunities, and customer demands (Sazegar et al., 2018). Competitive advantage significantly impacts various areas, including organisational performance, service recovery prediction, success, excellence, human resource productivity, and sustainability (Anwar et al., 2018; Yang et al., 2018). Competitive advantage mediates organisational learning and performance, especially in highly competitive and dynamic contexts (Abolfazl and Mehrdad, 2016). Organisations must proactively respond to changes in competitive contexts for sustainability and profitability. Removing uncertainty as a barrier can enhance employee engagement and empowerment, leading to the following proposed hypotheses:

H1: Competitive advantage mediates the relationship between technology uncertainty and hotel performance in Saudi Arabia.

H2: Competitive advantage mediates the relationship between market uncertainty and hotel performance in Saudi Arabia.

H3: Competitive advantage mediates the relationship between competitive uncertainty and hotel performance in Saudi Arabia.

MATERIALS AND METHODS

This study adopts a quantitative method based on previous positivist investigations, which clearly understand how the phenomenon will likely behave. Numerous studies in the hospitality industry have also utilised the quantitative technique, further supporting its suitability (Al-Hazmia, 2020; Davahli et al., 2020; Mohamed, 2021). This study follows a positivist, empirical, and quantitative research approach. It assumes the existence of laws and principles governing the functioning of the World and aims to identify and describe these principles through data collection. Statistical methods with a strong foundation and evidential support will be employed to analyse the collected data, enabling rigorous analysis and interpretation. Figure 1 visually represents the research process undertaken to attain the study's objectives. The journey commences with an extensive literature review, which serves to identify the key variables under examination and formulate the research hypotheses. Subsequently, the research team determined the sample size through a method tailored to the study's requirements and crafted a comprehensive survey questionnaire. This instrument was subsequently administered to the specified target population, with diligent attention to collecting and validating the responses received. Following this data-gathering phase, an in-depth analysis was conducted, and the findings were thoughtfully presented and discussed. Lastly, the study's culmination involved drawing concise conclusions and offering valuable recommendations.
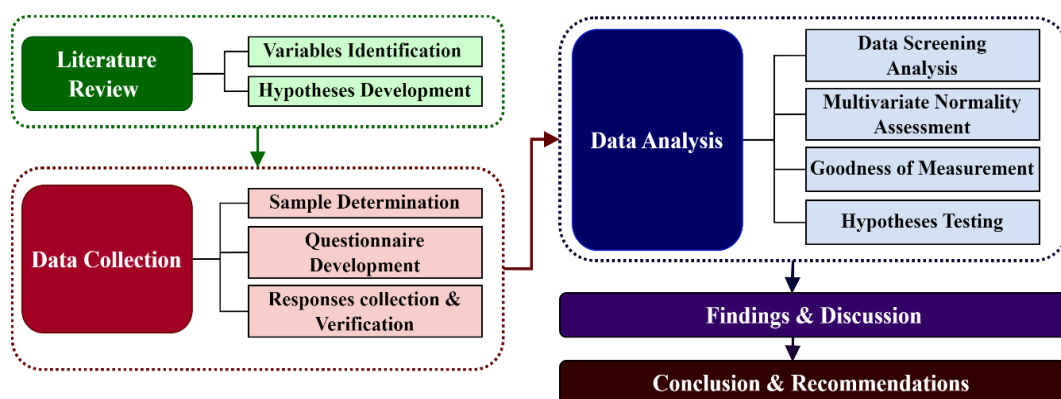

Figure 1. Research flow chart

1. Research Instrument
1.1. Questionnaire Design

The questionnaire was carefully formulated to address all research questions and hypotheses. The questionnaire consists of four parts. Part 1 encompasses demographic information, including gender, age, position, experience, type of lodging, lodging scale, location, hotel size, year of operation, and booking system (self-constructed).

Part 2 covers the independent variables, which include three sections: Section 2A focuses on technology uncertainty, Section 2B on market uncertainty, and Section 2C on competitive uncertainty (closed-ended).

Part 3, Section 3D, pertains to the mediator variable: competitive advantage (closed-ended). Lastly, Part 4, Section 4E, addresses hotel performance, the dependent variable measured using a five-point Likert scale.

1.2. Measurements of Research Variables

This section outlines the sources of measurement items for the questionnaire's study variables. Existing measures were adapted from previous studies. Table 1 presents the measurement items for each variable.

Table 1. Adopted Items for Technology Uncertainty

Variable	Code	Item Questions
Technology Uncertainty TU	TUI	Technologies are changing rapidly in our hotel.
	TU2	Technological changes provide big opportunities.
	TU3	It is difficult for us to predict the future technology for the hotel industry.
	TU4	Our hotel always makes new ideas to adapt to technological advancement.
	TU5	Technological developments in our hotel are relatively minor.
	TU6	Our hotel applies frequent technology improvements to adapt to the technology revolution.
Market Uncertainty (MU)	MUI	Clients' preference in our hotel has been changing over the years.
	MU2	Clients tend to look for new products and services.
	MU3	Our clients are very concerned about market price value.
	MU4	New emerging markets prefer service and product value.
	MU5	Our clients maintain the same preferences over the years.
	MU6	The marketplace in the hotel hospitality industry is uncertain and hard to forecast.
Competitive Uncertainty (CU)	CU1	The competition in the hotel industry in our area is challenging.
	CU2	The hotel competitors show aggressive promotions.
	CU3	The hotel competitors respond to market demand.
	CU4	Price competition is a competitive advantage of our hotel.
	CU5	Establishing a new hotel (1-3 stars) is expected in this area.
	CU6	Our competitors are weaker than us.
Competitive Advantage (CA)	CAI	Our hotel always ensures that the service and product quality match the market demand.
	CA2	Our hotel always adopts Research and Development (R&D) to improve service quality.
	CA3	Our hotel continuously improves its managerial capability to ensure hotel performance.
	CA4	Our hotel has improved the profit margin from time to time.
	CA5	Our hotel strategies the corporate image as our branding.
	CA6	Our hotel has adopted competitive advantage values in ensuring the hotel's performance.
Hotel Performance (HP)	HP1	Our hotel adopted the best services for our clients
	HP2	Our hotel always meets the client's satisfaction level with our services.
	HP3	Our hotel always ensures that employee performance achieves the key performance index.
	HP4	Our hotel's annual occupancy rate consistently achieved the target.
	HP5	Our hotel's net profit after tax is competitive.
	HP6	Our hotel's return on investment achieved the target yearly.
Adopted from: (Chang, 2011; Darvishmotevali et al., 2020; Tavitiyaman et al., 2011)		

