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THE MODERATING ROLE OF ENVIRONMENTAL TURBULENCE IN THE RELATIONSHIP BETWEEN SERVICE DIFFERENTIATION ORIENTATION AND PERFORMANCE OF STAR-RATED HOTELS IN NAIROBI, KENYA

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ABSTRACT

The performance of star-rated hotels in Kenya remains variable despite the adoption of strategic orientations, suggesting that the performance value of strategy may depend on external conditions. This study examined the moderating role of environmental turbulence in the relationship between service differentiation orientation and performance of star-rated hotels in Nairobi, Kenya. It drew on the Resource-Based View (RBV), Porter's differentiation strategy, Contingency Theory, and Dynamic Capabilities Theory. A positivist philosophy and explanatory cross-sectional survey design were adopted. Data were collected using a five-point Likert-scale questionnaire from managerial employees in 3-, 4-, and 5-star hotels. Of 240 questionnaires distributed, 149 usable responses were obtained, representing a 62.1% response rate. Data were analyses using descriptive statistics, reliability and diagnostic tests, Pearson correlation, regression, and moderated regression. Service differentiation orientation was positively associated with hotel performance ($r = .562$, $p < .001$) and had a positive, statistically significant regression coefficient ($B = 0.318$, $\beta = 0.341$, $t = 4.746$, $p < .001$). The interaction between service differentiation orientation and environmental turbulence was also positive and statistically significant ($B = 0.104$, $\beta = 0.194$, $t = 2.667$, $p = .009$). The reported model R^2 increased from .481 to .534 following the inclusion of environmental turbulence and the interaction term. The findings indicate that the positive association between differentiation orientation and hotel performance is significant at increased environmental turbulence. The study contributes context-specific evidence from Nairobi Star-rated hotels and integrates complementary theoretical explanations of resources, positioning, contextual fit, and adaptation. It recommends systematic environmental scanning, service innovation, personalization, and adaptive capability development.

Keywords: Service Differentiation Orientation; Environmental Turbulence; Hotel Performance; Star-Rated Hotels; Contingency Theory; Kenya

1. INTRODUCTION

1.1 Background of the Study

The hospitality sector contributes to employment, foreign-exchange earnings, and economic activity in both developed and developing economies. Hotel performance is sensitive to fluctuations in demand, technological change, evolving consumer expectations, input costs, regulation, and competition. Alongside physical facilities and service quality, hotels therefore compete through strategic capabilities that enable them to configure resources, create guest value, and respond to environmental change. Service differentiation orientation refers to an organizational emphasis on developing distinctive, valuable, and memorable service experiences relative to competitors. Its strategic logic is consistent with Porter's (1985) differentiation strategy and the Resource-Based View, which emphasizes the competitive value of firm-specific resources and capabilities (Barney, 1991; Wernerfelt, 1984).

Hospitality markets have changed through digitalization, evolving traveler profiles, the growth of alternative accommodation platforms, and greater attention to health, safety, and authentic experiences. These developments intensify competition and encourage hotels to move beyond standardized delivery towards personalized and experience-oriented offerings. Service differentiation orientation is consequently more than a promotional tactic: it shapes resource allocation, capability development, and market positioning across the hotel value chain. The strategic value of such orientation, however, should not be assumed to be uniform across hotels or market conditions; its contribution may depend on the organization's ability to respond to changes in its operating environment. These developments also change the information available to hotel managers. Online reviews, booking platforms, social media, and customer relationship systems can make guest preferences more visible, while simultaneously increasing the speed with which service failures and competitor innovations become known. Hotels may therefore need to use customer information not simply to promote existing packages but to identify changing expectations and adjust service design. Nevertheless, technology adoption does not automatically produce differentiation: its strategic value depends on integration with employee skills, service processes, and a coherent guest experience.

Research on hospitality services links perceived service quality and customer-oriented practices with satisfaction, loyalty, and behavioral intentions, although the strength of these relationships can vary across settings (Kandampully et al., 2015). The experience-economy perspective further proposes that memorable experiences can create value beyond the functional service itself (Pine & Gilmore, 1999). These arguments provide a rationale for differentiation, but do not establish that every differentiated hotel will outperform standardized competitors in every market. Performance outcomes are also likely to depend on the relevance of the offer to target guests, the resources available to deliver it, and the competitive and technological conditions facing the hotel.

In Kenya, star-rated hotels compete with international chains, boutique properties, and digital accommodation platforms. Hotels in Nairobi have developed personalized services, conference facilities, wellness offerings, cultural experiences, and premium amenities to strengthen their market positions. Kenyan studies have examined technology orientation, organizational agility, service innovation, and hotel performance in particular settings (Mwachia et al., 2023; Ngari & Mwangi, 2023). These studies provide useful contextual evidence, but their constructs and study settings should not be treated as direct tests of the specific interaction examined here. The Nairobi hospitality industry therefore provides a relevant setting suitable for assessing how environmental turbulence affects the strength and direction of the relationship between service differentiation orientation and hotel performance.

1.2 Statement of the Problem

Despite the use of differentiation strategies, performance among star-rated hotels in Kenya remains uneven. The Kenya National Bureau of Statistics (KNBS, 2024) reports fluctuations in tourism and accommodation indicators, while industry reporting also points to changes in visitor demand and operating conditions (World Travel & Tourism Council [WTTC], 2024). Such variation raises the possibility that strategic orientation alone does not explain performance differences. Hotels may face different levels of seasonal demand, competitive pressure, technological change, and shifts in customer expectations, all of which can influence the returns associated with differentiation.

