American Journal of Tourism and Hospitality (AJTH)

ISSN: 2993-6519 (ONLINE)

VOLUME 4 ISSUE 2 (2026)

PUBLISHED BY
E-PALLI PUBLISHERS, DELAWARE, USA

American Journal of Tourism and Hospitality (AJTH)

Volume 4 Issue 2, Year 2026
ISSN: 2993-6519 (Online)
DOI: https://doi.org/10.54536/ajth.v4i2.6548
https://journals.e-palli.com/home/index.php/ajth

Mediation Role of Green Technology on Competitiveness and Performance of Hospitality Facility- A Theoretical Framework

Henry Mogaka Nyamogosa[1*], Beatrice Chepngetich[1], George Otieno Obonyo[1]

Article Information

Received: October 17, 2025
Accepted: December 23, 2025
Published: July 23, 2026

Keywords

Accredited Hospitality Facilities, Facility Competitiveness, Financial Performance, Green-Technology Aaplication, Kenya

ABSTRACT

This conceptual paper aims to develop a theoretical framework for the mediating effect of green-technology application on the relationship between facility competitiveness and financial performance of accredited hospitality facilities. To develop this framework, a two-phased process was followed whereby the first stage entailed reviewing relevant literature of facility competitiveness, green-technology application and their effect on hospitality facility financial performance. The second stage entailed improvement of the framework. The development of the theoretical structure is based on the previous theoretical explanations and empirical analysis in the area of firm competitiveness and social sciences. The researchers propose a theoretical framework to illustrate how facility competitiveness and green technology application can predict and explain the financial performance of accredited hospitality facilities in Kenya. Resource-based view and Porter's competitive advantage theories are used and their justifications and inadequacies in the studies of firm competitiveness in hospitality facilities is highlighted. The reviewed theoretical framework highlights methods that may be used to organize facility competitiveness and green-technology application in Kenyan hospitality facilities. Financial performance measures for hospitality facilities are also described. Researchers advance propositions that give a basis for conducting empirical research in future to authenticate the proposed model. The current study can inspire specialists and scholars to examine how facility competitiveness and green technology application predict and explain the financial performance of accredited hospitality facilities. Assimilation of knowledge from many disciplines enables this paper to focus on aggregating awareness regarding the conceptualization of facility competitiveness, green-technology application in hospitality facilities and the financial performance of those facilities. In the current fierce competitive environment in the hospitality industry, the paper provides a basis to understand managerial implications regarding embracing facility competitiveness and green-technology application in hospitality facilities.

INTRODUCTION

Green-technologies play critical roles in minimizing waste and saving water and energy to increase a hotel's overall performance (Nwokolo *et al.*, 2024). Studies show that renewable energy technologies such as biogas and solar energy are being adopted in hotels to reduce their carbon footprint, save costs, improve guest satisfaction, and differentiate themselves in the industry (Mahachi *et al.*, 2015; Sonubi *et al.*, 2015). Green technology application promotes environmental sustainability and serves as a catalyst for driving hospitality firms' performance. However, operating costs in hospitality venues, such as hotels, resorts, safari guest lodges, safari camps, palaces, and forts, have risen to 55.2% of turnover before rent and are likely to increase to 67% by 2030 (Thomas, 2022). This increase in operational costs is likely to lower profit margins or generate losses for hospitality facilities, leading to poor financial performance. Competitiveness enables hospitality facilities, such as hotels, to improve their market share and competitive position, acquire advanced technologies, and improve their performance (Bii *et al.*, 2023). Many empirical studies have suggested combining competitive strategies with other firm resources, including green technology, to achieve hospitality facility financial performance. While the concept of complementarity and resource-based innovation may be applied in facility competitiveness and hospitality financial performance studies, there exists limited research of this nature, especially in Kenya. To the knowledge of the authors, there has been no study on the relationship between facility competitiveness, green-technology application and financial performance. The argument in this paper is that a hospitality facility can only achieve a competitive advantage when green technologies are applied effectively, and that a good fit between the facility's competitiveness and green technology application will result in higher financial performance. This paper looks at the relationship between facility competitiveness and financial performance as well as the mediating effect of green-technology application. The mediating effects of other green-technology applications, such as energy-efficient appliances, water-efficient appliances, and solid waste management appliances, on the relationship between facility competitiveness and financial performance of accredited hospitality facilities have not been examined, despite the fact that emission reduction and pollution

[1] Maseno University, Kisumu, Kenya
[*]Corresponding author's e-mail: henrynyamogosa@gmail.com

control technologies have been used in prior studies to mediate the relationship between firm competitiveness and performance of firms (Cheng *et al.*, 2024; Pancholi *et al.*, 2024). This study adds to the current theoretical discussions and analyses by specifically investigating the mediation effect of green-technology application on the relationship between facility competitiveness elements proposed in resource-based view, namely, innovation capacity, service quality, quality of human resources and location, and financial performance of accredited hospitality facilities. In addition, the paper provides insightful information regarding diagnosing and discovering appropriate explanations for the decline of profit margins among Kenyan accredited hospitality facilities.

Resource-based view theory and Porter's competitive advantage theory provides guidance for propositions development for the study. There has been absence of a more complete picture regarding the interaction of internal resources such as nature, knowledge and capabilities and the external competitive environment that can affect facility competitiveness and financial performance (Hossain *et al.*, 2021; Wang *et al.*, 2022). Resource-based view theory guides in identifying competitive advantage sources rooted within the facility while Porter's competitive theory assists to understand how identified facility resources can be leveraged to achieve greater financial performance amid intense competition in the hospitality industry. Integration of these two theories equip the study to uncover complex relationships between facility competitiveness, green-technology application and financial performance. This provides insightful information to both scholars and practitioners regarding the effect of green-technology application on hospitality facility financial performance in the context of Kenyan accredited hospitality facilities. In addition, the study provides managerial implications with regard to applying green-technologies to reduce operational costs in order to improve financial performance of hospitality facilities. We propose that green-technology application has a role on fostering facility competitiveness that can result in enhanced hospitality facility financial performance.

LITERATURE REVIEW

This section contains the main body of the paper, divided into the following subheadings: hospitality facility competitiveness, green-technology application, financial performance, relationship between facility competitiveness and financial performance of hospitality facility, contributions of resource-based view and Porter's competitive theories to the current study (Figure 1).