Technology uncertainty, the inability to predict aspects of a firm's technological environment, was measured using a questionnaire inspired by Darvishmotevali et al. (2020), which included six selected inquiry items. Market uncertainty, driven by factors beyond a firm's control, was assessed based on Burgers et al. (1993) and Darvishmotevali et al. (2020). Six suitable inquiry items from section 2A of the questionnaire were used. Competitive uncertainty, focusing on unexpected events and competitors' characteristics, strategies, and reactions, was measured using items from Darvishmotevali et al. (2020), comprising six items. Competitive advantage, related to cost-effective product/service production, was measured using six items adapted from Chang (2011). Hotel performance, encompassing various factors related to a hotel's effectiveness, was assessed using a five-point Likert scale with six statements adapted from Tavitiyaman et al. (2011).

2. Population and Sample Size Determination

Determining the appropriate sample size is critical for obtaining accurate results in this study, which focuses on three-star, two-star, and one-star hotels in Saudi Arabia. While the exact population size of managerial-level employees is unknown, an estimated 11,365 individuals were derived, assuming an average of five top management employees per hotel.

To ensure a representative sample, 500 questionnaires were distributed. This sample size aligns with established guidelines. According to Kitchenham and Pfleeger (2002), a sample of at least 384 units is acceptable for populations exceeding 1,000,000 units, with a 95% confidence interval. Additionally, applying the "ten-times rule" by Gefen and Straub (2005), which suggests a minimum sample size of ten times the highest number of predictors, a range of 200-500 samples is considered adequate, given four predictors for both the dependent (hotel performance) and independent

variables (technology uncertainty, market uncertainty, competitive uncertainty, and competitive advantage). Stratified sampling was employed, dividing the population based on hotel rating stars and location.

The distribution of questionnaires was proportional, resulting in 360 in Makkah, 90 in Madinah, 20 in the Eastern region, and 15 in Riyadh and Jazan. This approach ensures representation across strata and minimises bias, as detailed in Table 2. The study aims to collect data from 375 questionnaires, thoughtfully distributed among different hotel rating stars and locations, guided by established sample size principles and stratified sampling techniques.

Table 2. The strata of the research sample

Region	Three Star	Two Star	One Star	Total	Percentage	Questionnaires Distributed
Makkah	331	206	1,041	1578	72.9	360
Madinah	56	65	286	407	18.8	90
Eastern	34	20	16	70	3.2	20
Riyadh	27	14	13	54	2.4	15
Jazan	9	18	28	55	2.5	15

3. Data Collection and Analysis Procedures

The online survey link was sent to selected hotels based on the sampling frame, utilising Google Forms to collect responses for all research questions. The intended respondents were managers or owners of three-star and lower-rated hotels in the five main regions of Saudi Arabia. The questionnaire, provided in English, was accompanied by a cover letter explaining the research's objectives and significance. A gentle reminder was sent after one month to encourage participation. However, due to online survey limitations, achieving the desired sample size within each stratum and region proved challenging. As a result, additional efforts were made to redistribute the survey to stratified hotels based on star ratings in Jazan, Riyadh, and the Eastern Border, ensuring representation and encouraging participation.

For data analysis, SPSS software (Statistical Packages for Social Sciences) and partial least squares (PLS) analysis were employed to align with the study's goals. SPSS facilitated demographic, descriptive, validity, reliability, and multiple regression analyses. PLS analysis, chosen for its versatility in handling various data types and accommodating reflective and formative constructs, provided insights into construct relationships and predictions. It also emphasised explaining variances, which are crucial for drawing meaningful conclusions. The study obtained a comprehensive understanding of the data through these analytical techniques, enabling the exploration of relationships and construct validation.

RESULTS AND DISCUSSION
1. The Data Screening Analysis

Thorough preliminary data screening is crucial in quantitative surveys to ensure reliable and meaningful results, as neglecting this step can significantly impact the quality of analysis (Yuan et al., 2006). This study employed various data screening procedures, including handling missing data, identifying influential data points, and detecting high correlations among variables through multicollinearity testing. These rigorous measures improved data quality, resulting in accurate and trustworthy results. These steps were essential for maintaining the findings' integrity and ensuring the analysis output's reliability.

1.1. Missing Value Analysis

Missing data is a common research concern, and its impact varies depending on its extent. In this study, the missing data amounted to only 0.04%, considered non-significant and below the acceptable threshold of 5%. To address this, the researcher used the mean series method, recommended for random, non-systematic missing data (Tabachnick and Fidell, 2007). Properly handling missing data ensures the validity and reliability of the analysis results.

1.2. Outliers

Outliers in statistics are data points significantly deviating from others, often due to measurement variability or experimental errors. In this study, case-wise diagnostics and separate linear regression analyses identified outliers for the four endogenous variables, using standardised residual values exceeding -3.3 or +3.3 as the criterion. None of the data points fell beyond this range, adhering to Pallant's (2013) recommendation to retain identified outliers as valid responses. Additionally, Cook's Distance assessed influential points, with a threshold of 1.0 indicating significance. No cases exceeded this threshold, ensuring no data points were excluded based on outliers. These outlier detection procedures maintain comprehensive analysis while preserving data integrity.

