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Bounce-Back Strategies: Revitalizing the Hotel Industry Post-Pandemic

Abstract

The COVID-19 pandemic severely disrupted the hotel industry, necessitating a reevaluation of competitive strategies. This study examines viable strategies for revitalizing hotel operations in the post-pandemic context, focusing on Medellín, Colombia. Using the Fuzzy Analytic Hierarchy Process (FAHP) technique, we evaluate the relative importance of different strategies and their applicability in different scenarios. The study identifies five key strategies, prioritized as follows: differentiation, service development, market penetration, liquidation, and backward integration. Our findings show that while traditional strategies such as differentiation remain highly valued, their implementation during the pandemic is challenging. The inclusion of liquidation among the top strategies indicates the severe impact of the crisis. The proposed model allows for a comprehensive assessment of strategic approaches and emphasizes the importance of adaptability in responding to unprecedented challenges. This research contributes new insights to the evaluation of competitive strategies in the context of a global crisis and provides a methodological framework that can inform strategic decision-making in the hotel industry as it copes with recovery and future uncertainties.

Keywords: Hotel industry, competitive strategies, post-pandemic, fuzzy analytic hierarchy process, Medellin

1. Introduction

The COVID-19 pandemic severely affected the hospitality industry (Do et al., 2022; Smart et al., 2021; Vo-Thanh et al., 2022), necessitating the adoption of revised hotel marketing and crisis management practices (Vo-Thanh et al., 2021; Yacoub and ElHajjar,

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2021). On March 19, 2020, the occupancy rate of hotels in Colombia dropped to 14.9 percent, a decline of 50 percentage points from the same day in the previous year. The fall in hotel occupancy rates was attributed to the outbreak of the COVID-19 pandemic, caused by the novel coronavirus (SARS-CoV-2), resulting in a decrease in bookings for Colombia's accommodation sector (Lopez, 2022). This drastic decline has threatened the sustainability of hospitality businesses, making it imperative for hotels to reevaluate competitive strategy alternatives to support post-pandemic recovery (Smart et al., 2021).

The impact of the pandemic on hotels goes beyond short-term disruptions (Vo-Thanh et al., 2024). Extended closures strained finances and disrupted operations (Gössling et al., 2021). New health protocols added further cost and complexity (Garrido-Moreno et al., 2021; Gupta et al., 2024). Consumer behavior has shifted, with an increase in contactless services, stricter hygiene concerns, and a preference for domestic and rural destinations (Robina-Ramírez et al., 2022). These combined challenges require strategic responses specific to the post-pandemic context. Traditional crisis management may be insufficient, necessitating adaptive strategies that position hotels for recovery and long-term resilience in this new environment. Nevertheless, there is limited empirical evidence on the relative viability of potential approaches that hotels might pursue (Smart et al., 2021).

The study by Carvalho et al. (2016) highlights the contrasting impacts of different strategic orientations on business performance. Their findings suggest that a conservative strategic orientation may hinder performance, while an entrepreneurial strategic orientation tends to enhance it. In another study, Espino-Rodríguez and Lai (2014) indicate the dual effects of outsourcing on cost leadership and differentiation strategies. They found that outsourcing could lead to cost advantages but might compromise differentiation. In addition, their study suggests that a hybrid competitive strategy can

significantly enhance both organizational performance and strategic capability. These studies collectively emphasize the complex nature of strategic decision-making in the hospitality sector and reveal that while certain strategic orientations and practices can foster performance and strategic capability, the overall effectiveness of these strategies depends on a nuanced understanding of their interplay with various organizational factors. The context of these studies is primarily within the realm of business strategy, focusing on how different strategic approaches can influence performance outcomes in the hospitality industry, rather than directly addressing the impacts of COVID-19.

Vo-Thanh et al. (2021) note the importance of staff training in strategic consolidation because of its impact on customer satisfaction. Chang and Chang (2009) state that an adequate competitive strategy should not only offer a good level of service, but also guarantee a strategy centered on an experiential approach. The strategic planning process must consider that customers' decisions go beyond traditional factors, such as cost and quality, and include experience to engage customers emotionally and in purchasing services at higher prices (Yeh et al., 2019). Once hotels achieve a degree of personalized service, they improve their position vis-à-vis competition and mitigate cost threshold volatility (Abrate et al., 2012).

The competitive environment in the hospitality industry is characterized by a complex set of interrelated challenges. These include effective labor management, competitive pricing, customer retention, seasonal planning, sustainability initiatives, and strategic marketing efforts. Success in addressing these challenges collectively determines a hotel's competitive position in the marketplace. Previous studies have detailed these issues (e.g., Abrate et al., 2012; Chang and Chang, 2009; Vo-Thanh et al., 2021), stressing the multifaceted nature of the operational and strategic hurdles faced by hoteliers. Given this scenario, it is imperative for hotels to develop a comprehensive competitive strategy.

Such a strategy should not only address immediate market pressures but also integrate solutions for these broader operational challenges. Lin and Wu (2008) advocate for this approach, suggesting that a holistic competitive strategy is crucial for ensuring the long-term sustainability and market success of hotels. This strategy should be adaptable, forward-thinking, and responsive to the evolving industry landscape and customer preferences.

It is also important to note that existing studies do not highlight an absolute strategic position that predicts success but suggests multiple approaches such as cost leadership, service differentiation, development of digital channels, and even hybrid strategies (Gu et al., 2023; Talón-Ballestero et al., 2023; Zizka and Chen, 2023). This study recognizes the variety of organizational structures within the hotel industry, ranging from independent properties to hotels affiliated with chains and those that are part of marketing networks. While some hotels enjoy a high degree of autonomy in their decision making, many operate within the framework, standards and policies set by parent companies or franchise agreements. Even so, individual properties often retain a degree of flexibility in implementing competitive strategies to address local market conditions and challenges. The goal of a hotel's strategy lies in achieving a competitive advantage to survive, and the strategy itself can be a source of competitive advantage (Bordean et al., 2010).