This variation raises a central strategic question: why might hotels pursuing similar differentiation practices experience different performance outcomes? A contingency perspective suggests that the value of a strategy depends partly on the conditions in which it is implemented (Donaldson, 2001; Lawrence & Lorsch, 1967). Environmental turbulence may strengthen the value of differentiation when changing preferences and competitive offerings increase the need for distinctive, responsive services. Conversely, turbulence may weaken performance where hotels lack the resources or capabilities to adapt. Although Kenyan hospitality research has examined strategic orientations and organizational capabilities, further empirical study is required on the moderating role of environmental turbulence in the service differentiation–hotel performance relationship (Lawrence & Lorsch, 1967). This study therefore tests that interaction rather than assuming a universal effect. Environmental turbulence should also be distinguished from environmental hostility. Turbulence concerns the rate and unpredictability of change, whereas hostility concerns the scarcity of resources or severity of threats. A turbulent environment may create opportunities for hotels that detect changes early, but it may also increase costs and uncertainty (Lawrence & Lorsch, 1967). The analysis therefore treats turbulence as a contextual condition whose consequences depend partly on organizational responsiveness.

The study addresses an empirical question at the intersection of service differentiation and environmental conditions in the Nairobi star-rated hotel context. It also brings together four complementary perspectives: the RBV explains the strategic value of distinctive resources; Porter's (1985) framework explains competitive positioning through differentiated value; Contingency Theory explains why the strategy–performance association may vary with environmental conditions; and Dynamic Capabilities Theory explains how firms can adapt and reconfigure resources as conditions change (Teece, 2007). The contribution is therefore a context-specific test of moderation supported by a clearly differentiated theoretical framework, rather than a claim that the study is the first to examine turbulence or differentiation in all hospitality settings.

1.3 Contribution of the Study

This study makes three contributions. First, it provides an empirical test of how environmental turbulence moderates the relationship between service differentiation orientation and performance among star-rated hotels in Nairobi, Kenya. The contribution is specific to the combination of construct, outcome, context, and model; it therefore takes a different approach from other prior studies that examined related relationships elsewhere. Second, it integrates four perspectives with distinct explanatory functions: RBV explains the resources underpinning differentiation; Porter's framework explains the competitive positioning of distinctive services; Contingency Theory explains the moderating role of environmental conditions; and Dynamic Capabilities Theory explains adaptation and resource reconfiguration. Third, it translates the findings into managerial implications concerning environmental scanning, personalization, innovation, and adaptive capacity.

1.4 Objectives of the Study

The main aim was to determine the moderating role of environmental turbulence on the relationship between service differentiation orientation and the performance of star-rated hotels in Nairobi, Kenya. The specific objectives were:

1. To assess the effect of service differentiation orientation on performance of star-rated hotels in Nairobi, Kenya.
2. To determine the moderating role of environmental turbulence on the relationship between service differentiation orientation and the performance of star-rated hotels in Nairobi, Kenya.

1.5 Research Hypotheses

The study tested two null hypotheses:

H_{01}: Service differentiation orientation is not significantly associated with the performance of star-rated hotels in Nairobi, Kenya.

H_{02}: Environmental turbulence does not significantly moderate the relationship between service differentiation orientation and the performance of star-rated hotels in Nairobi, Kenya.

1.6 Significance of the Study

Several stakeholder groups are interested in the study. The findings offer a strong basis for hotel managers to inform their investment decisions on differentiation to maximize returns on their strategic investments. The findings will inform interventions by the policymakers and industry stakeholders like the Tourism Regulatory Authority and Kenya Tourism Board to bolster the resilience and competitiveness of the hospitality industry (Buhalis et al., 2023). This study makes a contribution to the field of contingency-based strategy research by illustrating the border conditions for the appropriate implementation of a differentiation strategy and by combining the four theoretical perspectives in one explanatory model. Finally, the study provides a replicable framework for investigating the linkages between strategy, environment and performance in similar contexts of emerging markets for the broader East African hospitality industry.

2. LITERATURE REVIEW

2.1 Conceptualization of Service Differentiation Orientation

Service differentiation orientation is a strategic emphasis through which hospitality organizations develop and deliver services perceived by target customers as distinctive and valuable relative to competing offers. It concerns the organizational priority given to service uniqueness, customer experience, service-delivery innovation, brand distinctiveness, and service customization. These are treated in this study as five operational indicators of the broader orientation, not as interchangeable constructs. The RBV provides a rationale for the role of intangible resources such as employee skills, service culture, customer relationships, innovation capacity, and brand reputation in developing distinctive services (Barney, 1991; Wernerfelt, 1984). In practice, these dimensions are interrelated: service innovation may generate new forms of customization, while a consistent customer experience can reinforce brand distinctiveness. Their combined strategic value depends on whether guests recognize the resulting offer as meaningful and whether the hotel can deliver it reliably across service

encounters. The orientation therefore concerns an organization-wide commitment to distinctive value creation rather than isolated promotional activities.