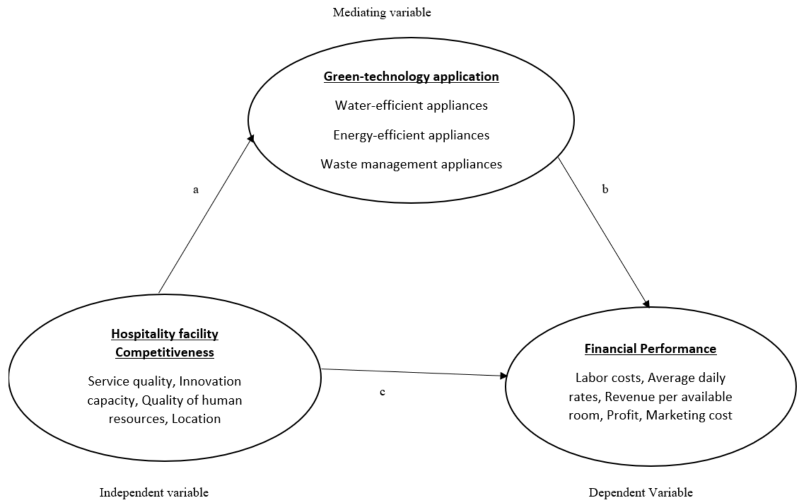

Figure. 1: Proposed theoretical framework (Authors, 2025)

RESULTS AND DISCUSSION

Proposed Theoretical Framework

Hospitality Facility Competitiveness

Firm competitiveness is considered a source of firm financial performance. Competitiveness refers to factors that improve the attractiveness and economic benefits of a firm and influence its profitability ratios positively (Dwyer & Kim, 2003). Hospitality facility competitiveness is the ability of a hospitality and tourism facility to obtain and keep comparative advantages, which make it attain, sustain, and enhance its position in the market (Tsai *et al.*, 2009). Crouch and Ritchie (1999) defined firm competitiveness as an enterprise's performance in the hospitality industry and its contribution to the economic, social, and cultural advancement of the community where it works. Firm competitiveness is a company's ability to design, generate, and market its goods and services at a better or lower price than its competitors (Viviani & Buzzigoli, 2009). In this way, firm's competitive edge is mostly determined by firm-specific characteristics.

Firm-specific characteristics such as quality of service, type of product offered, location and accessibility, facilities and amenities, innovation and technology have been suggested to determine facility competitiveness (Barney *et al*., 2001; Kruesi & Bazelmans, 2023). The quality of service delivered to guests in a hospitality facility impact their satisfaction in staying in the facility (Ali *et al*., 2021). Friendliness, prompt response to service, personalized services and professionalism from the hospitality staff enhances guests' satisfaction. However, there exists inconsistencies in defining quality of service in hospitality facilities due to its subjective nature, variations of customer expectations and the intangible service delivery aspects. Perceptions, interactions and experiences influence service quality, making it difficult to standardize it. In resource-based view theory, service quality is considered as a strategic resource but because of its intangibility and variability, it becomes challenging to classify it as a sustainable competitive advantage. Hence, there is need to understand and manage quality throughout a hospitality facility. Balaji (2009) proposed four areas; service design, service organization and culture, service productivity and service encounter upon which the question of quality in a service facility can be addressed. On the other hand, Parniangtong (2017) argued that competitors find it difficult to replicate deeply embedded customer-centric ethos within the facility's values and practices. Continuous training, empowering of employees and leadership commitment to service excellence can result in developing a strong service culture within a facility (Nowak, 2019). Although intangibility and variability of service quality can pose challenges in attaining permanent competitive advantage, hospitality facilities can build a strong service culture, apply effective processes aimed at fostering customer loyalty and commit themselves to continuous improvement. Thus, there exists a wide gap between developing quality of service hypothesis and authentic applications of quality of service in hospitality facilities, laying a foundation for the development of the paper's theoretical framework.

The measurement of competitiveness in the hotel sector has encountered difficulties. Some authors have proposed the use of the method known as data-envelopment analysis (DEA) that integrates multiple input and output variables concurrently to measure service sector productivity. This technique captures many factors that contribute to the performance of the firm (Carmona Olmos, 2012). On the other hand, some authors have suggested a balanced performance measuring method that monitors small-to-medium hotels' non-financial and financial aspects (Panno, 2020). In this technique, customer orientation is an essential indicator of corporate performance. Some studies have suggested the need to define criteria for measuring competitiveness, aggregating sub-indicators into an integrated index that incorporates human resources, marketing effectiveness, market share, risk management, profit benchmark, service quality and pricing features (Кувіка, 2024; Safarov & Janzakov, 2021). The literature review indicates the need to use a multi-criteria framework to assess comparative advantage in hospitality businesses, stressing the significance of managing abilities and resource quality (Grande, 2022)