Existing studies have explored different facets of competitive strategy and their interconnections with other organizational factors in the hospitality sector (e.g., Carvalho et al., 2016; Espino-Rodríguez and Lai, 2014). However, these studies have not comprehensively examined all the dimensions necessary to identify the most effective strategies for gaining a competitive edge in the hospitality industry. This research gap presents an opportunity to explore these unexplored dimensions that could lead to the development of a unique and sustainable competitive advantage over competitors.

Consequently, this study aims to: i) identify the main competitive strategy options for hotels, ii) determine expert-based priorities for these strategies, and iii) empirically analyze the top-ranked approaches to inform hotel strategic planning. To achieve these objectives, this study uses a case study approach focusing on hotel managers in Medellín, Colombia. This methodology allows for an in-depth examination of competitive strategies in a specific post-pandemic context.

To address the above gap, this study aims to identify and prioritize the most effective competitive strategies for hoteliers in Medellin, Colombia, using a fuzzy multi-criteria analysis model. This approach is useful for strategic planning in hotels, where it evaluates subjective or qualitative factors — referred to as linguistic variables — that are difficult to quantify. Linguistic variables represent the qualitative aspects of decision-making, such as guest satisfaction or service quality, using descriptive terms. The analytic hierarchy process (AHP), a widely recognized method in organizational studies, offers the flexibility needed for such complex evaluations (Emrouznejad and Marra, 2017). AHP can be integrated with fuzzy set theory (FAHP) to address the inherent uncertainty in measuring these qualitative factors. The combination of these techniques has been successfully applied for hotel selection (Ngai and Wat, 2003), classification of electronic services offered by hotels (Shahin et al., 2014), evaluation of hotel websites (Baki, 2020), and delineation of customer-centric marketing strategies (Wang and Zhang, 2021). By incorporating fuzzy multicriteria analysis, the study extends AHP's structured decision-making framework to better account for the uncertainty and imprecision inherent to expert judgments about hotel competitive strategies.

To achieve the purpose stated above, this study will employ a four-phase methodological approach to examine competitive strategies in Medellín's hotel industry. First, a comprehensive set of 17 specific strategies across five general dimensions was

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compiled based on literature review. Next, 10 experienced hotel managers were purposively selected for the study. Data collection involved telephone interviews and online questionnaires using a nine-point AHP scale for pairwise comparisons of strategies. Finally, the FAHP model was applied to analyze the data, incorporating fuzzy logic to account for uncertainty in human judgments. This approach allows for a systematic evaluation of the relative effectiveness of various competitive strategies in the local hotel industry context.

The next section reviews competitive strategies and their attributes. Subsequent sections detail the study's methodology and top-rated tactics followed by findings, conclusions, and managerial implications derived from the prioritized strategies.

2. Strategies in the hotel industry: A critical review

2.1 Evolution of strategic approaches in hospitality

The hospitality industry has witnessed a significant evolution in strategic approaches, particularly in response to various crises. Historically, the hotel industry has experienced several crises, not only of an infectious nature, but also natural disasters and terrorist attacks, leading this industry to implement different strategies and overcome the challenges posed by these situations (Crespí-Cladera et al., 2021; Ritchie and Jiang, 2019; Zenker and Kock, 2020). However, the COVID-19 pandemic has led to unprecedented changes in hotel marketing and crisis management practices (Dimitrios et al., 2020; Kahveci, 2023; Lai and Wong, 2020; Le and Phi, 2021; Majumdar, 2022; Vo-Thanh et al., 2021).

The pandemic has accelerated the adoption of certain strategies that were previously emerging trends. For example, the implementation of enhanced health and safety protocols has become a critical strategy that not only ensures the well-being of guests and

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staff, but also influences guest perceived value and visitation intentions (Polo-Peña et al., 2024). This shift represents a significant evolution from traditional hospitality strategies that focused primarily on service quality and guest satisfaction.

Moreover, the crisis has catalyzed the adoption of technology-driven strategies. Robina-Ramírez et al. (2022) report the increased use of contactless service delivery, which represents a departure from the traditionally high-touch nature of hospitality services. This evolution reflects the industry's adaptability and responsiveness to changing consumer needs and security concerns. These short-term measures have been critical in restoring consumer confidence and promoting a sense of security in the hospitality industry. In the context of tour operators, in response to the COVID-19 pandemic, Do et al. (2022) also found that short- and medium-term strategies (i.e., hold on, cut back, and exit) were preferred over long-term strategies (i.e., innovate).

2.2 Comparative effectiveness of different strategies

The effectiveness of various strategies in the hospitality industry has been a subject of ongoing research, with studies revealing mixed results across different contexts.

2.2.1 Traditional competitive strategies

Intensive strategies have been widely used in the hospitality industry to penetrate existing markets and develop new ones. Market penetration, market development, and product/service development are the main approaches within this category (Ansoff, 1957; David, 2011). Japutra and Situmorang (2021) found that implementing intensive strategies to increase repeat customers can reduce costs and improve service perceptions. Similarly, Bordean et al. (2010) and Lin and Wu (2008) argue that developing tactics for known market segments can improve marketing management, sales promotion, and implementation of new service packages. However, the effectiveness of these strategies may vary depending on market saturation and competitive intensity. Furthermore, as

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Chang and Chang (2009) point out, an experiential approach that differentiates hotels from competitors is crucial when implementing intensive strategies.

Integration strategies, including backward, forward, and horizontal integration, have also played an important role in shaping the competitive landscape of the hotel industry. Lafferty and van Fossen (2001) trace the origins of horizontal integration in the hotel industry to the early 20th century with the emergence of chains such as Ritz-Carlton and Trust Houses. They argue that horizontal integration can lead to greater economies of scale, product differentiation, and innovation while reducing costs. Backward integration, which involves control over suppliers, can influence service quality and cost reduction in key areas such as food, beverage, and external tourist services (Bordean et al., 2010). However, Espino-Rodríguez and Lai (2014) caution that while integration strategies can provide cost benefits, they can also undermine differentiation efforts, illustrating the complex trade-offs involved in these strategies.