The construct is operationalized through five indicators: service uniqueness, customer-experience focus, innovation in service delivery, brand distinctiveness, and service customization. These indicators represent complementary dimensions of an overarching strategic orientation. Uniqueness concerns the perceived distinctiveness of the service offer; customer-experience focus concerns attention to the guest journey; innovation concerns changes to service processes or offerings; brand distinctiveness concerns a recognizable market identity; and customization concerns adapting services to guest preferences. Five questionnaire items were used to measure the construct. The items were adapted from prior instruments and reviewed by experts for contextual relevance. Together, the indicators capture the strategic emphasis placed on creating and delivering distinctive value in hotel services.

2.2 Theoretical Foundations of Service Differentiation

The RBV explains why distinctive internal resources may support superior performance. Barney (1991) argues that resources can underpin sustained competitive advantage when they are valuable, rare, difficult to imitate, and non-substitutable. In hotels, relevant intangible resources may include service culture, employee expertise, customer relationships, and brand reputation. Porter's (1985) differentiation strategy complements this resource explanation by describing how firms position their services through attributes customers value and may be willing to pay for. In hotels, such positioning may involve service quality, design, facilities, or distinctive guest experiences. These two perspectives explain the resource base and competitive positioning of differentiation; the remaining theories address the conditions and processes through which its performance value may vary (Buhalis et al., 2023). The distinction is important in the hotel sector because physical facilities and service routines can be imitated, whereas a coherent combination of employee knowledge, organizational culture, customer relationships, and brand associations may be more difficult to reproduce. Resource ownership alone is insufficient; resources must be organized and deployed in ways that support the chosen market position. Differentiation is therefore strongest when internal capabilities are translated into service attributes that target customers value and competitors cannot readily match.

2.3 Service Differentiation and Hotel Performance

By improving customer satisfaction, boosting customer loyalty and financial performance, service differentiation orientation has a significant impact on hotel performance. Differentiation in theory gives value by enhancing its perceived uniqueness and lowers the sensitivity to price. This relationship is explained by the RBV which argues that intangible assets like service culture and innovation are not easy to be replicated which provides sustained competitive advantage (Barney, 1991; Crook, Ketchen, Combs, & Todd, 2008). Numerous empirical studies have consistently shown that service differentiation is positively correlated with hotel performance. Han, Kim, and Kim (2022) show a strong correlation exists between service excellence and customer satisfaction, and between service quality and customer loyalty and word-of-mouth. Service differentiation also helps financial results by allowing premium pricing strategies: Hotels with unique and high-quality services can set higher room prices and still have strong demand. Further research reveals that strongly differentiated hotels have higher RPR, longer average length of stay and higher hotel occupancy rates. Research in Kenya shows that service innovation and customer experience management are key factors that positively influence hotel occupancy rates and revenue performance in classified hotels (Ngari & Mwangi, 2023). Studies on organizational agility in Kenyan coast hotels have also shown that organizational agility is positively linked to the performance outcomes of the organizations, as a result of their online business capabilities and learning organization

strategies (Mwachia et al., 2023). However, differentiation can only be maintained if there is continuing investment in the development of staff, in innovation systems and in the monitoring of service quality, and environmental turbulence, technological disruption and competitive intensity can erode differentiation advantages unless they are effectively managed (Teece, 2007; Carvalho et al., 2016). This implies that the differentiation–performance relationship is not universal, but rather depends on the context, and for this reason, the present study focuses on the contextual variable of environmental turbulence. The expected performance benefits may arise through several connected pathways. Distinctive services can increase perceived value and reduce direct price comparison, while consistent guest experiences can encourage satisfaction, positive recommendations, and repeat patronage. Service innovation may also improve operational processes and allow hotels to respond to emerging market segments (Carvalho et al., 2016). However, differentiation requires investment in employee development, technology, service design, and quality assurance. If the additional costs exceed the value guests attach to the differentiated offer, the strategy may not improve profitability. Managers must consequently assess both customer response and the resources required to sustain the service proposition.

2.4 Environmental Turbulence as a Moderating Variable

Environmental turbulence refers to the degree of change and unpredictability in an organization's external environment, including market demand, technology, competitive intensity, and regulation (Dess & Beard, 1984; Duncan, 1972). It is particularly relevant to hospitality because demand is seasonal, preferences evolve, and digital channels can change how guests compare and purchase services (Buhalis et al., 2023; Ivanov & Webster, 2021). In this study, turbulence is specified as a moderator: it is expected to change the strength of the association between service differentiation orientation and hotel performance. Contingency Theory proposes that organizational effectiveness depends on alignment between organizational choices and contextual conditions (Donaldson, 2001; Lawrence & Lorsch, 1967). Dynamic Capabilities Theory adds that firms need to sense changes, seize opportunities, and reconfigure resources to remain effective in changing environments (Teece, 2007). Turbulence may therefore increase the value of differentiation where hotels can adapt, but it is not inherently beneficial and may create disadvantages for firms that cannot respond. For hotels, turbulence may be reflected in sudden changes in booking patterns, the emergence of new competitors, shifts in travel preferences, platform innovation, and changes in operating requirements. These conditions can shorten the useful life of established service features and increase the importance of timely market information (Mwachia et al., 2023). A hotel that monitors such signals and adjusts its service offer may use differentiation to remain relevant; a hotel with limited flexibility may struggle to maintain consistency or absorb the cost of change. The moderating perspective therefore recognizes that the performance value of differentiation is contingent on the external environment and the organization's capacity to respond.