Innovation capacity as been considered as a critical strategic resource for improving competitiveness in the hospitality industry. Also, innovation capacity in these hospitality facilities has been linked to service quality improvement and guest satisfaction (İplik *et al*., 2014). Ability to innovate has become an important issue in the hospitality industry due to the fact that hospitality facilities are struggling to differentiate themselves from competitors and meet diverse demands of guests (Shi *et al*., 2021). It has been suggested that incorporating innovation capacity as a strategic resource will allow hospitality facilities such as hotels to effectively adapt to market changes, meet new demand and expand the range of services that they provide (Santa *et al*.,2025). However, achieving these benefits of innovation capacity has been limited by the cost of innovation activities (İplik *et al*., 2014). The rate of success of innovations and innovation activities in hospitality industry has been indicated to be low in recent times (Martín-Rios & Ciobanu, 2019). This has resulted in scholars and practitioners delving into the concept of innovation to be able to create a competitive advantage out of innovation capabilities. Innovation capabilities is thought to enhance competitive advantage of hospitality firm in a flexible organizational structure (Anning-Dorson *et al*.,2020). Similarly, product and process innovation capabilities have been found to positively affect responsible innovation (Ngan, 2023). There exist lasting effects of improving innovation capabilities on hotel performance (Chandran *et al*., 2024). Innovation is essential for hotels to improve their operational efficiency and customer satisfaction through adapting to technological (Giannoukou, 2024). Pandemics such as Covid-19 have acted as catalysts in transforming digitalization in the hospitality sector. Integration of innovative tools and technologies in various processes of hospitality firms has improved operational efficiency and service delivery (Dzhyndzhoian *et al*., 2024), hence maintaining competitiveness in ever changing market. Artificial intelligence and mobile applications technologies enhance operational efficiency and maximize guest satisfaction through inclining services to individual preferences (Dzhyndzhoian *et al*., 2024). Investing in new technologies and fostering a culture that embraces creativity and innovation among employees could lead to superior performance (Zárraga-Rodríguez *et al*., 2015). Human talent and innovation have been identified as factors that can help build competitiveness in hospitality sector (Puche, 2021). Whereas, marketing, management and quality factors have been identified to assist built the competitiveness of the sector to a lesser extent (Puche, 2021). Hotels that engage in strategic thinking are likely to innovate, which in turn results in improved overall performance (Ledi *et al*., 2024). Although innovation capacity is essential for competitiveness, it is worth noting that not all innovations succeed as hospitality industry encounters difficulties in applying innovative practices (Martín-Rios & Ciobanu, 2019). There is need to manage innovations effectively in the hospitality sector to minimize in resource wastage and achieve the sustained success. Studies on innovation capacity have presented mixed findings. While innovation is considered as an essential factor in gaining competitive advantage, the extent to which it translates to success differs across different contexts. Although incremental innovations in process, product and service have been found to affect competitive strategies such as differentiation and cost leadership positively (Coşkun, 2013), there exists limited study on innovation capacity's influence on green-technology application in accredited hospitality facilities particularly in developing world. Although cost savings as a result of innovation can enhance profitability, they might not always lead to significant revenue growth, making it difficult to have a clear-cut of a positive financial impact (Molina-Castillo *et al.*, 2023; Serafim & Cristovao Verissimo, 2021). Process, organization, product and marketing types of innovation can possess different effects on hospitality facility performance. While some studies found out that full innovation impacts performance positively (Ledi *et al.*, 2024), others found out that innovation has relatively small direct effects on corporate performance (Molina-Castillo *et al.*, 2023), with benefits being more indirect. Therefore, these mixed findings lays foundations for the development of the theoretical framework for the study.

The quality of human resources is considered as a strategic asset that has a direct influence on competitive advantage and service excellence (Fitriyah & Sholihah, 2023). Practices of human resource management shapes the behavior of employee who then influences customer perceptions of service quality. Strategic human resource has been found to correlate with revenue growth significantly, showing the effect of human resource on financial performance of hospitality facilities like hotels (Adanse *et al.*, 2024). Also, human resource management has been found to affect employee attitudes and behaviors, which in turn shapes perceptions of tourists regarding service quality (Tiago *et al.*, 2020). Integrating quality management practices with human resource management has been linked to overall performance of hospitality facilities, particularly in UK hospitality industry (Maxwell, 1994). Quality of human resources has a direct impact on customer satisfaction, competitive advantage and financial performance (Anwar & Abdullah, 2021). Hospitality facility staff's professionalism, friendliness, empathy and ability to recognize and fulfil needs of guests has a direct influence on the perception of the hotel and their overall experience (Al Halbusi *et al.*, 2023; Engel *et al.*, 2013). Emphasis on talent management and continuous training equip employees with skills and knowledge to address guest complaints and unforeseen issues effectively and efficiently, hence building trust and loyalty. Skilled employees are in a position to provide personalized suggestions, remember guest preferences and anticipate guests' needs, resulting in providing memorable and differentiated experience (Wirtz & Jerger, 2016). Furthermore, competitors find it difficult to replicate a highly skilled and guest-centric workforce, making human capital of the facility unique and a sustainable competitive advantage source (J. Norman *et al.*, 2014). A well-trained and engaged employees of hospitality facility are able to deliver superior service quality that differentiates them from competitors, leading to better reviews, premium pricing and occupancy rates (Sampaio *et al.*, 2021). Valued and empowered employees develop positive feeling of contributing their innovative ideas to improve processes, services and guest experiences (González-González & García-Almeida, 2021). Trained and competent employees perform tasks efficiently with minimum errors, waste and rework, hence impacting the hotel overall performance (Patwary *et al.*, 2025). Although theoretical arguments have presented human resources as a strategic asset, studies looking at its direct link to hotel financial performance have often highlighted different findings. Some studies have indicated that quality of human resources do not directly result in increased revenue or reduced costs but works via many mediating factors such as service delivery and guest satisfaction (Papademetriou *et al.*, 2023), leadership style (Ahmad, 2021) and brand image (Ali *et al.*, 2021). Other studies have indicated that quantifying the indirect effects of quality human resources on financial performance is difficult and that many financial performance indicators may not fully capture the long-term benefits accrued from superior workforce (Khan, 2021). Furthermore, different studies have defined quality of human resources differently. While some study focus on particular human resource practices like performance management, training and compensation (Hassan, 2022), others focus on broader aspects such as human capital efficiency, special skills sets or employee engagement (Desta *et al.*, 2022). The mixed findings call for further studies that incorporate mediating variables, contextualize the study and utilize financial performance measures that reflect effect of intangible human resource on a hospitality facility.