Defensive strategies have gained prominence, especially in the context of the COVID-19 pandemic. These strategies, including risk sharing, downsizing, divestment, and liquidation, aim to protect and preserve markets and retain customers (Fornell and Wernerfelt, 1987; Shaw, 2021). Canhoto and Wei (2021) illustrate how a London hotel implemented joint actions with various stakeholders to mitigate pandemic-related risks and uncertainties. Japutra and Situmorang (2021) note that staff retrenchment was a common defensive move adopted by hotels during the crisis. Additionally, Crespí-Cladera et al. (2021) highlight the use of financial management tactics such as tax reductions and soft credit lines to improve financial distress situations. While these strategies can help hotels survive short-term crises, their long-term implications on service quality and customer loyalty remain a concern.

Diversification strategies have been explored by hotels seeking to expand beyond their core business. Lin and Kim (2020) argue that diversification can lead to increased profitability and minimize risks associated with industry decline. Kahveci (2023) found that some hotels used business model innovation and diversification to prepare for the post-pandemic era. Similarly, Noel (2022) found that hotels with higher "native adaptability" were better positioned to weather the crisis. Still, Köseoglu et al. (2021) caution that diversification strategies require careful risk assessment, given the investment and uncertainty associated with entering unfamiliar territory. The effectiveness of diversification may depend on factors such as the hotel's existing resources, market conditions, and the relationship of new ventures to the core hospitality business.

Generic strategies, as proposed by Porter (1985), continue to be relevant in the hotel industry. Cost leadership, differentiation, and focus strategies have been widely adopted, often with varying degrees of success. Bordean et al. (2010) found that differentiation strategies were particularly effective in creating unique value propositions for hotels. However, Abrate et al. (2012) argue that the benefits of differentiation, such as price stability and improved market position, must be balanced against the costs of maintaining uniqueness. Becerra et al. (2013) suggest that in highly competitive environments, hotels often employ a combination of cost leadership and differentiation strategies to prevent price erosion while attempting to differentiate. The choice between these generic strategies, or the decision to pursue a hybrid approach, often depends on factors such as hotel size, target market, and competitive intensity.

2.2.2 Crisis-specific strategies

In the context of the COVID-19 pandemic, studies have revealed varying levels of effectiveness for different strategies. Lai and Wong (2020) found that epidemic

prevention practices were prioritized in both the early and pandemic phases, while cost-cutting strategies became more critical as the pandemic progressed. Garrido-Moreno et al. (2021) identified key strategies such as creating contingency plans, training staff on safety and hygiene, and adapting common areas to prevent virus spread. Similarly, Robina-Ramírez et al. (2022) found that hotels adopted contactless service delivery, increased cleaning and disinfection, and used personal protective equipment. These operational changes were crucial for restoring consumer confidence. These operational changes were critical to restoring consumer confidence. This suggests that the effectiveness of strategies can change over the course of a crisis.

Moreover, Majumdar (2022) reported that Indian hotels also focused on financial strategies, including discounting special offers, reducing list prices, and conserving energy to improve cash flow and reduce operating costs. This suggests that hotels had to balance health safety measures with financial survival tactics. Furthermore, Gkoumas (2022) and Gyódi (2022) observed that some hotels went beyond operational and financial adjustments to explore alternative revenue streams, such as converting rooms into temporary office space and targeting domestic travellers. These different approaches show that hotels used a combination of short-term survival strategies and longer-term adaptations to weather the crisis, with the effectiveness of each strategy likely depending on factors such as hotel size, location, and target market.

Chanyasak et al. (2022) reported that strategies focused on increasing non-room revenues and training staff were the most satisfactory for hotels in Thailand. In contrast, Kahveci (2023) found that small hotels in Turkey focused on cash flow management, innovative solutions, and business model innovation. These contrasting findings demonstrated the importance of context in determining strategy effectiveness.

2.3 Contextual factors influencing strategy selection

The selection of competitive strategies in the hotel industry is heavily influenced by various contextual factors.

2.3.1 Geographic and market factors

Robina-Ramírez et al. (2022) found significant differences in strategic approaches between urban and rural hotels in Spain. Urban hotels prioritized collaboration with tourism authorities to manage visitor flows, while rural hotels faced unique challenges related to limited access to healthcare and technology. This underscores the importance of location and market characteristics in shaping strategic choices.

Piga et al. (2022) observed that chain hotels and those with a more managerial approach to revenue management were more likely to implement dynamic pricing strategies. This suggests that organizational structure and management style play crucial roles in strategy selection.

2.3.2 Hotel type and size

The type and size of a hotel significantly influence its strategic choices. Ghaderi et al. (2022) reported on the responses of home-based accommodation providers in Iran, highlighting how smaller, non-traditional accommodations adopted different strategies compared to larger hotels. Similarly, Salari and Murphy (2023) examined the survival and recovery strategies of Iranian ecolodges, emphasizing the importance of financial support and collaboration with local communities for these specialized accommodations.

2.3.3 External environment

The external environment, particularly in times of crisis, plays a crucial role in strategy selection. The COVID-19 pandemic has demonstrated how sudden, global disruptions can force hotels to rapidly adapt their strategies. Gkoumas (2022) and Gyódi (2022) showed how hotels had to adapt to new business models and revenue streams in response

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to the pandemic, indicating the significant influence of external shocks on strategic decision-making.

2.4 Gaps in existing strategic frameworks for crisis response

While existing strategic frameworks have provided valuable insights into hotel management, the COVID-19 pandemic has exposed several gaps in these frameworks, particularly in terms of crisis response.

2.4.1 Long-term crisis management

Traditional crisis management frameworks typically focus on short-term, localized disruptions. Do et al. (2022) found that tour operators favored short- and medium-term strategies over long-term ones in response to the pandemic. Similarly, Crespí-Cladera et al. (2021) observed that hotels resorted to financial management tactics such as tax reductions and soft credit lines to manage short-term financial distress. These studies indicate a gap in strategic planning for extended crises and raise questions about the industry's preparedness for future long-term disruptions.

2.4.2 Integration of technology and health safety

Existing frameworks have not adequately addressed the integration of technology and health safety measures into core business strategies. The rapid adoption of contactless technologies and hygiene protocols during the pandemic (Robina-Ramírez et al., 2022) suggests a need for frameworks that incorporate these elements as fundamental components of hotel strategy. This is further supported by Garrido-Moreno et al. (2021), who identified the implementation of alternative service delivery methods and adaptation of common areas as key strategic measures. However, research has not yet examined the long-term operational and financial implications of these changes.