2.5 Empirical Review of Environmental Turbulence as Moderator

Prior research demonstrates that environmental conditions can shape strategy–performance relationships. Jaworski and Kohli (1993) and Slater and Narver (1994) examined the role of market conditions in relation to market orientation and performance. Carvalho et al. (2016) provide hospitality-related evidence concerning environmental turbulence and strategic orientation. Research in Kenya has also examined strategic and performance issues in the hospitality sector (Mwachia et al., 2023; Ngari & Mwangi, 2023). Building on these contributions, the present study examines environmental turbulence as a moderator of the relationship between service differentiation orientation and hotel performance among star-rated hotels in Nairobi. This focus brings together strategic differentiation and environmental conditions within a specific hospitality setting.

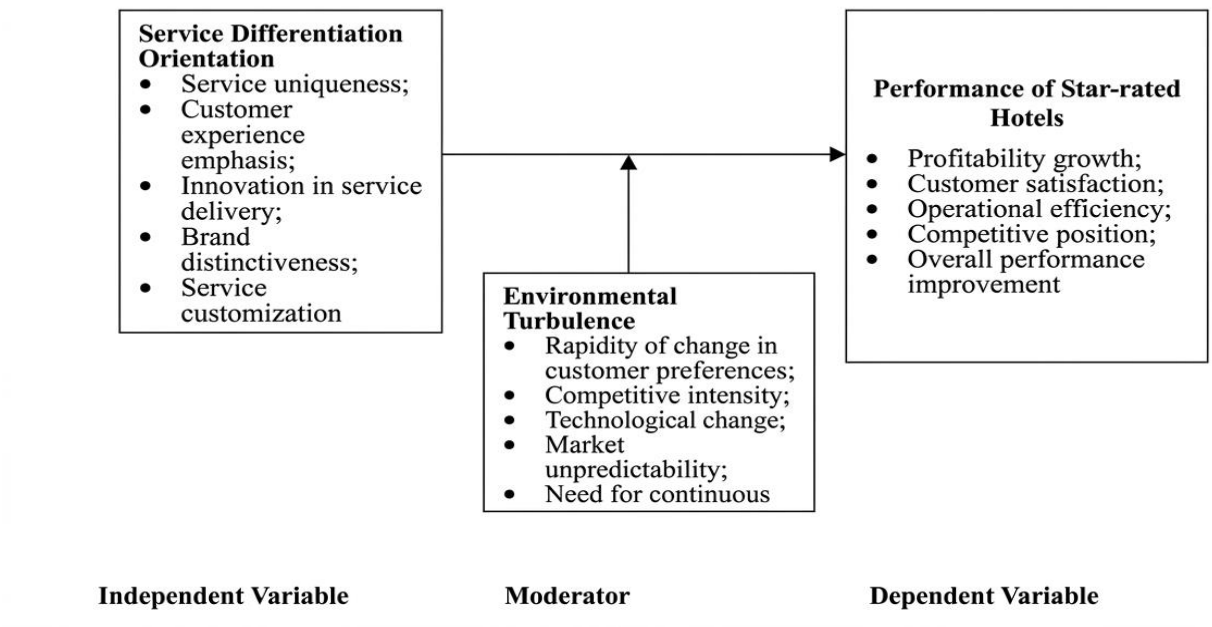
2.6 Theoretical Framework

Four theories inform the model, each serving a distinct purpose. First, the RBV explains why intangible resources—including service culture, employee competence, customer relationships, and brand reputation—can support differentiation and performance (Barney, 1991; Wernerfelt, 1984). Second, Porter's (1985) differentiation strategy explains how a hotel can position its service offer around attributes valued by customers. Third, Contingency Theory explains why the association between differentiation and performance may vary across environmental conditions (Donaldson, 2001; Lawrence & Lorsch, 1967); it therefore provides the principal rationale for the moderation hypothesis. Fourth, Dynamic Capabilities Theory explains how hotels can sense environmental change, seize opportunities, and reconfigure resources to sustain differentiated offerings under turbulence (Teece, 2007; Teece et al., 1997). The theories are complementary rather than interchangeable: RBV addresses what resources matter, Porter addresses how distinctive value is positioned, Contingency Theory addresses when the strategy–performance relationship may change, and Dynamic Capabilities Theory addresses how firms adapt. Together, they support the direct relationship and moderation hypotheses.

2.7 Conceptual Framework

The conceptual model specifies service differentiation orientation (SDO) as the independent variable, hotel performance (HP) as the dependent variable, and environmental turbulence (ET) as the moderator. The direct path is SDO → HP. The moderation interaction is; SDO × ET → HP. Environmental turbulence changes the strength/direction of the SDO–performance relationship.

Figure 1. Conceptual framework for the study.



2.8 Research Gap

This study focused on the role of environmental turbulence in the relationship between service differentiation orientation and hotel performance among star-rated hotels in Nairobi. Strategic-management research has examined resource-based advantage, differentiation, market orientation, and environmental conditions, while hospitality studies have considered service

quality, technology orientation, organizational agility, and hotel performance (Jaworski & Kohli, 1993; Mwachia et al., 2023; Ngari & Mwangi, 2023; Slater & Narver, 1994). These streams provide a foundation for examining how a distinctive service strategy relates to hotel outcomes under changing environmental conditions. By testing the moderating role of turbulence in the Nairobi hospitality context, the study brings these perspectives together in a context-specific model. The integrated framework distinguishes the contribution of resource, positioning, contingency, and adaptation perspectives.