Location serves as an essential strategic resource in hospitality businesses, influencing competitive advantage, operational efficiency and profitability. Hotels located in prime tourist areas experience an increased demand, which eventually increases their occupancy rates (Lado-Sestayo *et al.*,2014). Furthermore, hotel's profitability can be influenced significantly by the competitive landscape surrounding it (Lado-Sestayo *et al.*,2014). Small and medium enterprises can use local resources to differentiate themselves from the competitors and develop a sustainable competitive advantage (Tani & Papaluca, 2015). Similarly, hospitality enterprises can strategically deploy physical space to optimize operational costs and improve service delivery (Vischer, 1996). High visibility of hospitality facility from main roads or pedestrian areas would attract more customers, which then enhances brand recognition and reduces marketing costs (Suvittawat, 2024). In addition, businesses with a unique location like direct beach access, stunning panoramic views or historic building differentiates itself from the competitors. These hospitality facilities can often command higher prices because of the unique experiences that their setting provide (Valentin & O'Neill, 2019). Location contributes to the brand image of a hospitality facility, making it stand out among the competitors. A hospitality facility accessibility to fresh produce market, distribution centers and suppliers ensures timely delivery of goods, streamlines logistics and reduces transportation costs (Gersmann, 2022). Additionally, accessibility of businesses to water, electricity and internet as well as management of waste and public services ensures smooth operations. A safe and secure location attracts guests, as perceptions of safety of a location influences booking decisions of guests significantly (Alkier *et al.*, 2023). Although some studies have highlighted benefits accrued from a prime location to hospitality facilities, some studies have indicated high costs that come with property taxes, rent and acquisition (DeFranco *et al.*, 2022). Prime locations have been indicated to attract many competitors, hence require the business to differentiate themselves. While a prime location is necessary, it is not sufficient condition for success, as other resources such as service quality, branding and innovation are needed to be combined with it in order to drive hospitality facility performance. The strategic value of a unique physical location can be diminished in the event the rivals provide superior service, innovative technology and a memorable experience that outweighs locational advantage (Bhandari *et al.*, 2022). Similarly, strong online presence of a less prominent location together with positive reviews and targeted online promotional campaigns can assist hospitality facility to gain a competitive advantage (Kumar, 2021). This itself dilutes the argument that hospitality facilities in prime locations have foot traffic advantage over others. The significance of location to hospitality facility differs across countries and cultures, as each location has its own local regulations, consumer preferences and infrastructure. Studies thus far indicate that the optimal exploitation of location as a strategic resource for hospitality facility like hotel depends on its capability to adapt to changing market conditions and align with other resources.

MATERIALS AND METHODS

Facility Competitiveness and Green-Technology Application

Green initiatives adoption by hotels has been linked to improved hotel competitiveness due to the fact that these practices resonate with consumers and stakeholders who are environmentally conscious (Samarasinghe *et al.*, 2024). Competitive pressures and customer expectations drive green innovations, which in turn plays a vital role in sustainable performance in the hospitality sector Sun & Nasrullah, 2024). Aligning green creativity appropriately to digital technologies would improve green competitiveness, hence allowing hotels to adapt quickly to market demands (Salama *et al.*, 2024. This in turn solidifies hotels' competitive edge. Studies show that majority of global tourists prefer sustainable practices when selecting accommodations (Papallou *et al.*, 2024; Venugopal & Ranganath, 2025). This indicates that hotels that are able to meet this demand can attract large population and eventually command higher prices. Business competitiveness has been found to mediate the relationship between green innovation and financial performance of Ultra-Micro and Micro Craft Businesses in Indonesia (Rudiningtyas & Wardana, 2024). However, green innovation was found to have no significant effect on financial performance (Rudiningtyas & Wardana, 2024).

Green-technology Application and Financial Performance

Applying green-technologies have been found to indirectly improve financial performance via green innovation and cooperation (Liu *et al.*, 2024). However, some direct negative effects on financial performance indicators have been indicated in applying green-technologies (Liu *et al.*, 2024). Previous empirical studies have consistently indicated that green technology innovation serves as a key strategic factor of enterprise performance, improving financial performance via cost efficiency and competitive advantage while simultaneously enhancing environmental sustainability goals (Liang, Cao, Tang, Hu, & Zhang, 2025). Applying waste reduction technologies and energy management systems has been linked to lowering operational costs significantly, hence enhancing profitability (Manalo & Afable, 2023; Mandal *et al.*,2024). Green technologies have been indicated to directly contribute to hotel cost reductions, which positively impact hotel performance (Khalil *et al.*, 2024). Applying energy-saving strategies such as smart thermostats, predictive analytics, LED lighting and automated HVAC systems have been reported to reduce electricity consumption (Lee *et al*, 2024). Similarly, applying water-saving strategies such as low-flow fixtures, internet of things sensors and automated irrigation systems have been indicated to reduce water wastage (Basu, 2024). This is important for hotels that utilize more water per room per day as compared to the local population (Suárez-Fernández *et al.*, 2025). Furthermore, applying green-technologies contribute to reduction of waste generation and lower disposal costs (Mandal *et al.*, 2024). Operational savings accrued from applying green-technologies can directly translate to increased profitability, hence making green technology a strategic investment for financial performance. Furthermore, green-technology application can differentiate a hotel from its competitors by providing a unique proposition that attracts guests, hence resulting in increased occupancy rates and higher average daily rates (Mazzucchelli & Chierici, 2024). On contrary, some studies indicate a complex relationship between green technology and financial performance, with potential negative effects if not well managed (Liu *et al.*, 2024). This indicates the need for businesses to carefully strategize their green technology initiatives to ensure that they align with the business objectives. It is against this that the study postulated that appropriate alignment of green-technology application with facility competitiveness can assist hospitality facilities achieve significant cost savings, improve their market position and attract environmentally conscious consumers, which in long run result in greater financial performance.

A Mediating Effect of Green-Technology Application

Green technology has been found to significantly mediate the relationship between sustainable practices and financial performance of firms in various industries practicing sustainability (Noman *et al.*, 2024). In this study particular measures of green technology are not provided and there is a blanket statement that firms should adopt different green technologies to support their sustainability initiatives. This calls for further investigation to define and analyze specific measures of green technology in relation to financial performance. Green technology application in firms has been indicated not to directly promote firm financial performance, but it can promote firm financial performance only via green innovation (Liu *et al.*, 2024). Furthermore, green technology application was found to have a significant total positive effect on both environmental and financial performance. On the other hand, business competitiveness has been found to mediate the relationship between green innovation and financial performance (Rudiningtyas & Wardana, 2024). However, the findings indicated that green innovation has no significant effect on financial performance (Rudiningtyas & Wardana, 2024). Green technology innovation on another study was found to significantly enhance both financial and environmental performance (Liang *et al.*, 2025). Also, market competitiveness was found to mediate the relationship between green technology innovation and performance of enterprises (Liang *et al.*, 2025). Environmental, social and governance practices are linked to improved performance of manufacturing firms via green technological innovation (Chen *et al.*, 2024). Similarly, sustainable technologies usage in the firms are linked to better future financial performance of firms (Battiston *et al.*, 2023; Chavez & Lunar, 2024). Green competitive advantage mediates the link between ambidextrous green innovation and sustainable performance (Baquero, 2024).