2.4.3 Resilience and adaptability

Traditional strategic frameworks focus on competitive positioning and market share, but the pandemic has shown the importance of resilience and adaptability (Barbhuiya and Chatterjee, 2023). Noel (2022) found that hotels with higher "native adaptability" to social distancing were less likely to close and offered smaller discounts. This aligns with findings from Kahveci (2023), who observed that small hotels in Turkey focused on business model innovation and adaptability to prepare for the post-pandemic era. These studies suggest adaptability should be a key consideration in strategic frameworks, but current models do not adequately capture this factor.

2.4.4 Holistic approach to strategy

Kim et al. (2023) proposed a typology of hotel industry responses to COVID-19, including revenue management, crisis communication, and corporate social responsibility initiatives. This multifaceted approach suggests existing frameworks may be too narrow. Similarly, Chanyasak et al. (2022) found that successful strategies in Thailand involved a combination of increasing non-room revenues, staff training, and adapting business models. These studies indicate a need for more comprehensive strategic frameworks that integrate various elements, but they do not provide clear guidance on how to balance these diverse aspects in practice.

2.5 FAHP in the hotel context

This section presents some relevant empirical studies using multicriteria techniques (similar to those used in this study) in the tourism and hospitality contexts. FAHP model has been increasingly recognized for its applicability in the hotel industry, serving both as a theoretical and methodological bridge in various studies (Chen et al., 2014; Vatankhah et al., 2023). This section offers a critical examination of the literature where FAHP has been employed, highlighting its versatility and impact on strategic decision-

making in hotels. For example, in the domain of hotel selection, Ngai and Wat (2003) pioneered the use of FAHP by developing an expert system designed to aid in the decision-making process. In another study, Baki (2020) leveraged FAHP to construct a performance evaluation model for hotel websites, focusing on customer satisfaction metrics. These studies underscore the FAHP's capability to handle subjective and complex criteria, thus providing a more nuanced and customer-centric evaluation framework.

Further extending the application of FAHP, Shahin et al. (2014) utilized the method to evaluate and categorize electronic services offered by hotels, demonstrating the technique's adaptability in assessing service quality in the digital domain. As for Chen et al. (2014), they applied FAHP to assess the ambiance of hotel spas, emphasizing the method's strength in evaluating sensory and experiential aspects of service environments. More recently, Wang and Zhang (2021) proposed a management system model using FAHP to delineate a customer-centered marketing strategy, showcasing the method's forward-looking application in strategic marketing planning. However, despite these diverse applications, there remains a gap in the literature regarding the integration of multi-criteria decision-making methods like FAHP with competitive strategies specifically tailored for the hotel sector. This gap signifies a potential area for further research where FAHP could be employed to systematically analyze and prioritize competitive strategies within the hotel industry, facilitating a more strategic and data-driven approach to decision-making in the post-COVID-19 recovery phase and beyond.

3. Methods

This study uses a multi-stage methodological approach to systematically examine the relative effectiveness of competitive strategies in the Medellín hotel industry. The

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research design includes four distinct phases: (1) selection of competitive strategies, (2) selection of hotel managers, (3) data collection instrument and measurement scales, and (4) application of the FAHP model. Figure 1 illustrates the sequential flow of the methodological framework.

INSERT FIGURE 1 HERE

3.1 Structure of competitive strategies

To ensure a comprehensive examination of the competitive strategies employed in the hotel industry, a robust set of general and specific strategies were compiled based on a thorough review of seminal works (Ansoff, 1957; Porter, 1985) and contemporary literature (Bordean et al., 2010; Canhoto and Wei, 2021; David, 2011; Lin and Kim, 2020; Lin and Wu, 2008). As shown in Figure 2, a total of 17 specific competitive strategies were identified and categorized into five general dimensions: intensive, integrative, diversification, defensive, and generic. This comprehensive set of strategies serves as the basis for the subsequent stages of the study. The rationale for selecting these five categories is twofold: i) broad coverage: these categories collectively provide a holistic view of the strategic landscape in the hotel industry, covering growth-oriented, stabilizing, and market-navigating strategies; and ii) empirical relevance: each category has been empirically validated in the context of the hotel industry, ensuring that the selected strategies are not only theoretically sound but also practically applicable.

Intensive strategies focus on market penetration and development, which are crucial for hotels aiming to expand their customer base or enter new markets. Integrative strategies, involving mergers and acquisitions, are relevant for hotels seeking consolidation or expansion of their service offerings. Diversification strategies allow hotels to venture into new business areas, reducing dependency on traditional revenue

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streams. Defensive strategies are essential for risk management and maintaining competitive positioning in challenging market conditions. Lastly, generic strategies proposed by Porter (1985), including cost leadership, differentiation, and focus, provide a foundational competitive framework applicable across various market scenarios.

INSERT FIGURE 2 HERE

3.2 Hotel managers' selection

A sample of 10 hotel managers in Medellin with more than 12 years of experience were purposively selected based on various factors such as reputation and chain affiliation (Table 1). Managers had more than six years of experience. The heterogeneous set of 10 hotels was selected from 98 hotels registered on digital platforms, representing a 10% response rate. This low response rate is due to the COVID-19 pandemic, but it is within the minimum threshold for case studies (Baruch and Holtom, 2008). In the context of case studies, the focus is not on statistical representativeness but on the depth and richness of the data collected (Verleye, 2019). As this is an exploratory multi-criteria decision modeling case study, the primary focus is on in-depth assessment of constructs rather than survey-based generalization. A sample size of 10 hotel managers, although seemingly small, can provide valuable insights into the application of competitive strategies in the Medellin hotel industry. Also, by focusing on a smaller, carefully chosen group of hotels, we can dive deep into the nuances of each establishment's competitive strategies. This allows for a more thorough exploration of the decision-making processes and strategic considerations unique to each hotel, which might be overlooked in a larger, more superficial sample. Similarly, the selection criteria, emphasizing experienced managers from diverse hotel types, ensures a range of viewpoints that can illuminate different facets of the industry. This variety is crucial in an exploratory study, as it helps identify patterns and distinctions across different market segments and management approaches.