3. RESEARCH METHODOLOGY

3.1 Research Design and Philosophy

This study adopted a positivist philosophy and an explanatory quantitative cross-sectional survey design. A quantitative approach is appropriate where constructs are measured using structured indicators and hypotheses are evaluated statistically (Creswell & Creswell, 2018; Sekaran & Bougie, 2020). The cross-sectional survey enabled data to be collected from managerial respondents during one study period and supported analysis of associations and interaction effects (Saunders et al., 2019). Positivism aligns with the study's focus on testing theory-derived hypotheses using observable measures. The explanatory orientation was selected to evaluate theoretically specified relationships among service differentiation orientation, environmental turbulence, and hotel performance. The cross-sectional design is economical and suitable for examining associations among multiple constructs within a defined period. Since the data were collected at one point in time, the findings are interpreted in terms of statistical associations and predictive relationships rather than definitive causal effects.

3.2 Population and Sampling

The study covered 3-, 4-, and 5-star hotels in Nairobi City. The target population comprised 41 eligible hotels and an estimated 600 managerial employees. Using Yamane's (1967) formula at a 5% margin of error, the target sample was 240 respondents. Stratified random sampling method was used to distribute the sample across the hotel categories: 53 respondents from 3-star hotels, 47 from 4-star hotels, and 140 from 5-star hotels. Managers were drawn from general management, operations, human resources, marketing and sales, finance, food and beverage, front office, and housekeeping. Each individual hotel served as the unit of analysis, while managerial employees served as the units of observation. Their responses provided information on strategic orientation, environmental turbulence, and hotel performance. This approach enabled the study to capture perspectives from managers working across key operational and administrative functions.

3.3 Data Collection Instrument

Data were collected using a structured questionnaire with five-point Likert response options (1 = strongly disagree, 5 = strongly agree). Five items measured service differentiation orientation, covering customer preferences, service innovation, brand distinctiveness, and customization. Five items assessed environmental turbulence through changes in customer preferences, competition, technology, market predictability, and the need for adaptation. Hotel performance was measured through five indicators: profitability growth, customer satisfaction, efficiency, competitiveness, and overall performance improvement, reflecting a balanced performance perspective (Kaplan & Norton, 1992). The questionnaire items were adapted from established measures and reviewed by experts for contextual relevance and clarity. The measures were selected to capture the strategic, environmental, and performance dimensions central to the study.

3.4 Pilot Testing

A pilot test was conducted with approximately 24 participants drawn from hotels not included in the main study to assess the reliability of the questionnaire, with a Cronbach's alpha threshold of $\alpha \geq 0.70$ considered acceptable, and to evaluate item clarity and content validity through expert review (Saunders et al., 2019). The pilot results informed minor refinements to item wording and sequencing, enhancing the instrument's clarity and relevance.

3.5 Data Analysis

Data was analyzed using SPSS version 28 and Hayes's (2018) PROCESS macro. Descriptive statistics summarized the study variables; Cronbach's alpha assessed internal consistency; and the KMO statistic and Bartlett's test assessed the suitability of the item correlation matrix for factor analysis. Diagnostic checks covered distributional properties, multicollinearity, homoscedasticity, and residual independence. Pearson correlations assessed bivariate associations, while regression estimated the relationship between service differentiation orientation and hotel performance. Moderation was assessed by including environmental turbulence and the product term SDO × ET in the regression model. In general form, the model is $HP = b_0 + b_1(SDO) + b_2(ET) + b_3(SDO \times ET) + \varepsilon$. A statistically significant b_3 indicates moderation; its sign indicates whether the relationship strengthens or weakens as turbulence increases (Hayes, 2018). The analysis therefore evaluated both the direct association between service differentiation orientation and hotel performance and the extent to which environmental turbulence affected that association.

3.6 Ethical Considerations

The ethics standards of the study were adhered to. All respondents gave their informed consent, and were assured of anonymity and confidentiality. All participants were free to discontinue participation at any time without penalty. The data were stored securely and used only for research purposes. All respondents had to obtain ethical approval from their institutional review board before data were collected.

3.7 Limitations of the Methodology

The cross-sectional design captures relationships at one point in time and therefore does not establish temporal order or causality. The use of managerial self-reports for the predictor, moderator, and outcome also creates a risk of common-method variance. Although procedural safeguards such as anonymity and confidentiality can reduce evaluation apprehension, self-reported measures may still be affected by shared response tendencies. The study was confined to star-rated hotels in Nairobi County; consequently, the findings may not be readily generalizable to hotels in other counties, other categories of hotels, or the broader hospitality industry. Any extrapolation of the findings beyond the study's geographical and sectoral scope should therefore be undertaken with caution. These limitations are considered when interpreting the findings and provide directions for further research.

4. RESULTS

4.1 Response Rate and Sample Characteristics

Of the 240 questionnaires distributed, 149 usable responses were obtained, giving a response rate of 62.1%. The responses comprised 32 from 3-star hotels, 30 from 4-star hotels, and 87 from 5-star hotels. The respondents included 80 men (53.7%) and 69 women (46.3%) and represented general management, operations, human resources, finance, marketing, food and

beverage, front office, and housekeeping. This distribution provided representation across the three hotel categories and a range of managerial functions. The findings are interpreted within the context of the participating star-rated hotels and the Nairobi-Kenya hospitality sector.

