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

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Abstract: **This study examined whether environmental turbulence changes the strength of the relationship between market orientation and performance among star-rated hotels in Nairobi, Kenya. The study was guided by Market Orientation Theory and Contingency Theory and adopted a positivist philosophy, an explanatory quantitative approach and a cross-sectional survey design. Data were collected from managerial personnel in classified three-, four- and five-star hotels using structured five-point Likert-scale questionnaires. Reliability, construct suitability and regression assumptions were assessed before hypothesis testing. The underlying regression analysis showed that market orientation had a positive and statistically significant effect on hotel performance (B = 0.271, β = 0.296, t = 4.169, p < .001). The interaction between market orientation and environmental turbulence was also positive and statistically significant (B = 0.086, β = 0.173, t = 2.324, p = .021). The full moderation model increased explained variance from R^2 = .481 to R^2 = .534. The findings indicate that environmental turbulence strengthens the performance contribution of market orientation. The study recommends systematic market intelligence, faster cross-functional information sharing, shorter strategic review cycles and selective investment in digital capabilities to support responsive decision-making in changing hotel markets.**

Keywords: **Environmental turbulence; Hotel performance; Hospitality management; Market orientation; Strategic orientation, Star-rated hotels.**

I. INTRODUCTION

Tourism and hospitality remain important components of Kenya's service economy. Government reporting points to continued recovery in tourism activity, including approximately 2.4 million international visitors in 2024 and tourism earnings of about KSh 452.2 billion. Planning documents also indicate growth in international arrivals, domestic hotel bed-nights and meetings, incentives, conferences and events (MICE) activity [13]. More recently, accommodation and food service activities expanded by 15.6% in 2025, highlighting the sector's wider economic contribution [14].

Growth in demand, however, does not eliminate the strategic pressures confronting hotel operators. Guests can compare prices and service experiences quickly, alternative accommodation providers have expanded consumer choice, and changes in technology, regulation, purchasing power and travel behaviour can alter demand. Nairobi is especially important because of its business, diplomatic and MICE functions and its concentration of classified accommodation establishments. The Tourism Regulatory Authority provides the institutional basis for classification and quality assurance in the accommodation sector [15].

In this setting, hotel performance depends partly on how effectively managers understand and respond to the market. Market orientation involves generating information about customers and competitors, distributing that information across functions and using it to coordinate organizational responses [1], [2]. In hotels, this capability can inform service design, pricing, promotion, customer engagement and resource allocation. Empirical studies have associated market orientation and related strategic orientations with stronger hospitality performance [6]–[8].

However, the value of a strategic capability may depend on the environment in which it is deployed. Contingency Theory argues that organizational effectiveness is influenced by the fit between internal arrangements and external conditions [3]. Environmental turbulence is therefore important because rapid and unpredictable changes may reduce the usefulness of established routines and increase the value of timely information and flexible responses. Evidence among Nairobi star-rated hotels has shown that turbulence can alter relationships between organizational capabilities and performance [9].

Despite this evidence, limited empirical attention has been directed to the interaction between market orientation and environmental turbulence among Kenyan star-rated hotels. This study addresses that gap by examining whether environmental turbulence changes the strength of the market orientation–performance relationship in Nairobi.

The study had two objectives: to determine the relationship between market orientation and the performance of star-rated hotels in Kenya; and to determine whether environmental turbulence moderates that relationship. The hypotheses were: H1: Market orientation has a significant positive influence on the performance of star-rated hotels in Kenya. H2: Environmental turbulence significantly moderates the relationship between market orientation and hotel performance.

II. LITERATURE REVIEW

A. Theoretical Framework

Market Orientation Theory provides the main theoretical foundation. Kohli and Jaworski define market orientation as an organizational process involving the generation of market intelligence, dissemination of that intelligence and responsiveness to it [1]. Narver and Slater complement this process view by emphasizing customer orientation, competitor orientation and inter-functional coordination [2]. For hotels, these dimensions provide a basis for converting guest and competitor information into coordinated managerial action.

Contingency Theory provides the basis for treating environmental turbulence as a moderator. The theory proposes that there is no single organizational arrangement that is optimal under all conditions; effectiveness depends partly on the fit between the organization and its environment [3]. In stable markets, established routines may be adequate. Under turbulent conditions, managers may require faster information flows, flexible decisions and more frequent adjustments to products, prices and promotional activities.

The argument is also consistent with the dynamic-capabilities perspective, which emphasizes the ability to sense changes, seize opportunities and reconfigure resources as conditions evolve [4], [16]. Hospitality research similarly highlights agility, collaboration, integration and reconfiguration as mechanisms through which firms respond to uncertain environments [4], [5].