Financial Performance in Hospitality Facilities

Many factors including firm characteristics, strategic decisions and macroeconomic conditions influence financial performance of hospitality facilities. Financial ratios and performance indicators can be utilized to assess the financial health of hospitality facilities in order to provide information regarding hospitality facility's operational efficiency, liquidity and profitability. Firm size, debt levels and asset tangibility significantly affect the financial performance of hotel (Matias *et al.*, 2024). While larger firms display increased financial performance because of economies of scale, firms with high debt levels reflect low financial performance (Matias *et al.*, 2024). Liquidity rations, net profit margin, average room rate, return on assets and occupancy percentages have been highlighted has key financial ratios utilized in assessing hotel performance (Santoso, n.d.)

Contributions of Resource-Based View (RBV) and Michael Porter's Competitive Advantage Theories to the Present Study

The Resource-Based View (RBV) theory suggests that a firm's competitive advantage and superior performance stem from its unique and valuable resources and capabilities (Barney, 1991; Wernerfelt, 1984). For a resource or capability to provide a sustained competitive advantage, it should ideally be valuable, rare, inimitable, and non-substitutable (VRIN framework). On the other hand, Michael Porter's competitive advantage theory suggests that firms can achieve a competitive advantage by pursuing one of two basic strategies: cost leadership or differentiation (Porter, 1985, 1990). A third strategy, focus, involves concentrating on a narrow buyer segment, product line, or geographic market, and within that focus, pursuing either cost leadership or differentiation. The foundation of this hypothetical paper stems from the views of these two theories. Previous studies have confirmed a link between core resources and performance in different firms (Almashhadani & Almashhadani, 2023; Kallmuenzer & Peters, 2018). Regarding the particular aspects of firm competitiveness, the use of the firm's distinct tangible (physical, technological, human, and financial) and intangible (brand recognition, reputation, and patents) resources drives firm success and fosters innovations that outperform competitors (Drnevich & Kriauciunas, 2011). Furthermore, most hospitality facilities have integrated operational strategies such as market development, product diversification, product innovation, cost leadership, focus, and differentiation into their operations to be able to effectively compete with other hospitality facilities in the country and those in other countries (Bukirwa, 2017). However, most of the reviewed studies utilized a limited number of elements of facility competitiveness to link it to the performance of the hotels and restaurants sectors and failed to consider both discrete and compound elements of firm competitiveness concurrently. Furthermore, while the concept of complementarity and resource-based innovation may be applied in facility competitiveness and hospitality financial performance studies, there exists limited research of this nature. In light of this, it is unknown how tangible and intangible resources, as well as their capabilities, affect the financial performance of accredited hospitality facilities. Also, the predicted relationship between resource-based factors studied and the performance of firms has not been adequately explained (Syariati *et al.*, 2021). For instance, core resources such as quality of human resources, innovation capacity, prime location and service quality have not been considered simultaneously as probable core resources that can lead to enhanced hospitality facility performance. Failure to explore further investigations on firm competitiveness and financial performance in diverse settings such as accredited hospitality facilities restrict the possibility of generalizing and reviving both resource-based view and Michael Porter's competitive theories via other main academic domains (Raza & Khan, 2022). Reviewed literature indicates that it is important to discover how resource-based factors impact green-technology application that has not been investigated within hospitality sector. Despite the limitations highlighted regarding the study of resource-based and porter's competitive advantage theories, they still remain credible theories for pursuing the link between hospitality facility competitiveness, green-technology application and financial performance of hospitality facilities.

Therefore, its hypothesized that a relationship exists between facility competitiveness, green-technology application and the hospitality facility financial performance. Subsequently, three propositions emanating from existing literature have been developed. The first proposes that facility competitiveness (innovation capacity, service quality, quality of human resources, and location) affects green-technology application. The second proposition states that green-technology application affects financial performance of hospitality facilities. The third proposition states that green-technology application mediate the relationship between facility competitiveness and the financial performance of hospitality facilities.

Research Implications and Contributions

The theory provides a foundation for the recognition of potentially meaningful patterns and testing hypotheses. It also provides the basis for developing alternative explanations for phenomena observed in the real world. On the other hand, research provides valuable insights that inform decision-making processes, improve customer experiences, and drive innovation within the industry. Practice provides the essential real-world context that drives the development of relevant theories and shapes pertinent research questions, ensuring that academic inquiry remains grounded in the realities of the sector (Gray, 2021). Firm competitiveness and green technology researchers and hospitality facility practitioners have continuously made calls for empirical investigations of firm competitiveness and green technology application; such studies make immense contribution to the academic literature growth (Buhalis *et al.*, 2019). Nevertheless, there exists limited studies that focus on green technology application's effect on the relationship between facility competitiveness and financial performance of Kenyan hospitality facilities. Additionally, there is limited information on a theoretical framework for the same. A theoretical framework provides the basis for holding or strengthening a hypothesis that need to be investigated and highlights the need for related research to be conducted (Kivunja, 2018).

The development of a theoretical framework is essential, as it provides direction to subsequent investigations regarding facility competitiveness fostered in hospitality facilities and to advance sound facility competitiveness and green-technology application theorization on hospitality facility management. Thus, a theoretical framework is proposed in this paper to fill the aforementioned gap. Further, based on resource-based view and porter's competitive advantage theories, which contemplates valuable, rare, inimitable and non-substitutable resources as well as cost leadership and differentiation strategies, the paper contributes to developing a standard and adaptable facility competitiveness theory, green-technology practices, and the financial performance of hospitality facilities. Future investigations may be reinforced by the developed theoretical framework through correlation of the research with prevailing information, assessing critical theoretical propositions and articulating the hypothetical foundations for study. Questions of "how and why" can be well answered by the proposed framework and assist identify limitations that may be linked to proposed generalizations. Furthermore, the presented theoretical framework proposes that green-technology application has a significant mediation effect on the relationship between facility competitiveness and financial performance of Kenyan hospitality facilities, indicating appropriate hypotheses and propositions as well as items to be measured.