2. Multivariate Assessment of Normality

A multivariate assessment of skewness and kurtosis was conducted following Hair Jr et al.'s (2017) recommendations to assess data normality using the software available at https://webpower.psychstat.org/models/kurtosis/results. Results showed that the data did not follow a multivariate normal distribution, indicated by significant values for Mardia's multivariate skewness ($\beta = 5.36$, $p<0.01$) and Mardia's multivariate kurtosis ($\beta = 47.45$, $p>0.01$), as displayed in Table 3.

Consequently, the study opted for SmartPLS, a nonparametric analysis software, due to the unique characteristics of the research data. Since the study focuses on a specific subset of three-star hotels and below in Saudi Arabia, the sample size is expected to be small, and variations in responses from hotel managers and owners could lead to non-normal data distribution. SmartPLS, as a nonparametric analysis software, is well-suited for such scenarios, providing reliable results and facilitating result interpretation with its user-friendly interface and graphical output, as employed by Ramayah et al. (2017). By using SmartPLS, the study addresses data non-normality and ensures the robustness of results.

Table 3. Multivariate Normality

Variables	Skewness	SE-skew	Z-skew	Kurtosis	SE-Kurt	Z-Kurt

Variables	Skewness	SE-skew	Z-skew	Kurtosis	SE-Kurt	Z-Kurt
C.A	-1.131	0.158	-7.167	2.650	0.314	8.432
CU	-1.021	0.158	-6.468	1.832	0.314	5.828
HP	-0.002	0.158	-0.012	-0.240	0.314	-0.763
MU	-1.384	0.158	-8.773	3.623	0.314	11.527
TU	-0.933	0.158	-5.916	1.385	0.314	4.405

Sample size: 238; Number of variables: 5; Univariate Skewness and Kurtosis

Mardia's Multivariate Skewness and Kurtosis

	b	z	p-value
Skewness	5.361045	212.65479	0
Kurtosis	47.451891	11.48008	0

3. Goodness of Measurement

In research, assessing measurement quality is essential. Construct validity ensures that the measurement aligns with the variables, while reliability assesses consistency. Methods like factor analysis and structural equation modelling gauge construct validity, while measures like Cronbach's alpha evaluate reliability.

Evaluating construct validity and reliability is vital for measurement quality. High construct validity and reliability lead to consistent and accurate results, enhancing the study's validity and decision-making. Rigorous assessment ensures measurement model quality, fostering meaningful and trustworthy study conclusions.

3.1. Construct Validity

Evaluating measurement model reliability and validity is crucial for result accuracy. Construct validity, assessing compatibility between the instrument and variables, and reliability, measuring measurement consistency, are vital (Sekaran and Bougie, 2010). Construct validity often uses factor loadings, with values above 0.50 considered acceptable (Hair Jr et al., 2014). This study adopted a 0.50 cutoff (Chin, 1998) and removed items TU5, MU5, CU6, HP4, and HP5 due to low factor loadings. Cross-loadings in Table 4 depict item relationships with intended constructs. Bolded items in Table 8 have sufficient factor loadings. All "competitive advantage" items explained the variable well. "Competitive uncertainty" had one item below the cutoff. "Hotel performance" removed items 4 and 5. "Market uncertainty" removed item 5. "Technology uncertainty" removed item 5. This analysis assures construct validity, ensuring the model accurately measures variables.

Table 4. Factor Loadings

Constructs	CA	CU	HP	MU	TU
CA1	0.565	0.372	0.341	0.364	0.379
CA2	0.666	0.474	0.166	0.392	0.322
CA3	0.715	0.448	0.255	0.433	0.303
CA4	0.674	0.433	0.239	0.349	0.311
CA5	0.736	0.524	0.123	0.419	0.432
CA6	0.703	0.366	0.27	0.463	0.322
CU1	0.453	0.669	0.289	0.527	0.383
CU2	0.45	0.737	0.142	0.367	0.278
CU3	0.423	0.666	0.245	0.402	0.262
CU4	0.431	0.627	0.152	0.34	0.292
CU5	0.384	0.623	0.013	0.295	0.254
HP1	0.205	0.181	0.62	0.277	0.219
HP2	0.315	0.274	0.793	0.235	0.276
HP3	0.184	0.057	0.633	0.216	0.28
HP6	0.063	0.021	0.567	0.034	0.09
MU1	0.462	0.454	0.285	0.731	0.443
MU2	0.428	0.436	0.26	0.778	0.448
MU3	0.428	0.424	0.27	0.732	0.446
MU4	0.408	0.426	0.204	0.729	0.331
MU6	0.37	0.308	0.127	0.541	0.225
TU1	0.366	0.301	0.235	0.318	0.698
TU2	0.369	0.289	0.42	0.362	0.772
TU3	0.246	0.188	0.009	0.252	0.528
TU4	0.365	0.334	0.263	0.409	0.691
TU6	0.374	0.374	0.236	0.483	0.692

3.2. Convergent Validity

Convergent validity examines correlations within a single construct involving factor loading, average variance extracted (AVE), and composite reliability (CR) (Hair Jr et al., 2014). AVE, representing item variance, should be 0.5 or higher, met in this study. CR values, assessing internal consistency, exceeded the 0.70 threshold (Nunnally, 1978), ranging from 0.70 to 0.99. Table 5 summarises the convergent validity results, meeting all criteria. For "Competitive Advantage," Cronbach's alpha was 0.763, CR was 0.836, and AVE was 0.561. "Competitive Uncertainty" had alpha at 0.784, CR at 0.899, and AVE exceeding the minimum cutoffs as shown in Figure 2. These results confirm construct reliability and convergent validity, assuring accurate measurements for further analysis.