The quantitative measurement scales used in this study aim to systematize the complex and multidimensional competitive strategies into analyzable data. However, a question arises as to why a qualitative approach was not predominantly adopted to explore these strategies more deeply with each of the 10 hotels. The use of quantitative methods, in this context, is to facilitate a structured comparison and analysis across the hotels, providing a clear framework for assessing the impact and effectiveness of different competitive strategies. This does not negate the value of qualitative inquiry but rather complements it, ensuring that the nuanced, multifaceted aspects of competitive strategies are captured and analyzed systematically.

The purposive selection of hotels with different reputations, chain affiliations, and star ratings ensures a heterogeneous sample that captures the diversity of the market. Finally, the validity and reliability of the variables measured and the data collected in this study was ensured through two aspects: 1) first, through the support background of recent studies and the antecedents real implementation of the competitive strategies selected for the study (Bordean et al., 2010; Lin and Kim, 2020; Lin and Wu, 2008); 2) second aspect that supports the validity of the study consisted in requiring that the participating experts comply with the prerequisite of having prior knowledge of the competitive strategies to be analyzed and their real application in the operation and decision-making in this industry.

INSERT TABLE 1 HERE

3.3 Measurement scales

Telephone interviews and an online questionnaire were utilized to gather insights from hotel managers, focusing on their perceptions of competitive strategies. The questionnaire was structured based on the AHP scale proposed by Saaty (1980), which employs a nine-point system for pairwise comparisons of strategies. This scale ranges from 1 (equally

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preferred) to 9 (extremely more preferred), with intermediate values (2, 4, 6, and 8) representing nuanced preferences between these extremes. From this, each hotel manager provides a set of six comparison matrices, resulting in a total of 310 comparisons (31 comparisons per individual * 10 hotels). This extensive data set allows for a thorough examination of the relative effectiveness of competitive strategies, increasing the credibility and trustworthiness of the results.

While this nine-point scale resembles a Likert scale and can be considered ordinal, it serves a specific purpose in the AHP methodology. Unlike typical Likert scales used for subjective attitude measurement, the AHP scale facilitates a structured decision-making process that quantifies the relative importance or preference among various options. This distinction is crucial for the subsequent statistical analysis, as AHP generates ratio-scale data from these pairwise comparisons, allowing for the derivation of weights and priorities among the strategies evaluated, rather than merely ranking, or rating them.

Upon collecting the expert judgments, the linguistic terms from the AHP scale were converted into fuzzy triangular numbers, following the method proposed by Chang (1996). This transformation enables the nuanced processing and analysis of the data set as presented in Table 2. By employing fuzzy numbers, the approach accommodates the inherent uncertainty and subjectivity in the managers' evaluations, thus enhancing the robustness and interpretability of the analytical results.

INSERT TABLE 2 HERE

3.4 FAHP model

The FAHP model was selected as the primary decision-making method for this study because of its ability to assess the relative effectiveness of competitive strategies while accounting for the inherent vagueness and imprecision of human judgment (Buckley, 1985). Such effectiveness has led to the application of this model in recent studies linked

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to the hospitality sector (Baki, 2020; Piya et al., 2022; Vinh et al., 2022; Wang and Zhang, 2021). Thus, the ability of the FAHP model to solve problems where uncertainty prevails fitted with the need to identify and prioritize the most effective competitive strategies from the perspective of hoteliers in Colombia. The FAHP model extends the traditional AHP (Saaty, 1980) by incorporating fuzzy set theory (Zadeh, 1965) to represent imprecise information using triangular fuzzy numbers (TFNs). To determine these numbers, the variables that make up the fuzzy set are governed by a membership function that suggests their degree of membership in a range between 0 and 1, as shown in Figure 3.

INSERT FIGURE 3 HERE

Complementing what is highlighted in Figure 3, each TFN is composed of the parameters *l*, *m* and *u*, which refer to the smallest, most promising and largest possible value that can interpret a fuzzy event. Thus, instead of being expressed through crisp numbers, the TFNs are expressed through limits on both the left and right sides. Then, for $\mu_{\tilde{A}}(x)$, the corresponding membership function is highlighted in Equation 1.

$$\mu_{\tilde{A}}(x) = \begin{cases} 0, \ x < l \\ \frac{(x-l)}{(m-l)}, l \leq x \leq m \\ \frac{(u-x)}{(u-m)}, m \leq x \leq u \\ 0, x > u \end{cases} \tag{1}$$

Similarly, given two TFN $\tilde{A}$ and $\tilde{B}$, expressed as $\tilde{A} = (l_1, m_1, u_1)$ and $\tilde{B} = (l_2, m_2, u_2)$, are desired to operate with each other, the following arithmetic laws set forth in Equations 2, 3 and 4 must be followed.

Addition of TFN:

$$\tilde{A} \oplus \tilde{B} = (l_1 + l_2, m_1 + m_2, u_1 + u_2) \tag{2}$$

Multiplication of TFN:

$$\tilde{A} \otimes \tilde{B} = (l_1 \times l_2, m_1 \times m_2, u_1 \times u_2) \tag{3}$$

Division of TFN:

$$\tilde{A} \oslash \tilde{B} = (l_1/u_2 \, , m_1/m_2 \, , \, u_1/l_2) \qquad (4)$$

Considering the structure of the membership function and the arithmetic laws highlighted above, the steps followed in the FAHP model for the determination of the general and specific weights of the competitive strategies are described below (Chang, 1996):

Step 1: Expert judgments were elicited from the rating of the hierarchical structure of competitive strategies set out in Figure 2.

Step 2: After the judgments regarding the strategies were obtained, each of the general and specific level ratings given on the linguistic scale were converted to TFN, according to the conversion scale highlighted in Table 1. From this, the converted TFN judgments were structured into individual paired comparison matrices between variables, as highlighted in Equation 5.