CONCLUSION

As per the views of resource-based and porter's competitive advantage theories, the proposed hypothetical framework highlights the mediating effect of green-technology application on the relationship between facility competitiveness and financial performance of Kenyan hospitality facilities. Previous theoretical justifications and empirical studies of hospitality management provide basis for identification of the current theoretical framework. Justifications and highlights for using resource-based and porter's competitive advantage theories together with their rare applications to green-technology application studies have been provided. Facility competitiveness, green-technology application and financial performance measures have been adopted from previous studies, modified and accustomed as proposed. Three main propositions are made. In this paper, a theoretical framework is advanced to create opportunities for conducting future studies. Also, the paper presents a theoretical framework that provides guidance to practice and the hypotheses development, and research on facility competitiveness and green-technology application of Kenyan hospitality facilities. Literature from other academic disciplines provides basis for this paper to strengthen the combined evidence of conceptualizing and describing facility competitiveness, green-technology application and financial performance. This paper presents an empirical study that applies the suggested model via a cross-sectional survey. The suggested theoretical framework can assist in conceptualizing and developing future studies on facility competitiveness, green-technology application and financial performance in hospitality facilities.

REFERENCES

Ahmad, S. (2021). Motivation and performance: A psychological process. *International Journal of Business and Management Research, 9*(2), 104-112.

Al Halbusi, H., Al-Sulaiti, K., AlAbri, S., & Al-Sulaiti, I. (2023). Individual and psychological factors influencing hotel employee's work engagement: The contingent role of self-efficacy. *Cogent Business & Management, 10*(3), 2254914.

Ali, B. J., Gardi, B., Othman, B. J., Ahmed, S. A., Ismael, N. B., Hamza, P. A., ... & Anwar, G. (2021). Hotel service quality: The impact of service quality on customer satisfaction in hospitality. *International Journal of Engineering, Business and Management, 5*(3), 14-28.

Alkier, R., Okičić, J., & Milojica, V. (2023). Perceived Safety and some Other Factors in Tourist´ s Decision-Making Process: Findings from Opatija Riviera. *Pomorstvo, 37*(1), 151-159.

Almashhadani, M., & Almashhadani, H. A. (2023). The Influence of Technological Capacity and Financial Capacity on Promoting Firm Competitiveness and Firm Performance. *Journal of Humanities Social Sciences and Business (Jhssb), 3*(1).

Anning-Dorson, T., & Nyamekye, M. B. (2020). Be flexible: turning innovativeness into competitive advantage in hospitality firms. *International Journal of Contemporary Hospitality Management, 32*(2), 605-624.

Anwar, G., & Abdullah, N. N. (2021). The impact of Human resource management practice on Organizational performance. *International journal of Engineering, Business and Management (IJEBM), 5.*

Balaji, B. (2009). Service Quality: Approaches, Service Gaps and Causes of Service Quality Problems. Your article library.

Baquero, A. (2024). Examining the role of ambidextrous green innovation and green competitive advantage in stimulating sustainable performance: The moderating role of green absorptive capacity. *SAGE Open, 14*(4). https://doi.org/10.1177/21582440241294160

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management, 17*(1). https://doi.org/10.1177/014920639101700108

Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of management, 27*(6), 643-650.

Basu, M. (2024). Tech-Driven Horizons: Pioneering Sustainable Tourism for Environmental Resilience and SDGs Triumph. In The Need for Sustainable Tourism in an Era of Global Climate Change: Pathway to a Greener Future (pp. 215-247). Emerald Publishing Limited.

Battiston, S., Monasterolo, I., & Montone, M. (2023). Technological greenness and long-run performance. Social Science Research Network. https://doi.org/10.2139/ssrn.4639787

Bhandari, K. R., Ranta, M., & Salo, J. (2022). The resource‐based view, stakeholder capitalism, ESG, and sustainable competitive advantage: The firm's embeddedness into ecology, society, and governance. *Business Strategy and the Environment, 31*(4), 1525-1537.

Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., & Hofacker, C. (2019). Technological disruptions in services: lessons from tourism and hospitality. *Journal of service management, 30*(4), 484-506.

Bukirwa, S. (2017). Influence of Competitive Strategies on Organizational Performance of Hotels in Kenya (a Survey of Hotels in Mombasa County). *Strategic Journal of Business & Change Management, 4*(2). https://doi.org/10.61426/sjbcm.v4i2.428

Chandran, V. G. R., Ahmed, T., Jebli, F., Josiassen, A., & Lang, E. (2024). Developing innovation capability in the hotel industry, who and what is important? A mixed methods approach. *Tourism Economics, 30*(3), 728-748.

Chavez, Q. S. A., & Lunar, A. S. (2024). Green tourism practices among ecoparks in the First District of Oriental Mindoro. *American Journal of Tourism and Hospitality, 3*(1), 1–15. https://doi.org/10.54536/ajth.v3i1.5154

Chen, X., Lakkanawanit, P., Suttipun, M., Swatdikun, T., & Huang, S. (2024). Green Technology Innovation and Corporate Reputation: Key Drivers of ESG and Firm Performance. *Emerging Science Journal, 8*(6), 2501–2518. https://doi.org/10.28991/esj-2024-08-06-021

Coşkun, M. (2013). Matematik kavramları öğretiminde öyküleştirme yönteminin tutuma ve başarıya etkisi (Master's thesis, Kirsehir Ahi Evran University (Turkey)).

Crouch, G. I., & Ritchie, J. R. B. (1999). Tourism, competitiveness, and societal prosperity. *Journal of Business Research, 44*(3). https://doi.org/10.1016/S0148-2963(97)00196-3

DeFranco, A., Koh, Y., Prem, P., & Love, B. (2022). Inclusion of condominium units in luxury hotels as a diversification strategy: Property performance perspective. *Cornell Hospitality Quarterly, 63*(1), 108-118.

Desta, A. G., Tadesse, W. M., & Mulusew, W. B. (2022). Aspects of Human Capital Management and Employee Job Performance: The Mediation Role of Employee Engagement. I*nternational Journal of Business Science & Applied Management, 17*(3).

Drnevich, P. L., & Kriauciunas, A. P. (2011). Clarifying the conditions and limits of the contributions of ordinary and dynamic capabilities to relative firm performance. *Strategic Management Journal, 32*(3). https://doi.org/10.1002/smj.882

Dwyer, L., & Kim, C. (2003). Destination competitiveness:

Determinants and indicators. *Current Issues in Tourism, 6*(5). https://doi.org/10.1080/13683500308667962

Dzhyndzhoian, V., Khodak, O., & Yakovlieva-Melnyk, N. (2024). Innovative approaches to strategic management of analytical studies and forecasting of the activities of hotel and restaurant business enterprises. In E3S Web of Conferences (Vol. 538, p. 02002). EDP Sciences.