B. Market Orientation and Hotel Performance

Market orientation is particularly relevant to hotels because service delivery occurs through repeated interaction with customers. Guest expectations may change in response to reviews, social media, travel patterns, income conditions and alternative accommodation. A market-oriented hotel therefore treats customer and competitor information as a continuing input to management rather than relying only on periodic feedback.

Customer orientation involves identifying and interpreting guest needs through satisfaction information, reviews, complaints, booking patterns and repeat visits. Competitor orientation involves monitoring rival prices, promotions, service packages, facilities and positioning. Inter-functional coordination ensures that these insights move across departments so they can influence operations, marketing, pricing and service delivery.

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Empirical evidence supports the performance relevance of these practices. Sari and Indriani found an association between market orientation, hotel performance and value-based marketing innovation [6]. In Nairobi County, strategic orientation has also been positively associated with performance among five-star hotels [7], while Karanja et al. reported positive relationships between customer focus, competitor awareness, inter-functional coordination and hospitality performance [8]. These findings support the expectation that stronger market orientation is associated with better hotel performance.

H1: Market orientation has a significant positive influence on the performance of star-rated hotels in Kenya.

C. Environmental Turbulence as a Moderating Variable

Environmental turbulence refers to external conditions characterized by rapid change, uncertainty and limited predictability. For hotels, turbulence may arise from changes in customer demand, price competition, technology, macroeconomic conditions, regulation and alternative accommodation. These changes can affect assumptions underlying pricing, marketing, staffing and investment decisions.

Turbulence matters not only because it creates risk but also because it can change the value of organizational capabilities. When demand is stable, market information may largely confirm existing decisions. As conditions become less predictable, timely intelligence can help managers recognize threats and opportunities earlier and adjust before competitors. This reasoning follows the contingency perspective and the dynamic-capabilities view of adaptation [3], [4], [16].

Kariuki et al. reported a significant moderating role for environmental turbulence in the relationship between core competencies and performance among star-rated hotels in Nairobi City County [9]. The present study extends that line of inquiry by focusing on market orientation and proposing that turbulence strengthens the relationship because market intelligence and responsiveness become more consequential when external conditions change rapidly.

H2: Environmental turbulence significantly moderates the relationship between market orientation and the performance of star-rated hotels in Kenya.

D. Conceptual Relationship

Market orientation is the focal independent variable, hotel performance is the dependent variable and environmental turbulence is the moderating variable. Market orientation comprises customer orientation, competitor orientation and inter-functional coordination. Environmental turbulence captures market unpredictability, competitive intensity and policy or macroeconomic volatility. The moderation is expressed as: Hotel Performance = β0 + β1(Market Orientation) + β2(Environmental Turbulence) + β3(Market Orientation × Environmental Turbulence) + ε.

Market Orientation ⟶ Hotel Performance

Environmental Turbulence moderates the relationship

Fig. 1. Conceptual relationship examined in the study

III. METHODOLOGY

A. Research Philosophy and Design

The study adopted a positivist philosophy and an explanatory quantitative design. A cross-sectional survey was used to assess the hypothesized relationships among market orientation, environmental turbulence and hotel performance using observable measures collected from managerial respondents at a defined period.

B. Target Population and Sampling

The target population comprised managerial personnel in officially classified three-, four- and five-star hotels operating in Nairobi, Kenya. Managers were selected because their responsibilities include strategic planning, resource allocation, market intelligence and competitive decisions. The sampling frame was based on official tourism establishment registers, with stratification used to represent three-, four- and five-star properties.

C. Data Collection and Measurement

Primary data were collected through a structured self-administered questionnaire. Items used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Market orientation was measured through customer orientation,

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competitor orientation and inter-functional coordination. Environmental turbulence covered market unpredictability, competitive intensity and policy or macroeconomic volatility, while hotel performance incorporated financial and non-financial indicators.

D. Validity, Reliability and Diagnostic Tests

Internal consistency was evaluated using Cronbach's alpha, with .70 treated as the minimum acceptable benchmark. Construct suitability was examined using the Kaiser–Meyer–Olkin statistic and Bartlett's Test of Sphericity. Normality was assessed using the Shapiro–Wilk test, multicollinearity using variance inflation factor values, and homoscedasticity using the Breusch–Pagan procedure.

E. Data Analysis

Descriptive statistics summarized the study constructs. Multiple regression was used to assess the strategic-orientation variables and hotel performance, with market orientation treated as the focal direct effect. Hierarchical moderation analysis then examined the market orientation × environmental turbulence interaction. Moderation was assessed from the significance and direction of the interaction coefficient and the change in explained variance between models.

IV. RESULTS

A. Reliability and Diagnostic Results

The diagnostic checks supported the use of the planned regression procedures. Cronbach's alpha values for the three constructs exceeded .70, indicating satisfactory internal consistency. KMO values were above .50 and Bartlett's Test of Sphericity was significant at $p < .001$, supporting factorability. The Shapiro–Wilk results indicated acceptable normality, VIF values remained below 5.0, and the Breusch–Pagan assessment supported the assumption of homoscedasticity.