Let $\tilde{D}^k = \left[\tilde{a}_{ij}^k \right]$ be the fuzzy pairwise comparison matrix of kth decision maker, where k = 1, 2, …, p

$$\tilde{D}^k = \begin{bmatrix} (1,1,1) & \tilde{a}_{12}^k & \cdots & \tilde{a}_{1n}^k \\ \tilde{a}_{21}^k & (1,1,1) & \cdots & \tilde{a}_{2n}^k \\ \vdots & \vdots & \ddots & \vdots \\ \tilde{a}_{n1}^k & \tilde{a}_{n2}^k & \cdots & (1,1,1) \end{bmatrix}$$

(5)

Where $\tilde{a}_{ij}^k \times \tilde{a}_{ji}^k = 1$ with i=j=1, 2, …, n

Step 3: Seeking to synthesize the judgments into a single matrix by category, the fuzzy comparison matrices were combined using the geometric mean proposed by Buckley (1985), as highlighted in Equation 6.

Let $\tilde{D} = [\tilde{a}_{ij}]$ be the combined fuzzy pairwise comparison matrix

$\tilde{D} =$

$$\begin{bmatrix} (1,1,1) & \tilde{a}_{12} & \cdots & \tilde{a}_{1n} \\ \tilde{a}_{21} & (1,1,1) & \cdots & \tilde{a}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \tilde{a}_{n1} & \tilde{a}_{n2} & \cdots & (1,1,1) \end{bmatrix}$$

(6)

Where $\tilde{a}_{ij} \times \tilde{a}_{ji} = 1$ with i=j=1, 2, …, n and $\tilde{a}_{ij} = \left(\tilde{a}_{ij}^1 \otimes \tilde{a}_{ij}^2 \otimes \ldots \otimes \tilde{a}_{ij}^p \right)^{\frac{1}{p}}$

Step 4: The consistency of combined fuzzy pairwise comparison matrix is computed by defuzzifing the fuzzy number. It is assumed that if the defuzzified combined pairwise comparison matrix is consistent, then the combined fuzzy pairwise comparison is also consistent, as shown in previous studies (Vinh et al., 2022). Thus, to test the consistency of expert judgments, the combined fuzzy pairwise comparison matrix was defuzzified into crisp numbers. Subsequently, three indices were measured to determine its consistency, the first was the Consistency Index (CI), as shown in Equation 7. Subsequently, in Equation 8 we employed the Randomness Index (RI), which is contingent upon the number of factors that comprise each matrix, with the possible values being [0.00, 0.00, 0.52, 0.89, 1.11, 1.25, 1.35, 1.40, 1.45], as determined by the scale proposed by Saaty (1977). Finally, we divided the Consistency Index (CI) by the Randomness Index (RI) to obtain the Consistency Ratio (CR), which serves as the final value to determine whether the judgment is consistent ($\leq$ 0.1) or requires adjustment (>0.1), as demonstrated in Equation 9.

$$CI = \frac{\lambda \max - n}{n-1} \qquad (7)$$

$$RI = \left[\frac{(0.00, 0.00, 0.52, 0.89, 1.11 \ldots 1.45)\ (n-2)}{n} \right] \qquad (8)$$

$$RC = \frac{CI}{RI} \qquad (9)$$

Step 5: Following Buckley (1985), the fuzzy weight $\tilde{w}_i$ for each criterion (i) is calculated using geometric mean, as highlighted in Equations 10 and 11.

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$$\tilde{r}_i = (\tilde{a}_{i1} \otimes \tilde{a}_{i2} \otimes \ldots \otimes \tilde{a}_{in})^{\frac{1}{n}} \tag{10}$$

$$\tilde{w}_i = \tilde{r}_i \times (\tilde{r}_1 \otimes \tilde{r}_2 \otimes \ldots \otimes \tilde{r}_n)^{-1} \tag{11}$$

Where $\tilde{r}_{ij} = (l_{ij}, m_{ij}, u_{ij})$ and $(\tilde{r}_{ij})^{-1} = \left(\frac{1}{u_{ij}}, \frac{1}{m_{ij}}, \frac{1}{l_{ij}}\right)$

Step 6: Upon obtaining the final fuzzy weights for each general and specific factor, the fuzzy weights $\tilde{w}_i = (l_i, m_i, u_i)$ are defuzzified using the centre of the area defuzzification method, as suggested by Buckley (1985) for obtaining the final weight represented by a crisp number and as highlighted in Equation 12.

$$w_i = \frac{l_i + m_i + u_i}{3} \tag{12}$$

Step 7: Finally, the weights obtained from the defuzzification method were centrally normalized so that the sum of the proportions of all categories was equal to 1, as shown in Equation 13.

$$w_{ni} = \frac{w_i}{\sum_{i=1}^{n} w_i} \tag{13}$$

Finally, this integration of fuzzy logic with AHP allows for a more realistic representation of the decision-making process by capturing the uncertainty and subjectivity associated with human perceptions and judgments (Chang et al., 2009). However, it is essential to recognize that such judgments can be affected by the vagueness or imprecision of human thought when comparing the variables that make up a problem. The FAHP model was implemented using Microsoft Excel, a widely available and easy-to-use software package. Excel was chosen for its versatility, ease of use, and ability to handle complex mathematical calculations. The use of Excel allowed for the efficient construction of pairwise comparison matrices, the application of fuzzy arithmetic operations, and the calculation of consistency ratios. In addition, Excel's spreadsheet format facilitated the organization and visualization of the data, making it easier to interpret the results and draw meaningful conclusions.

4. Results and discussion

The first result is the general characterization of the managers of the sample. It can be inferred that on average the hotels have a trajectory of 12 years in the city of Medellin; the respondents have at least six years of experience in the hotel sector, the minimum level of education is a bachelor's degree and a master's degree as the maximum level, as highlighted in Figure 4.

INSER FIGURE 4 HERE

The application of the FAHP model illustrates the proportional utilization of competitive strategies defined in this study as solutions to the problems encountered in the Colombian hotel sector. In this research, the FAHP model was employed to discern the relative importance of competitive strategies within the Colombian hotel sector. The analysis post defuzzification and normalization of judgments highlighted that intensive strategies were most valued, accounting for 32.00 of the strategic focus. Defensive strategies followed at 22.07, and generic strategies were close behind at 21.43. Integration-focused tactics and diversification strategies were less prioritized, constituting 15.35 and 9.15 of the strategic emphasis, respectively (Table 3).