Engel, J., Tran, C., Pavlek, N., Blankenberg, N., & Meyer, A. (2013). The impact of friendliness on brand perception. Marketing Review St. *Gallen, 30,* 82-95.

Fitriyah, L., & Sholihah, I. (2023). Effective Human Resource Management Strategy: Improving Excellent Service For Competitive Advantage. *Managere: Indonesian Journal of Educational Management, 5*(2), 143-154.

Gersmann, Y. (2022). A trade-off between Centralized and Decentralized Purchasing: How can a corporation maintain flexibility in supplier-and product-choices and benefit from the advantages of centralized purchasing at the same time? (Master's thesis, University of Twente).

Giannoukou, I. (2024). Revolutionizing hospitality: Strategic integration of innovation management embracing technological innovation for enhanced customer experiences. *Technium Business and Management, 7*, 24-39.

González-González, T., & García-Almeida, D. J. (2021). Frontline employee-driven innovation through suggestions in hospitality firms: The role of the employee's creativity, knowledge, and motivation. International Journal of Hospitality Management, 94, 102877.

Gray, D. E. (2021). Doing research in the real world.

Hassan, Z. (2022). Employee retention through effective human resource management practices in Maldives: Mediation effects of compensation and rewards system. *Journal of Entrepreneurship, Management and Innovation, 18*(2), 137-174.

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.

İplik, F. N., Topsakal, Y., & Doğan, O. (2014). Strategic innovation: An empirical study on hotel firms operating in Antalya region. *Advances in Hospitality and Tourism Research (AHTR), 2*(1), 16-29

Kallmuenzer, A., & Peters, M. (2018). Innovativeness and control mechanisms in tourism and hospitality family firms: A comparative study. International Journal of Hospitality Management, 70. https://doi.org/10.1016/j.ijhm.2017.10.022

Khalil, N., Che Abdullah, S. N., Haron, S. N., & Hamid, M. Y. (2024). A review of green practices and initiatives from stakeholder's perspectives towards sustainable hotel operations and performance impact. *Journal of Facilities Management, 22*(4), 653-682.

Khan, S. (2021). Impact of human resource accounting on organizations' financial performance in the context of SMEs. *Accounting, 7*(3), 621-628.

Kivunja, C. (2018). Distinguishing between theory, theoretical framework, and conceptual framework: A systematic review of lessons from the field. *International journal of higher education, 7*(6), 44-53.

Kruesi, M. A., & Bazelmans, L. (2023). Resources, capabilities and competencies: a review of empirical hospitality and tourism research founded on the resource-based view of the firm. *Journal of Hospitality and Tourism Insights, 6*(2), 549-574.

Kumar, P. (2021). Digital marketing in hospitality and tourism. *University of South Florida (USF) M3 Publishing, 17*(9781732127593), 3.

Lado-Sestayo, R., Otero-González, L., & Vivel-Búa, M. (2014). Impacto de la localización y la estructura de mercado en la rentabilidad de los establecimientos hoteleros. *Tourism & Management Studies, 10*(2), 41-49.

Ledi, K. K., Dumeda, R. B., Bandoma, S., & Ameza-Xemalordzo, E. (2024). *Strategic thinking and innovation as panaceas for hotel performance in turbulent business environments. Cogent Business & Management, 11*(1), 2328330.

Lee, J., Kim, J., Hong, T., Mun, S. G., Koh, K., & Koo, C. (2024). Scalable investigation of energy usage patterns and saving potential in hotel guestrooms: Focused on occupancy states and electrical installations. Energy and Buildings, 302, 113735.

Liang, K., Cao, Z., Tang, S., Hu, C., & Zhang, M. (2025). Evaluating the influence of environmental, social, and governance (ESG) performance on green technology innovation: Based on Chinese A-share listed companies. *Sustainability, 17*(3), 1085. https://doi.org/10.3390/su17031085

Liu, W., Cao, Y., Chan, H. K., Lim, M. K., Tang, O., & He, Y. (2025). Examining the Impact of Green Technology Application on Firm Performance: An Empirical Study Utilizing With the Meta‐SEM Method. *Journal of Business Logistics, 46*(1), e70003.

Manalo, G. M., & Afable, F. M. (2023). Implementation of green tourism practices in the hotels and resorts of White Beach, Puerto Galera. *American Journal of Tourism and Hospitality, 1*(1), 1–15. https://doi.org/xxxx

Mandal, S., Raju, S. S., & Yadav, N. (2024). Sustainability Through Technology. *Advances in Hospitality, Tourism and the Services Industry (AHTSI) Book Series,* 309–336. https://doi.org/10.4018/979-8-3693-7127-5.ch012

Mandal, S., Raju, S. S., & Yadav, N. (2024). Sustainability Through Technology. *Advances in Hospitality, Tourism and the services Industry (AHTSI) Book Series,* 309-336. https://doi.org/10.4018/979-8-3693-7127-5.ch012

Martín-Rios, C., & Ciobanu, T. (2019). Hospitality innovation strategies: An analysis of success factors and challenges. *Tourism management, 70*, 218-229.

Martín-Rios, C., & Ciobanu, T. (2019). Hospitality innovation strategies: An analysis of success factors and challenges. *Tourism management, 70,* 218-229

Matias, F., Rebelo, S., Andraz, G., & Guerreiro, J. (2024). The Influence of Firm Characteristics and Macroeconomic Factors on Financial Performance: Evidence from the Portuguese Hotel Industry. Economies. https://doi.org/10.3390/economies12110306

Maxwell, G. A. (1994). Human resource management and quality in the UK hospitality industry—where is the strategy? *Total Quality Management, 5*(3), 45-52.

Mazzucchelli, A., & Chierici, R. (2024). Consumer behaviour and sustainability in hospitality. In Contemporary Marketing and Consumer Behaviour in Sustainable Tourism (pp. 38-60). Routledge.

Molina-Castillo, F. J., Meroño-Cerdán, A. L., Lopez-Nicolas, C., & Fernandez-Espinar, L. (2023). Innovation and technology in hospitality sector: Outcome and performance. *Businesses, 3*(1), 198-219.

Ngan, N. T. H., Hanh, D. H., & LANc, H. T. (2023). Effect of Innovation Resources on Sustainable Competitive Advantage: The Moderating Role of Responsible Innovation from Evidence of Hospitality Industry in Vietnam. *WSEAS Transactions on Business and Economics, 20,* 2669-2683.