B. Hypothesis Testing

Hierarchical regression was used to assess the direct market orientation effect and the proposed moderating role of environmental turbulence. The model statistics are presented in Table I.

Regression model	**R**	**R^2**	**Adjusted R^2**	**Std. Error**	**ΔR^2 / Sig. F Change**
Model 1: Direct effect	0.825	0.680	0.671	0.312	0.680 / < 0.001
Model 2: Moderated effect	0.860	0.740	0.732	0.281	0.060 / < 0.001

TABLE I: HIERARCHICAL REGRESSION MODEL SUMMARY

The underlying multiple-regression model explained 48.1% of the variation in hotel performance ($R^2 = .481$). Market orientation had a positive and statistically significant coefficient ($B = 0.271$, $\beta = 0.296$, $t = 4.169$, $p < .001$), supporting H1. The result indicates that stronger market orientation was associated with better hotel performance after the other strategic-orientation variables in the broader model were taken into account.

The market orientation × environmental turbulence interaction was positive and statistically significant ($B = 0.086$, $\beta = 0.173$, $t = 2.324$, $p = .021$). Explained variance increased from $R^2 = .481$ to $R^2 = .534$ in the full moderation model. The positive interaction indicates that the market orientation–performance relationship becomes stronger as environmental turbulence increases, supporting H2.

V. DISCUSSION

The direct-effect result supports the proposition that market orientation contributes to hotel performance. Market-oriented hotels have structured mechanisms for converting customer and competitor information into decisions concerning service, pricing, promotion and resource allocation. The result is consistent with evidence linking market orientation and related strategic orientations to hotel performance [6]–[8].

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The moderation finding provides the principal contribution of the study. The positive interaction indicates that the performance value of market orientation increases as environmental turbulence rises. This supports the contingency argument that strategic effectiveness depends partly on the conditions in which a capability is deployed [3]. Under stable conditions, hotels may rely more heavily on established routines. Under turbulent conditions, those routines become less reliable, making timely market intelligence and coordinated responses more important.

The finding is also consistent with research on agility and dynamic capabilities in hospitality. Chasapi et al. and Kamar et al. emphasize the importance of resources, collaboration, integration, agility and reconfiguration when organizations face changing conditions [4], [5]. The Kenyan context adds practical relevance because hotels operate amid changing customer expectations, competitive alternatives, technology and tourism demand. Market orientation can therefore serve as an adaptive capability rather than merely a marketing philosophy.

VI. CONCLUSION

This study examined whether environmental turbulence moderates the relationship between market orientation and performance among star-rated hotels in Kenya. The results support both hypotheses. Market orientation had a positive and statistically significant effect on hotel performance ($B = 0.271$, $\beta = 0.296$, $t = 4.169$, $p < .001$). The interaction between market orientation and environmental turbulence was also positive and significant ($B = 0.086$, $\beta = 0.173$, $t = 2.324$, $p = .021$). The broader direct-effects model explained 48.1% of performance variation, while the full moderation model explained 53.4%, an increase of 5.3 percentage points.

The study concludes that the performance value of market orientation is contingent on the external environment. Customer intelligence, competitor monitoring and inter-functional coordination become particularly important when conditions are uncertain and rapidly changing. For hotel managers, market orientation should therefore be embedded in routine decision-making and supported by systems that enable timely information sharing and flexible action. The study contributes to hospitality research by demonstrating that environmental turbulence changes the strength of the market orientation–hotel performance relationship.

VII. RECOMMENDATIONS

Hotels should strengthen market-intelligence systems covering guest feedback, online reviews, booking patterns, competitor pricing and emerging customer segments. Managers should also improve cross-functional information sharing so that market intelligence reaches operations, marketing, food and beverage, revenue management and other relevant functions quickly. Strategic plans should be reviewed more frequently so that pricing, promotions and service packages can be adjusted when conditions change. Selective investment in customer relationship management, analytics and online-reputation tools can support evidence-based decisions. Finally, hotel managers should strengthen skills in market intelligence, digital analytics, scenario planning, resilience and strategic flexibility.

VIII. LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The cross-sectional design limits conclusions about how market orientation and environmental turbulence change over time. The study also relies on managerial perceptions and does not directly combine survey responses with audited financial or operational records. Future research could use longitudinal designs and objective indicators such as occupancy, average daily rate and RevPAR. Comparative studies across Nairobi and other Kenyan destinations could examine whether the moderating effect varies by hotel class, destination or market segment. Future work could also test whether digital capability, innovation or organizational agility mediates the relationship between market orientation and performance under turbulent conditions.

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