Given the case study's nature and the small sample size, the proportions reflect the specific preferences and strategic choices of the hotels in the sample, not a broader market generalization. These percentages serve as an indicative measure of how each strategy type is perceived and implemented among the studied hotels in Medellin, revealing the strategic alignments and priorities in response to the sector's challenges. The importance of these findings lies in their detailed portrayal of strategic preferences within the sample, offering nuanced insights into the competitive strategy landscape in the Colombian hotel sector.

The results demonstrate a preference for focusing efforts on the development and penetration of existing markets. According to Japutra and Situmorang (2021), the implementation of intensive strategies to increase the frequency of repeat customers has shown lower costs and a favorable increase in the perception of services. The development of tactics in front of an already known segment presents a higher degree of effectiveness in marketing management, sales promotion, and implementation of new packages in hotel services (Bordean et al., 2010; Japutra and Situmorang, 2021; Lin and Wu, 2008), as well as experiential approach that includes different factors related to the comfort sought by the target segment and that distinguishes them from the competition (Chang and Chang, 2009).

Regarding the importance of generic and defensive strategies, the results coincide with existing studies that support their preference within the hotel industry and tourism in general. Firstly, generic strategies represent an advantage for firms with reduced financial capacity, once they compete in highly turbulent environments and seek to offer a distinctive service to attract customers, resorting to the use of price leadership or differentiation strategies (Becerra et al., 2013). Meanwhile, in the face of the pandemic emergency, opting for defensive strategies seems a good alternative for hotels with insufficient cash flow to survive (Carvalho et al., 2016). The COVID-19 pandemic reduced the number of tourists by 69%, leading the city's hotels to rely on alternative strategies to survive this new challenge or become bankrupt as the proposed financial and fiscal measures did not reach the sector (Crespí-Cladera et al., 2021).

INSERT TABLE 3 HERE

The multi-criteria analysis model disaggregated the proportions of specific strategies in each dimension, exhibiting strong preferences for strategies such as service development-C13 (0.3629), backward integration-C21 (0.5055), liquidation-C34

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(0.4208), concentric diversification-C41 (0.4946) and differentiation-C52 (0.6819), as can be seen in Tables 4, 5, 6, 7, and 8. The disaggregated analysis shows that in the group of generic strategies, differentiation presented a strong level of importance. In the group of integration strategies, the backward integration was the most relevant. Given that the backward integration is directly associated with the control over suppliers, it could influence the quality of services and the reduction of costs in food, beverage, external tourist services, transport, and other key factors related to hotel activities. In the group of defensive strategies, the assessment suggests that the most appropriate strategy to overcome the current difficulties was liquidation, reflecting the difficult situation the sector is going through due to the COVID-19 pandemic, the low expectations of an early recovery of the sector, and the lack of defense mechanisms to mitigate the financial impact on the hotel sector.

INSERT TABLES 4, 5, 6, 7, and 8 HERE

Table 9 shows the relative importance of each single specific strategy at a global level. The differentiation strategy-C52 (0.1461) has been the most favored strategy to face the current challenges, followed by the development of services-C13 (0.1161), market penetration-C11 (0.0937) and liquidation-C34 (0.0929). The least favored strategies were divestment-C33 (0.0193), conglomerate diversification-C42 (0.0213), horizontal diversification-C43 (0.0250), and cost leadership-C51 (0.0255). The overall results for the firms analyzed confirm the preference for differentiation-focused strategies. This favorability may be based on the explicit benefits of differentiation in terms of price stability, brand building, authenticity, and improved market position (Abrate et al., 2012). Some managers reported good results in profitability and retention rates by offering a differentiated service. Nevertheless, none of the respondents reported having implemented this strategy to mitigate the situation caused by COVID-19.

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In the dimension of intensive strategies, it is highlighted how service development and market penetration strategies showed a positive assessment, suggesting the adoption of alternatives focused on service specialization and quality management to increase the degree of interaction, attraction, and retention of customers, as previously observed in other hotel contexts in recent studies (Talón-Ballestero et al., 2023). Aznar et al. (2018) recommend that meeting consumer expectations and overall service improvement should be reflected in an improved external perception of the hotel both on digital channels and by increasing the number of stars as a symbol of quality and reputation. Despite the obstacles posed by COVID-19, it is important to remember that hotels should meet both employee and customer expectations and overcome price sensitivity and brand recognition challenges by adopting digital marketing and contactless services, improving hygiene and security protocols and promoting flexibility and adaptability to keep up with evolving trends (Salem et al., 2023; Seyitoğlu et al., 2023). In addition, hotels can reduce investment costs and differentiate themselves from commoditized offerings by leveraging technology to create personalized experiences. Indeed, since the outbreak of COVID-19, research has shown that customers accept more and more artificial intelligence technologies (e.g., robot services) that cover the qualities of novelty, efficiency, and reliability (Ivanov et al., 2023; Kim et al., 2021). Thus, a mixed service delivery system combining human and robot services seems to be the most suitable for the post-pandemic era.

Of the least valued strategies, the cost leadership strategy obtained a low score, which is consistent with the inclination of entrepreneurs towards differentiation activities and service development to avoid reducing the margins of new customers (Yeh et al., 2019). This explains why strategies related to the union between hotels to face the problems are

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not considered as a viable alternative for the sector, indicating that hotel in Medellin would solve problems due to the COVID-19 pandemic individually.

INSERT TABLE 9 HERE

Regarding unexpected results, liquidation was among the four strategies having the highest weightings, confirming the current situation of the hotel industry: many of hotels were closed or will be forced to close definitively. This can be seen because of the lack of reaction of hoteliers to a massive adverse situation such as the pandemic. Based on the interviews, although all respondents showed impetus to resist the crisis, the only practices they could implement include reduction of staff (temporarily or permanently) and reassignment of work to attend to the few occupied rooms, which has also been highlighted by Vo-Thanh et al. (2021). These results show that even in cities highly prominent in tourism like Medellin, hotels face problems related to the lack of focus and versatility with respect to the strategies to adopt in the face of sudden external changes.