Noman, M., Usman, Z., & Umair, M. (2024). Impact of Sustainable Environment &Amp; Green Transformational Leadership On Firm Financial Performance: A Mediating Role of Green Technology. *Journal of Social Research Development, 5*(2), 340–348. https://doi.org/10.53664/jsrd/05-02-2024-28-340-348

Nowak, R. (2019). Developing serving culture: focus on workplace empowerment. *Employee Relations: The International Journal, 41*(6), 1312-1329.

Papademetriou, C., Anastasiadou, S., & Papalexandris, S. (2023). The effect of sustainable human resource management practices on customer satisfaction, service quality, and institutional performance in hotel businesses. *Sustainability, 15*(10), 8251.

Papallou, E., Katafygiotou, M., & Dimopoulos, T. (2024). Emerging sustainability trends in tourist facilities: A comparative assessment of multiple hotels and resorts. *Sustainability, 16*(9), 3536.

Parniangtong, S. (2017). Competitive advantage of customer centricity. Springer Singapore.

Patwary, A. K., Azam, N. R. A. N., Ashraf, M. U., Muhamed Yusoff, A., Mehmood, W., & Rabiul, M. K. (2025). Examining employee performance through knowledge management practices, organisational commitment and capacity building in the Malaysian hotel industry. *Global Knowledge, Memory and Communication, 74*(3/4), 733-752.

Porter, M. E. (1985). Competitive Advantage. Creating and sustaining superior performance. New York: The Free Press. In Blood (Vol. 108, Issue 1).

Porter, M. E. (1990). Competitive Advantage of Nations: Creating and Sustaining Superior Performance. Harvard Business Review, 29(March-April).

Puche, M. A. S. (2021). Los factores claves de la competitividad en el sector hotelero: una propuesta desde la teoría de los recursos y capacidades (VBR). *Revista científica anfibios, 4*(1), 53-64.

Raza, S. A., & Khan, K. A. (2022). Impact of green human resource practices on hotel environmental performance: the moderating effect of environmental knowledge and individual green values. *International Journal of Contemporary Hospitality Management, 34*(6). https://doi.org/10.1108/IJCHM-05-2021-0553

Rudiningtyas, D. A., & Wardana, L. W. (2024). Green Innovation for Enhanced Competitiveness and Financial Performance: A Study of Ultra-Micro and Micro Craft Businesses in Indonesia. https://doi.org/10.55227/ijerfa.v3i1.236

Sampaio, C. A., Rodrigues, R. G., & Hernández-Mogollón, J. M. (2021). Price strategy, market orientation, and business performance in the hotel industry. *Journal of Global Information Management (JGIM), 29*(1), 85-102.

Santa, R., Rodríguez Victoria, O. E., & Tegethoff, T. (2025). The role of quality in the hotel sector: the interplay between strategy, innovation and outsourcing to achieve performance. *The TQM Journal, 37*(1), 199-221.

Santoso, T. G. (n.d.). Financial Ratio Analysis to Assess Financial Performance of the Hotel Industry. https://doi.org/10.23887/ijssb.v5i3.37003

Serafim, G. H., & Cristovao Verissimo, J. M. (2021). The relationship between strategic orientation, service innovation, and performance in hotels in Angola. *Sustainability, 13*(11), 6256.

Shi, F., Shi, D., Weaver, D., & Samaniego Chavez, C. E. (2021). Adapt to not just survive but thrive: resilience strategies of five-star hotels at difficult times. *International Journal of Contemporary Hospitality Management, 33*(9), 2886-2906.

Suárez-Fernández, S., Zapico, E., & Boto-García, D. (2025). Water-saving strategies at hotels: which are more effective?. *Current Issues in Tourism, 28*(7), 1135-1154.

Suvittawat, A. (2024). Exploring Customer Experience Drivers in Night Markets: Examining the Roles of Product Preference, Service Quality, and Facility Accessibility. *Tourism and Hospitality, 5*(4), 1477-1492.

Syariati, A., Amar, M. Y., & Syariati, N. E. (2021). The Strategic Choices in Achieving Tourism's Competitiveness and Performance among Hotels in Indonesia. *Geojournal of Tourism and Geosites , 38*(4). https://doi.org/10.30892/gtg.38429-763

Tani, M., & Papaluca, O. (2015). Local resources to compete in the global business: The case of Sextantio hotels. In Handbook of research on global hospitality and tourism management (pp. 119-141). IGI Global Scientific Publishing.

Tsai, H., Song, H., & Wong, K. K. F. (2009). Tourism and hotel competitiveness research. *In Journal of Travel and Tourism Marketing* (Vol. 26, Issues 5–6). https://doi.org/10.1080/10548400903163079

Valentin, M., & O'Neill, J. W. (2019). The value of location for urban hotels. *Cornell Hospitality Quarterly, 60*(1), 5-24.

Venugopal, K., & Ranganath, N. S. (2025). Eco-Conscious Travellers: Preferences and Perceptions of Homestay Accommodations. In Global Practices and Innovations in Sustainable Homestay Tourism (pp. 203-228). IGI Global Scientific Publishing.

Vischer, J. C. (1996). Optimizing Occupancy: Strategic Planning of the Organization-Accommodation Relationship. In Workspace Strategies: Environment as a Tool for Work (pp. 206-223). Boston, MA: Springer US.

Viviani, A., & Buzzigoli, L. (2009). Firm and System Competitiveness: Problems of Definition, Measurement and Analysis. In Firm and System Competitiveness.

Wang, J. (2022). Building competitive advantage for hospitality companies: The roles of green innovation strategic orientation and green intellectual capital. *International Journal of Hospitality Management, 102,* 103161.

Wernerfelt, B. (1984). A Resource-Based View of the Firm on JSTOR. *Strategic Management Journal, Vol. 5,* No, 10. https://www.jstor.org/stable/2486175

Wirtz, J., & Jerger, C. (2016). Managing service employees: literature review, expert opinions, and research directions. *The Service Industries Journal, 36*(15-16), 757-788.

Zárraga-Rodríguez, M., & Álvarez, M. J. (2015). Innovation Capability and the Feeling of Being an Innovative Organization. *Enhancing Synergies in a Collaborative Environment,* 343-350.