Table 5. Convergent Validity

CA: competitive advantage, CU: competitive uncertainty, HP: hotel performance, TU: technology uncertainty, MU: market uncertainty

Variable	Item	Loadings	Cronbach's Alpha	CR	AVE
CA	CA1	0.565	0.763	0.836	0.561
	CA2	0.666			
	CA3	0.715			
	CA4	0.674			
	CA5	0.736			
	CA6	0.703			
CU	CU1	0.669	0.784	0.899	0.543
	CU2	0.737			
	CU3	0.666			
	CU4	0.627			
	CU5	0.623			
HP	HP1	0.620	0.759	0.827	0.508
	HP2	0.793			
	HP3	0.633			
	HP6	0.567			
MU	MU1	0.731	0.744	0.831	0.500
	MU2	0.778			
	MU3	0.732			
	MU4	0.729			
	MU6	0.541			
TU	TU1	f	0.707	0.810	0.564
	TU2	0.772			
	TU3	0.528			
	TU4	0.691			
	TU6	0.692			
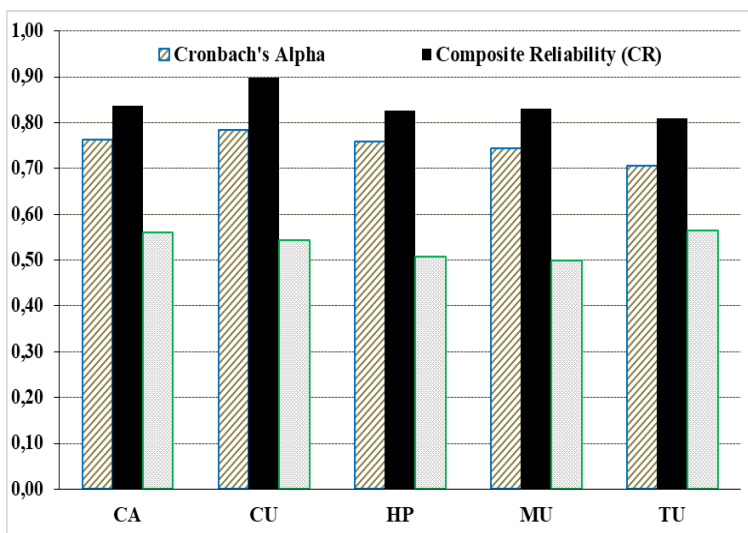
Figure 2. Convergent validity results
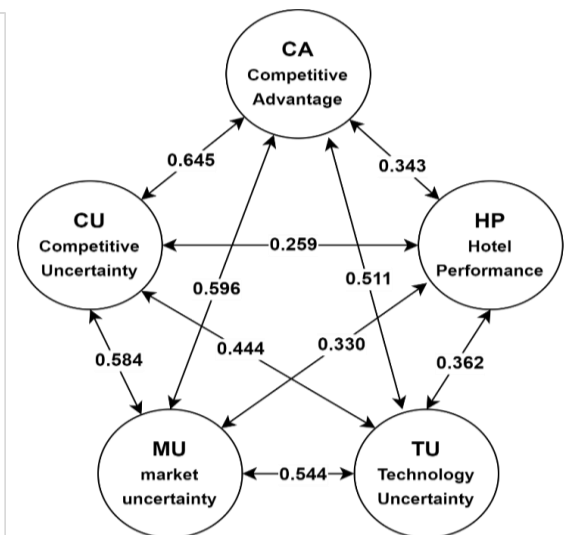
Figure 3. Fornell and Larcker Criterion

3.3. Discriminant Validity

Discriminant validity ensures distinct measures for different variables (O'Leary-Kelly and Vokurka, 1998). It assesses whether measurement items align with their intended constructs and should have square root AVE greater than inter-variable correlations ((Gefen and Straub, 2005). Figure 3 shows that correlations among Competitive Advantage (CA), Competitive Uncertainty (CU), Hotel Performance (HP), Technology Uncertainty (TU), and Market Uncertainty (MU) are lower than their respective AVE values, affirming discriminant validity by demonstrating that items primarily load on their intended variables. Recent advances introduced the Heterotrait-Monotrait Ratio of Correlations (HTMT) as a reliable method for assessing discriminant validity (Henseler et al., 2015). Table 6 displays HTMT values below the threshold of 0.90, reinforcing the discriminant validity between constructs. These results affirm that the measurement model effectively distinguishes between variables, bolstering the study's validity and reliability.

Table 6. HTMT Criterion

Variables	CA	CU	HP	MU	TU
CA					
CU	0.891				
HP	0.475	0.447			
MU	0.792	0.812	0.472		
TU	0.688	0.627	0.554	0.735	