4.2 Descriptive Statistics

Table 1 presents the descriptive statistics for the study variables. Service differentiation orientation recorded the highest mean score (M = 3.61, SD = 0.39) of all strategic orientation variables, indicating that star-rated hotels in Nairobi prioritized strategies aimed at offering better customer experiences and services to their guests through personalized services, hospitality experiences at premium levels, new service delivery methods, and brand positioning. Environment turbulence was scored at a mean of 3.29 (SD = 0.51), indicating that the survey hotels operated in moderately dynamic and uncertain business situations. Hotel performance was assessed by a mean of 3.47 (SD = 0.51) as moderate or high performance.

Table 1: Descriptive Statistics for Study Variables

Variable	N	No. of Items	Min	Max	Mean	SD	Cronbach's α
Service Differentiation Orientation	149	5	2.30	4.69	3.61	0.39	0.846
Environmental Turbulence	149	5	1.95	4.59	3.29	0.51	0.801
Hotel Performance	149	5	2.20	4.80	3.47	0.51	0.865

4.3 Reliability, Validity, and Diagnostic Tests

Internal consistency was acceptable for all three multi-item measures: service differentiation orientation (α = .846), environmental turbulence (α = .801), and hotel performance (α = .865), exceeding the commonly used .70 benchmark (Hair et al., 2019). The KMO statistic was .810, and Bartlett's test was $\chi^2 = 168.690$, df = 15, $p < .001$, indicating that the item correlation matrix was suitable for factor analysis. These statistics support the factorability of the measures, while the reliability coefficients indicate satisfactory internal consistency. Skewness, kurtosis, and Shapiro–Wilk results were consistent with approximate normality ($p > .05$). The VIF was 1.357, while the Breusch–Pagan ($p = .572$) and Levene's ($p = .602$) tests did not indicate heteroscedasticity. The Durbin–Watson statistic was within the reported 1.5–2.5 range. Taken together, the diagnostic results provide no indication of major violations of the assumptions examined. The factorability and reliability results provide preliminary measurement evidence; further assessment of convergent and discriminant validity would benefit from a detailed factor-analysis model.

4.4 Correlation Analysis

Pearson correlation showed a positive association between service differentiation orientation and hotel performance ($r = .562$, $p < .001$). This indicates that higher levels of uniqueness, customer-experience focus, innovation, and customization were associated with higher hotel performance. The association is consistent with the strategic rationale for differentiation (Porter, 1985) and with hospitality research linking service-related capabilities to customer and performance outcomes (Han et al., 2022; Ngari & Mwangi, 2023). Environmental turbulence was also positively correlated with hotel performance ($r = .389$, $p < .001$), while its correlation with service differentiation orientation was positive but smaller ($r = .186$, $p < .05$). These bivariate relationships provide the basis for the subsequent regression and moderation analyses.

Table 2: Pearson Correlation Matrix (N = 149)

Variable	1	2	3
1. Hotel Performance	—		
2. Service Differentiation Orientation	.562**	—	
3. Environmental Turbulence	.389**	.186*	—

Note. N = 149. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed). Dashes (—) on the diagonal indicate that self-correlations are not reported

4.5 Regression Analysis: Direct Effect

A regression model was used to assess the association between service differentiation orientation and hotel performance. The model was statistically significant, $F(1, 147) = 33.642$, $p < .001$, with $R^2 = .481$ and adjusted $R^2 = .467$. Service differentiation orientation had a positive, statistically significant coefficient ($B = 0.318$, $SE = 0.067$, $\beta = .341$, $t = 4.746$, $p < .001$). The first null hypothesis was rejected. This result indicates that increased service differentiation orientation was associated with increased hotel performance. The finding is consistent with related evidence on strategic capabilities and hotel performance in Kenya (Mwachia et al., 2023).

Table 3: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error	F (df)	Sig.
Direct-effects model	0.694	0.481	0.467	0.375	33.642 (1, 147)	< .001
Moderation model	0.731	0.534	0.503	0.362	17.736 (3, 145)	< .001

Table 4: Regression and Moderation Coefficients

Variable	B	Std. Error	β	t	p
Constant	0.614	0.291	—	2.110	.037
Service Differentiation Orientation (SDO)	0.318	0.067	0.341	4.746	< .001
Environmental Turbulence (ET)	0.148	0.049	0.136	3.020	.003
SDO × ET (Interaction)	0.104	0.039	0.194	2.667	.009

4.6 Moderation Analysis

Hierarchical moderated regression was used to examine whether environmental turbulence affected the relationship between service differentiation orientation and hotel performance. The direct-effects model explained 48.1% of the variance ($R^2 = .481$). After environmental turbulence and the interaction term were entered, the full model explained 53.4% of the variance ($R^2 = .534$), while the standard error of estimate decreased from .375 to .362. The model was statistically significant, $F(3, 145) = 17.736$, $p < .001$. Environmental turbulence had a positive coefficient ($B = 0.148$, $\beta = .136$, $t = 3.020$, $p = .003$), and the interaction coefficient was positive and statistically significant ($B = 0.104$, $\beta = .194$, $t = 2.667$, $p = .009$). The positive interaction indicates that the SDO–performance association becomes stronger as environmental turbulence increases. The second null hypothesis was rejected. Overall, the results support the moderating role of environmental turbulence in the relationship between service differentiation orientation and hotel performance.