4. Structural Model

To evaluate the structural model, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to assess the model's goodness of fit (Hair Jr et al., 2014). Validity was assessed through variance explained (R^2) and path coefficients between constructs, as shown in Figure 4. A bootstrap analysis with 500 re-samplings, following Chin's recommendation (1998), was conducted to determine the significance of path coefficients. Mean values were calculated for each variable. To examine the mediating role of Competitive Advantage, this study used the approach developed by Preacher and Hayes (2008), which is suitable for PLS-SEM due to its distribution-agnostic nature. The significance of the indirect relationship between variables (a) and (b) was assessed to determine the mediating effect. It is worth noting that the mediating effect between independent and dependent variables does not necessarily have to be significant in the absence of the mediating variable. The significance of the paths was assessed using bootstrapping procedures.
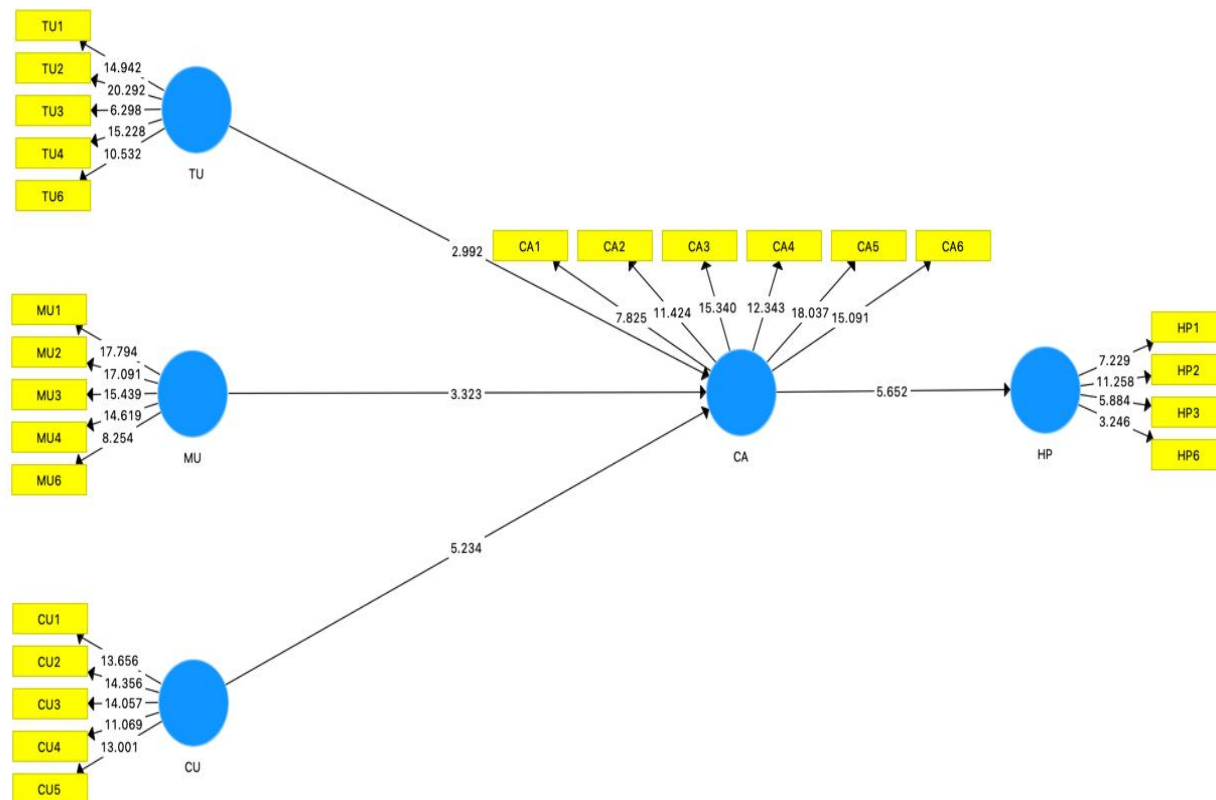

Figure 4. Structural model of the study

Bootstrapping is a nonparametric resampling method widely recognised as robust and effective for testing mediating effects (Hayes, 2009; Zhao et al., 2010). The t-statistic value in bootstrapping was calculated using the provided formula. The Smart PLS software automatically calculated the t-value for indirect effects, eliminating the need for manual calculation.

Table 7. Testing Hypothesis Result

Hyp.	Path	Beta	SD error	T Value	P Values	5.00%	95.00%	Result
H1	TU -> CA -> HP	0.065	0.028	2.314	0.011	0.022	0.118	Accepted
H2	MU -> CA -> HP	0.086	0.037	2.335	0.011	0.029	0.145	Accepted
H3	CU -> CA -> HP	0.142	0.032	4.402	0.000	0.095	0.202	Accepted

The results in Table 7 indicate that H1, H2, and H3 were accepted, supporting the mediating role of competitive advantage in these relationships. In other words, competitive advantage significantly influenced these connections, and no hypothesis involving competitive advantage as a mediator was rejected. In summary, competitive advantage was found to play a significant role when serving as a mediator. The mediation relationships between technology uncertainty and hotel performance, competitive uncertainty and hotel performance, and market uncertainty and hotel performance were supported, with beta values of 0.065, 0.086, and 0.142, confirming H1, H2, and H3.

These findings underscore the vital role of competitive advantage in Saudi Arabian hotel organisations and their overall performance. Competitive advantage affects service recovery prediction, organisational success, human resource productivity, and sustainability. In highly competitive and dynamic environments, where adaptation is crucial, Saudi Arabian hotel firms perceive changes as opportunities. This highlights the importance of actively responding to changes to achieve performance, sustainability, and success in uncertain and competitive settings. Organisations with competitive advantage can effectively navigate uncertainties, engage and empower employees, and maintain performance. These findings align with prior research, such as Abolfazl and Mehrdad (2016), which showed that competitive advantage significantly mediates the impact of organisational learning on organisational performance.

CONCLUSION

This study examined the relationship between environmental uncertainty, competitive advantage, and hotel performance in 1st, second, and third-star hotels in Saudi Arabia, focusing on the mediating role of competitive advantage. Data was collected from five major regions in Saudi Arabia: Mecca, Medina, Eastern Border, Jazan, and Riyadh. The findings revealed that competitive advantage significantly mediates the relationship between environmental uncertainty and hotel performance. This suggests that hotel owners and managers must strive for and maintain a competitive advantage for hotels to thrive in an uncertain environment by anticipating and adapting to market changes and dynamics.

The implications of this study are important for hotel owners and managers who can benefit from understanding the significance of competitive advantage. They should actively work towards developing and sustaining their competitive advantage by identifying their strengths and weaknesses and adjusting their operations and strategies accordingly. Additionally, they should stay proactive in monitoring and responding to changing market trends and customer preferences.

In conclusion, this study provides valuable insights into the interplay of environmental uncertainty, competitive advantage, and hotel performance in Saudi Arabia. By recognising the role of competitive advantage, hotel owners can better prepare for and overcome the challenges posed by environmental uncertainty. Due to the COVID-19 pandemic, data collection was challenging, and the study was conducted during a lockdown period. For future research, collecting data during normal times is recommended to capture a more accurate representation of the hotel industry.

Moreover, the self-reported nature of the questionnaire introduces the possibility of bias, and it is suggested that future studies consider using multiple respondents to mitigate bias. Furthermore, as most participants were from Makkah and Madinah, the data may not fully represent the entire hotel industry in Saudi Arabia. Future studies should aim for a more balanced representation of respondents across all hotel categories to understand the industry comprehensively.

REFERENCES

Abdolshah, M., Moghimi, M., & Khatibi, S.A. (2018). Investigating competitive advantage in banking industry based on Porter's Generic strategies: IRANs newly established private banks. *International Journal of Applied Management Sciences and Engineering (IJAMSE)*, *5*(1), 52–62. https://doi.org/10.4018/IJAMSE.2018010104

Abdulwase, R., Ahmed, F., Nasr, F., Abdulwase, A., Alyousofi, A., & Yan, S. (2020). The role of business strategy to create a competitive advantage in the organisation. *Open Access J Sci*, *4*(4), 135–138. https://doi.org/10.15406/oajs.2020.04.00162

Abolfazl, J.M., & Mehrdad, K. (2016). The mediating role of organisational agility in the relationship between organisational learning and organisational performance (Case study: The subsidiaries of Isfahan City general tax office). *International Business Management*, *10*(16), 3530–3535.

Abuhjeeleh, M. (2019). Rethinking tourism in Saudi Arabia: Royal vision 2030 perspective. *African Journal of Hospitality, Tourism and Leisure*, *8*(5), 1–16.

Afshar Jahanshahi, A. (2016). Disentangling the emergence of perceived environmental uncertainty among technology entrepreneurs. *Kybernetes*, *45*(6), 962–976. https://doi.org/10.1108/K-08-2015-0202

Al Hanini, E.A., & Al Oqqaily, Z. (2018). Does the Management Information System Causes Competitive Advantage for Banks working in Jordan? *International Journal of Economics and Financial Issues*, *8*(6), 104–109. https://www.econjournals.com/index.php/ijefi/article/view/7135

Al-Ababneh, M.M., Masadeh, M.A., Al-Shakhsheer, F.J., & Ma'moun, A.H. (2018). The impact of internal service quality on job satisfaction in the hotel industry. *Research in Hospitality Management*, *8*(1), 55–62. https://doi.org/10.1080/22243534.2018.1501182

Al-Alak, B.A., & Tarabieh, S.A. (2011). Gaining competitive advantage and organisational performance through customer orientation, innovation differentiation and market differentiation. *International Journal of Economics and Management Sciences*, *1*(5), 80–91.

Al-Hazmia, N. (2020). A study on the dimensions of the quality of tourism services in the Kingdom of Saudi Arabia. *Management Science Letters*, *10*(5), 1115–1120. https://doi.org/10.5267/j.msl.2019.10.030

Alkhazali, Z.A.F., Halim, S.A., & Osman, A. (2015). The role of human resources towards Jordanian commercial banks' performance. *International Journal of Economics, Commerce and Management*, *3*(2), 1–10.

Anderson, E.W., Fornell, C., & Rust, R.T. (1997). Customer satisfaction, productivity, and profitability: Differences between goods and services. *Marketing Science*, *16*(2), 129–145. https://doi.org/10.1287/mksc.16.2.129

Anwar, M., Khan, S.Z., & Khan, N.U. (2018). Intellectual capital, entrepreneurial strategy and new ventures performance: Mediating role of competitive advantage. *Business and Economic Review*, *10*(1), 63–93. https://doi.org/10.22547/BER/10.1.3

Arasli, H., Alphun, C., & Arici, H.E. (2019). Can balanced scorecard adoption mediate the impacts of environmental uncertainty on hotel performance? The moderating role of organisational decision-making structure. *Journal of Hospitality Marketing & Management*, *28*(8), 981–1009. https://doi.org/10.1080/19368623.2019.1578716

Assaf, A.G., & Barros, C. (2011). Performance analysis of the Gulf hotel industry: A Malmquist index with bias correction. *International Journal of Hospitality Management*, *30*(4), 819–826. https://doi.org/10.1016/j.ijhm.2011.01.002

Burgers, W.P., Hill, C.W.L., & Kim, W.C. (1993). A theory of global strategic alliances: The case of the global auto industry. *Strategic Management Journal*, *14*(6), 419–432. https://doi.org/10.1002/smj.4250140603

Chang, C.H. (2011). The influence of corporate environmental ethics on competitive advantage: The mediation role of green innovation. *Journal of Business Ethics*, *104*, 361–370. https://doi.org/10.1007/s10551-011-0914-x

Chin, W.W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, *295*(2), 295–336.

Criado-Perez, C., Jackson, C., Minbashian, A., & Collins, C.G. (2023). Cognitive Reflection and Decision-Making Accuracy: Examining Their Relation and Boundary Conditions in the Context of Evidence-based Management. *Journal of Business and Psychology*. https://doi.org/10.1007/s10869-023-09883-x

Darvishmotevali, M., Altinay, L., & Köseoglu, M.A. (2020). The link between environmental uncertainty, organisational agility, and organisational creativity in the hotel industry. *International Journal of Hospitality Management*, *87*, 102499. https://doi.org/10.1016/j.ijhm.2020.102499

Davahli, M.R., Karwowski, W., Sonmez, S., & Apostolopoulos, Y. (2020). The hospitality industry in the face of the COVID-19 pandemic: Current topics and research methods. *International Journal of Environmental Research and Public Health*, *17*(20), 7366. https://doi.org/10.3390/ijerph17207366

De Waegenaere, A., Sansing, R.C., & Wielhouwer, J.L. (2017). Development cost capitalisation during R&D races. *Contemporary Accounting Research*, *34*(3), 1522–1546. https://doi.org/10.1111/1911-3846.12306