Table 5: Hypothesis Testing Results

Hypothesis	Path / Effect	B	β	t	p	Decision
H_{01}	SDO → HP (Direct effect)	0.318	0.341	4.746	< .001	Rejected
H_{02}	SDO × ET → HP (Interaction)	0.104	0.194	2.667	.009	Rejected

4.7 Summary of Findings

The results indicate two substantive findings. First, service differentiation orientation was positively and statistically significant to hotel performance (B = 0.318, β = .341, p < .001). Second, the interaction between service differentiation orientation and environmental turbulence was positive and statistically significant (B = 0.104, β = .194, p = .009), indicating that the association was increasingly significant at higher levels of turbulence. The reported model R^2 increased from .481 to .534 after environmental turbulence and the interaction term were added. The findings are consistent with a contingency perspective .

5. DISCUSSION

5.1 Interpretation of Findings

The positive coefficient for service differentiation orientation indicates that hotels reporting stronger emphasis on distinctive services also reported higher performance. The result is consistent with the RBV, which explains how intangible and difficult-to-imitate resources can support competitive advantage (Barney, 1991), and with Porter's (1985) argument that distinctive value can support competitive positioning. It also aligns with Kenyan hospitality research concerning technology orientation and organizational agility (Mwachia et al., 2023; Ngari & Mwangi, 2023). The analysis establishes a positive and statistically significant association between this construct and hotel performance in the study sample. The practical implication of this relationship is that, hotels should evaluate differentiation in terms of customer-perceived value rather than the number of new services introduced. A service feature is strategically distinctive only when it is relevant to the target market and delivered consistently. Managers can use guest feedback, complaint patterns, repeat-visit information, and competitor monitoring to identify where the service experience can be improved. These activities are consistent with the constructs examined.

The positive interaction is the principal contribution of the study. It suggests that the association between service differentiation orientation and hotel performance is stronger under higher environmental turbulence. One possible interpretation, consistent with Contingency Theory, is that rapidly changing customer preferences and competitive offerings increase the value of services that are distinctive and responsive (Donaldson, 2001; Lawrence & Lorsch, 1967). Dynamic Capabilities Theory provides a complementary explanation: firms that can sense change, seize opportunities, and reconfigure resources may be better positioned to sustain differentiation as conditions change (Teece, 2007).

5.2 Theoretical Implications

RBV identifies the intangible resources that can support distinctive service delivery (Barney, 1991; Wernerfelt, 1984), while Porter's (1985) differentiation strategy explains how those resources may be translated into a distinctive market position. Contingency Theory explains why the performance association may vary with environmental conditions (Donaldson, 2001; Lawrence & Lorsch, 1967). The positive interaction is consistent with the proposition that differentiation is more strongly associated with performance under higher turbulence. Dynamic

Capabilities Theory suggests how hotels may preserve that advantage through adaptation and resource reconfiguration (Teece, 2007; Teece et al., 1997). The findings indicate that environmental turbulence is a relevant boundary condition in the Nairobi hotel context. This context-specific result extends the application of contingency reasoning to star-rated hotels in Nairobi and highlights the value of considering organizational adaptation when examining strategic orientation and performance.

5.3 Practical Implications for Nairobi Hotel Managers

The findings suggest several practical priorities for hotel managers in Nairobi. First, managers should invest in service features that guests value and that are difficult for competitors to reproduce, including personalization, distinctive dining or wellness experiences, and locally relevant guest activities. These are illustrative applications of service differentiation; not individual interventions tested in this study. Second, environmental scanning should become a routine management process (Saunders et al., 2019). Hotels can monitor demand patterns, competitor activity, technological developments, regulatory changes, and guest feedback through periodic briefings and performance dashboards. Third, managers should develop adaptive capacity before disruption occurs through scenario planning, cross-functional staff development, flexible resource allocation, and appropriate digital investment. Finally, turbulence should be treated as a condition requiring informed response, not as an automatic opportunity (Teece, 2007). Differentiation may have greater performance value in changing environments where hotels can identify relevant changes and adjust their offerings effectively. These priorities should be supported by clear performance indicators. Managers can track guest satisfaction and complaint resolution to evaluate service experience, monitor repeat bookings and referral activity to assess loyalty, and compare occupancy, average daily rate, and RevPAR to evaluate commercial outcomes. Such indicators can help determine whether differentiated offerings create value for guests and contribute to financial performance (Donaldson, 2001; Lawrence & Lorsch, 1967). Regular review meetings can connect these measures with customer feedback and competitor intelligence, ensuring that service adjustments are based on evidence rather than assumptions.

The second is to invest in employee skill development. Since differentiation comes from experiences, we need to invest in staff training, empowerment, and service culture. Staff at all levels of the hotel should be educated and equipped to deliver differentiated experiences to guests. This means they should be equipped to adapt to changing guest expectations. For policy-makers and industry bodies, these results stress the importance of investing in industry-level skill development, particularly for smaller hotels that may not have the resources to invest in differentiation themselves. Industry associations, training centers, and government agencies can help the transfer of knowledge, digital adoption, and innovation networks.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study found a positive and statistically significant association between service differentiation orientation and the performance of star-rated hotels in Nairobi, Kenya. Hotels placing greater emphasis on distinctive services, customer experience, innovation, and customization also reported higher performance. Environmental turbulence positively moderated this relationship: the positive association was stronger at higher levels of turbulence (Donaldson, 2001; Lawrence & Lorsch, 1967). This finding suggests that differentiation may be particularly valuable in changing environments, especially when hotels can adapt their services to shifting conditions. The findings highlight the importance of aligning strategic orientation with the external environment. Given the cross-sectional and self-reported nature

of the data, the results are interpreted as statistical relationships rather than definitive causal effects (Mwachia et al., 2023). Future research using longitudinal designs and objective performance indicators would help establish how these relationships develop over time.