Donaldson, L. (2001). *The contingency theory of organisations*. SAGE Publications, Thousand Oaks, United States. https://doi.org/10.4135/9781452229249

Drnevich, P.L., & West, J. (2023). Performance implications of technological uncertainty, age, and size for small businesses. *Journal of Small Business Management*, *61*(4), 1806–1841. https://doi.org/10.1080/00472778.2020.1867733

Elaraby, E.G. (2021). The Impact of Communication and Flexibility on Perceived Environmental Uncertainty in B2b Relationships During Covid-19. *International Journal of Tourism and Hospitality Management*, *4*(1), 78–94. https://doi.org/10.21608/ijthm.2021.179369

Enz, C.A. (2010). Commentary: Competitive dynamics and creating sustainable advantage. *The Cornell Hotel School of Hotel Administration Handbook of Applied Hospitality Strategy*, 297–305.

Ezzaouia, I., & Bulchand-Gidumal, J. (2020). Factors influencing the adoption of information technology in the hotel industry. An analysis in a developing country. *Tourism Management Perspectives*, *34*, 100675. https://doi.org/10.1016/j.tmp.2020.100675

Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information Systems*, *16*(1), 91–109. https://doi.org/10.17705/1CAIS.01605

Gursoy, D. (2018). Future of hospitality marketing and management research. *Tourism Management Perspectives*, *25*, 185–188. https://doi.org/10.1016/j.tmp.2017.11.008

Hair Jr, J.F., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, *26*(2), 106–121. https://doi.org/10.1108/EBR-10-2013-0128

Hair Jr, J.F., Sarstedt, M., Ringle, C.M., & Gudergan, S.P. (2017). *Advanced Issues in Partial Least Squares Structural Equation Modeling*. SAGE Publications, Thousand Oaks, United States.

Hayes, A.F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, *76*(4), 408–420. https://doi.org/10.1080/03637750903310360

Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*, 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hossain, M.S., Kannan, S.N., & Raman Nair, S.K.K. (2021). Factors Influencing Sustainable Competitive Advantage in the Hospitality Industry. *Journal of Quality Assurance in Hospitality & Tourism*, *22*(6), 679–710. https://doi.org/10.1080/1528008X.2020.1837049

Huang, H., Ali, S., & Solangi, Y.A. (2023). Analysis of the Impact of Economic Policy Uncertainty on Environmental Sustainability in Developed and Developing Economies. *Sustainability*, *15*(7), 5860. https://doi.org/10.3390/su15075860

Huang, K., Liu, Z., & Tian, G. (2020). Promote Competitive Neutrality to Facilitate China's Economic Development: Outlook, Policy Simulations, and Reform Implementation, A Summary of the Annual SUFE Macroeconomic Report (2019-2020). *Frontiers of Economics in China*, *15*(1), 1–24. https://doi.org/10.3868/s060-011-020-0001-9

Kim, J., & Canina, L. (2011). Competitive sets for lodging properties. *Cornell Hospitality Quarterly*, *52*(1), 20–34. https://doi.org/10.1177/1938965510377606

Kitchenham, B.A., & Pfleeger, S.L. (2002). Principles of survey research: part 3: constructing a survey instrument. *ACM SIGSOFT Software Engineering Notes*, *27*(2), 20–24. https://doi.org/10.1145/511152.511155

Kor, Y.Y., & Mahoney, J.T. (2005). How dynamics, management, and governance of resource deployments influence firm-level performance. *Strategic Management Journal*, *26*(5), 489–496. https://doi.org/10.1002/smj.459

Matar, A., Al-Rdaydeh, M., Al-Shannag, F., & Odeh, M. (2018). Factors affecting the corporate performance: Panel data analysis for listed firms in Jordan. *Academy of Accounting and Financial Studies Journal*, *22*(6), 1–10.

McMullen, J.S., & Shepherd, D.A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, *31*(1), 132–152. https://doi.org/10.5465/amr.2006.19379628

Ministry of Tourism KSA. (2020). *Outbound Tourism Indicators in Saudi Arabia*. https://mt.gov.sa/tic/publications

Mohamed, E.S.A. (2021). The impact of customer experience and relationship quality on corporate reputation in the hotel sector. *International Journal of Customer Relationship Marketing and Management (IJCRMM)*, *12*(2), 53–79. https://doi.org/10.4018/IJCRMM.2021040104

Mohammed, A., & Rashid, B. (2018). A conceptual model of corporate social responsibility dimensions, brand image, and customer satisfaction in Malaysian hotel industry. *Kasetsart Journal of Social Sciences*, *39*(2), 358–364. https://doi.org/10.1016/j.kjss.2018.04.001

Nunnally, J.C. (1978). An overview of psychological measurement. *Clinical Diagnosis of Mental Disorders: A Handbook*, 97–146. https://doi.org/10.1007/978-1-4684-2490-4_4

O'Leary-Kelly, S.W., & Vokurka, R.J. (1998). The empirical assessment of construct validity. *Journal of Operations Management*, *16*(4), 387–405. https://doi.org/10.1016/S0272-6963(98)00020-5

Oliver, J.J., & Velji, N. (2019). Are entrepreneurs becoming more risk averse? *Strategic Direction*, *35*(1), 1–2. https://doi.org/10.1108/SD-09-2018-0182

Pallant, J. (2013). *SPSS survival manual McGraw-Hill Education (UK)*. Open University Press, Maidenhead, Berkshire, United Kingdom.

Pereira-Moliner, J., López-Gamero, M.D., Font, X., Molina-Azorín, J.F., Tarí, J.J., & Pertusa-Ortega, E.M. (2021). Sustainability, Competitive Advantages and Performance in the Hotel Industry: A Synergistic Relationship. *Journal of Tourism and Services*, *12*(23), 132–149. https://doi.org/10.29036/jots.v12i23.282

Porter, M.E., & Millar, V.E. (1985). *How information gives you competitive advantage*. Harvard Business Review Reprint Service, Brighton, United States.

Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891. https://doi.org/10.3758/BRM.40.3.879

Ragatz, G.L., Handfield, R.B., & Petersen, K.J. (2002). Benefits associated with supplier integration into new product development under conditions of technology uncertainty. *Journal of Business Research*, *55*(5), 389–400. https://doi.org/10.1016/S0148-2963(00)00158-2

Raghavendra, A. (2020). Impact Of Technology On Consumer Intention To Choose Hotels. *Purakala (UGC CARE Journa), 31*(11), 267-287.

Ramayah, T., Yeap, J.A., Ahmad, N.H., Halim, H.A., & Rahman, S.A. (2017). Testing a confirmatory model of Facebook usage in SmartPLS using consistent PLS. *International Journal of Business and Innovation*, *3*(2), 1–14.

Ravichandran, T. (2018). Exploring the relationships between IT competence, innovation capacity and organizational agility. *The journal of strategic information systems, 27*(1), 22-42. https://doi.org/10.1016/j.jsis.2017.07.002

Salisu, Y., & Goni, A.K. (2019). The mediating role of competitive advantage in the relationship between innovation capability and the performance of small and medium enterprises in Nigeria. *Management Research Spectrum*, *9*(2), 54–59.

Sazegar, M., Forouharfar, A., Hill, V., & Faghih, N. (2018). The innovation-based competitive advantage in Oman's transition to a knowledge - based economy: dynamics of innovation for promotion of entrepreneurship. *Entrepreneurship Ecosystem in the Middle East and North Africa (MENA) Dynamics in Trends, Policy and Business Environment*, 491–518. https://doi.org/10.1007/978-3-319-75913-5_18

Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill building approach* (5th ed.). John Willey & Sons Ltd, New York, United States.

Sin, K.Y., & Jusoh, M.S. (2019). Identifying and prioritizing research gaps in studies related to total quality management on competitive advantage in Malaysian hotel industries. *International Journal of Academic Research in Business and Social Sciences, 9*(5), 335-349. http://dx.doi.org/10.6007/IJARBSS/v9-i5/5875

Sirmon, D.G., Hitt, M.A., Ireland, R.D., & Gilbert, B.A. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*, *37*(5), 1390–1412. https://doi.org/10.1177/0149206310385695

Song, M., & Montoya-Weiss, M.M. (2001). The effect of perceived technological uncertainty on Japanese new product development. *Academy of Management Journal*, *44*(1), 61–80. https://doi.org/10.2307/3069337

Sunarta, I.N., Rohman, A., & Kawedar, W. (2020). Market Competition, Perceived Environmental Uncertainty, Supply Chain Management Systems, and Organisational Performance: Hotel Starred in Bali Province, Indonesia. *International Journal of Supply Chain Management*, *9*(2), 669–676. https://doi.org/10.59160/ijscm.v9i2.4676

Tabachnick, B.G., & Fidell, L.S. (2007). *Experimental designs using ANOVA* (Vol. 724). Thomson/Brooks/Cole Belmont, United States.

Tavitiyaman, P., Qu, H., & Zhang, H.Q. (2011). The impact of industry force factors on resource competitive strategies and hotel performance. *International Journal of Hospitality Management*, *30*(3), 648–657. https://doi.org/10.1016/j.ijhm.2010.11.010

Tavitiyaman, P., Zhang, H.Q., Wei, J., & Saiprasert, W. (2018). Moderating effect of hotel markets on differentiation strategies and performance. *Anatolia*, *29*(3), 379–392. https://doi.org/10.1080/13032917.2018.1428903

Westphal, J.D., & Zhu, D.H. (2019). Under the radar: How firms manage competitive uncertainty by appointing friends of other chief executive officers to their boards. *Strategic Management Journal*, *40*(1), 79–107. https://doi.org/10.1002/smj.2966

Williamson, O.E. (1996). *The mechanisms of governance*. Oxford University Press, Oxford, United Kingdom.

Yan, J., & Yan, L. (2017). Collective entrepreneurship, environmental uncertainty and small business performance: A contingent examination. *The Journal of Entrepreneurship*, *26*(1), 1–26. https://doi.org/10.1177/0971355716677385

Yang, S., Ishtiaq, M., & Anwar, M. (2018). Enterprise risk management practices and firm performance, the mediating role of competitive advantage and the moderating role of financial literacy. *Journal of Risk and Financial Management*, *11*(3), 35. https://doi.org/10.3390/jrfm11030035

Yasar, M., & Kiraci, K. (2017). Market Share, the Number of Competitors and Concentration: An Empirical Application on the Airline Industry. *Anadolu International Conference in Economics Proceedings*, 1–10.

Yaseen, H., Omet, G., & Kahmash, F. (2015). On the entry of foreign banks: The Jordanian experience. *International Journal of Economics and Finance*, *7*(7), 278–282. https://doi.org/10.5539/ijef.v7n7p278

Yuan, J.S., Reed, A., Chen, F., & Stewart, C.N. (2006). Statistical analysis of real-time PCR data. *BMC bioinformatics, 7*, 1-12. https://doi.org/10.1186/1471-2105-7-85.

Zairi, M. (1996). Competition: what does it mean? *The TQM Magazine*, *8*(1), 54–59. https://doi.org/10.1108/09544789610107270

Zeithaml, V.A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, *52*(3), 2–22. https://doi.org/10.1177/002224298805200302

Zhang, H., & Song, M. (2020). Do first-movers in marketing sustainable products enjoy sustainable advantages? A seven-country comparative study. *Sustainability*, *12*(2), 450. https://doi.org/10.3390/su12020450

Zhao, X., Lynch Jr, J.G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, *37*(2), 197–206. https://doi.org/10.1086/651257