6.2 Recommendations

Based on these findings, the authors recommend that:

i. Hotel management should focus on differentiated service and invest in innovation, service quality improvement and customer experience improvement. Personalized services such as massage treatments and cultural experiences may be used.
ii. Hotel managers should actively monitor the environment, and keep tabs on changes in demand, competition, new technologies, and customer expectations, rather than treating it as a separate process only rarely performed.
iii. If the turbulence intensifies, the ability to adapt should be developed before it intensifies, through scenario planning, resource allocation, training of staff, digital capabilities, and decision-making in cross-functional areas.
iv. A broad range of initiatives should be funded at the industry level by policies and industry bodies to support hotel innovation, digital adoption, and training of managers, particularly for smaller and less resource-constrained hotels, that help build skills that individual hotels cannot.

These recommendations are in line with the recommendations made in a study on strategic orientations in the Kenyan hospitality sector (Mwachia et al., 2023; Chang'alwa & Kimaku, 2022).

6.3 Limitations and Suggestions for Further Research

The study was limited to star-rated hotels in Nairobi and used a cross-sectional design, which captures relationships at one point rather than changes over time. The use of managerial self-reports for the predictor, moderator, and outcome may introduce common-method variance. The sample covered three hotel categories and several managerial functions, but the findings should not be generalized automatically to other counties, ownership structures, or hospitality segments. Future studies should use longitudinal designs and objective indicators such as audited occupancy, average daily rate, and revenue per available room (RevPAR). They should also compare counties and hotel categories, examine measurement validity using detailed factor-analysis procedures, and test whether market, technological, competitive, and regulatory turbulence have distinct moderating effects. Research on resorts, serviced apartments, and restaurants could establish the extent to which the findings transfer to other hospitality settings.

REFERENCES

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182.

Bryman, A. (2016). Social research methods (5th ed.). Oxford University Press.

Buhalis, D., Leung, R., & Smart, A. (2023). Digital transformation in tourism and hospitality. *Journal of Travel Research*, *62*(6), 1234–1250.

Carvalho, I., Costa, J., & Ferreira, F. (2016). Environmental turbulence and hotel performance. *International Journal of Hospitality Management*, *54*, 1–10.

Chang'alwa, M. V., & Kimaku, P. (2022). Corporate level strategy and performance of coffee industry in Nairobi Metropolitan, Kenya. *International Journal of Social Sciences Management and Entrepreneurship*, *6*(2), 128–145.

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE.

Crook, T. R., Ketchen, D. J., Combs, J. G., & Todd, S. Y. (2008). Strategic resources and performance. *Journal of Management*, *34*(5), 1141–1161.

Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly*, *29*(1), 52–73.

Donaldson, L. (2001). The contingency theory of organizations. SAGE.

Duncan, R. B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly*, *17*(3), 313–327.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage.

Han, H., Kim, W., & Kim, M. (2022). Service quality and hotel performance. *Journal of Hospitality & Tourism Research*, *46*(3), 521–540.

Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (2nd ed.). Guilford Press.

Ivanov, S., & Webster, C. (2021). Digital transformation in tourism. *Tourism Management Perspectives*, *37*, 100–112.

Jaworski, B. J., & Kohli, A. K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing*, *57*(3), 53–70.

Kandampully, J., Zhang, T., & Bilgihan, A. (2015). Customer loyalty in hospitality. *International Journal of Contemporary Hospitality Management*, *27*(6), 1422–1442.

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard. *Harvard Business Review*, *70*(1), 71–79.

Kenya National Bureau of Statistics (KNBS). (2024). Economic survey 2024. Government of Kenya. https://www.knbs.or.ke

Kenya Tourism Board (KTB). (2024). Tourism performance report 2024. Government of Kenya. https://www.ktb.go.ke

Lawrence, P. R., & Lorsch, J. W. (1967). Organization and environment. Harvard University Press.

Mwachia, J. K., Kimaku, P., & Makungu, T. (2023). Influence of organizational agility dimensions on performance of hotel industry in Kenyan Coast Counties. *International Journal of Social Sciences Management and Entrepreneurship*, *7*(1), 172–187.

Ngari, J. M., & Mwangi, Z. M. (2023). Technology orientation and sustained competitive advantage in star-rated hotels in Kenya. *The University Journal*, *5*(1), 131–142. https://doi.org/10.59952/tuj.v5i1.136

Pine, B. J., & Gilmore, J. H. (1999). The experience economy. Harvard Business School Press.

Porter, M. E. (1985). Competitive advantage: Creating and sustaining superior performance. Free Press.

Saunders, M., Lewis, P., & Thornhill, A. (2019). Research methods for business students (8th ed.). Pearson.

Sekaran, U., & Bougie, R. (2020). Research methods for business (8th ed.). Wiley.

Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate market orientation? *Journal of Marketing*, *58*(1), 46–55.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509–533.

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, *36*(1), 1–10.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, *5*(2), 171–180.

World Travel & Tourism Council (WTTC). (2024). Economic impact report: Kenya. https://wttc.org

Yamane, T. (1967). Statistics: An introductory analysis (2nd ed.). Harper & Row.