Additionally, another unexpected result worth highlighting is the low valuation given by experts to diversification strategies in challenging contexts. Thus, despite the fact that antecedent studies (e.g., Dimitrios et al., 2020; Kahveci, 2023; Köseoglu et al., 2021; Lin and Kim, 2020; Noel, 2022) have shown that the application of diversification and adaptability strategies allows coping with the COVID-19 crisis by reaching new markets through the offering of new services or products in hotels, it is not considered as a viable option within the vision of the hotels studied. This result reflects the low adaptability of the hoteliers analyzed to diversify their services to try to partially cope with the pandemic, but also shows the relentlessness of the sanitary restrictions during the first months of the pandemic, repressing any type of secondary service that would allow to diminish the impact of the COVID-19 crisis on the hotels. There, it is valid to add that, at the time of collecting the experts' judgments, only one hotel mentioned having applied diversification

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strategies, referring to the use of the hotel restaurant for the sale of breakfast and lunch to the public.

Adding to the above, the low valuation of diversification strategies suggests a potential lack of innovation capacity within the sampled hotels. This unexpected finding implies that these establishments may struggle to adapt to rapidly changing market conditions, potentially hindering their long-term resilience. It could also indicate a gap in strategic thinking, where managers are focused on immediate survival rather than exploring new revenue streams, as has also been previously observed in other hotel contexts in recent studies (Barbhuiya and Chatterjee, 2023; Gu et al. 2023). Additionally, this result might reflect a deep-rooted industry conservatism, where traditional hotel services are prioritized over novel offerings. Lastly, it could point to a missed opportunity for risk mitigation through business model diversification, potentially leaving these hotels vulnerable to future sector-specific shocks.

Finally, a critical examination of recent empirical studies in the tourism and hospitality sector reveals the application of multicriteria techniques to evaluate these competitive strategies, underscoring their practical significance and adaptability in real-world scenarios. This approach not only aligns with the theoretical perspectives offered by David (2011) and Porter (1985) but also illustrates the dynamic application of these strategies in facilitating the recovery and sustainable growth of hotels post-COVID-19. Therefore, integrating the theoretical insights from David (2011) with empirical evidence from the hospitality industry offers a robust framework for exploring the strategic pathways that hotels can undertake for effective recovery and long-term resilience.

5. Conclusions, limitations, and recommendations

The hotel industry is characterized as a highly competitive industry, where strategies play

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a decisive role for success in the market. Besides the high degree of competition within the industry, the health crisis of COVID-19 is another challenge faced by the hotel industry. Thus, this study examined the most implemented and effective strategies to mitigate these challenges from Colombian hoteliers' perspective. A robust set of competitive strategies were defined and, through the application of a FAHP model, they were disaggregated into successive levels according to their proportions of importance.

Given that strategies shift and adapt in the course of time as changes come up, in a post-pandemic context, the results of the FAHP model show that, at a general level, the use of intensive strategies prevails as a resource to stabilize the purchase frequency of regular customers, through the development of new services and tourism packages.

At a specific level, the results highlighted differentiation (C52) as the single most favored strategy overall at 14.61% importance. These results coincide with some existing studies that developed specifically around the use of competitive strategies in the hotel sector, indicating marked preferences for service differentiation as the main strategic posture in the face of external challenges. However, for the sample under study, differentiation strategies do not demonstrate effectiveness in mitigating the current crisis. This position is consistent with recent studies that have not found traditional strategies to be effective in overcoming the pandemic crisis; on the contrary, there is a need to adopt new approaches such as the implementation of safety and hygienic protocols in services, priority use of digital channels for customer service and management, changes in payment methods, generation of domestic tourism, or creation of packages that do not involve crowds and symbolize safety for consumers (Japutra and Situmorang, 2021; Salem et al., 2023; Seyitoğlu et al., 2023; Vo-Thanh et al., 2021).

The results reveal an intriguing paradox. While the hotels seem to recognize the importance of service quality and differentiation, the discussion notes a lack of reported

implementation of these strategies to mitigate the impact of COVID-19. This raises questions about potential barriers or constraints that may be hindering hotels from fully leveraging their preferred strategic approaches. One possibility is that the financial and operational pressures imposed by the pandemic have limited the hotels' ability to invest in service innovation and differentiation initiatives. The high valuation of defensive strategies, such as liquidation, suggests that many hotels have been forced to prioritize short-term survival tactics over longer-term strategic positioning.

The results showed that within the dimension of intensive strategies, service development (C13 with 36.29% importance) and market penetration (C11 with 9.37% importance) were among the most highly valued specific strategies by the Colombian hoteliers. Based on the findings, it is recommended to prioritize strategies for the development of services and market penetration, considering that the reinvention of the hotel sector's operational and commercial activities could provide new tourism and accommodation alternatives in a market that has contracted due to the COVID-19 pandemic.

In addition, considering that defensive strategies, such as liquidation (C34), were among the top four most favored strategies, accounting for 9.29% of the strategic focus, it is recommended that the situation of the Colombian hotel sector, especially in highly touristic and contributing cities such as Medellin, is one of the focal points of the policies and strategies of local, departmental and national governments to reduce the levels of 'hotel mortality' and help hotel companies to face the crisis through the implementation of actions to reactivate the sector. Crespí-Cladera et al. (2021) and Salem et al. (2021) indicate that government support has a strong positive impact on the hotel sector recovery. It is hoped that through the identification of strategies and implementation of the recommendations outlined above, this study can serve as a reference guide for hotels,

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allowing them to resist the current pandemic as well as other similar problems that afflict the hotel industry.

Considering the findings of this study in the context of Colombian hotels and the external challenges they face, this study contributes to the understanding of the use of competitive strategies by hotels when confronted with crises and external problems, as well as identifying their strategic preferences. Specifically, the study identifies market penetration and differentiation as the strategic preferences of these hotels. These strategies have been shown to be effective in other contexts in addressing common tourism issues (Bordean et al., 2010). However, when used in isolation, they have been less effective in the face of unforeseen challenges such as the COVID-19 pandemic. Thus, this study allows us to denote that many hotel managers resort to the same type of strategic solutions even though the problems they face are different, indicating a resistance behaviour to strategic changes in this case. This insight connects the findings about the perceived value of differentiation with the lack of implementation, providing a rationale for the need to further understand and address these barriers.

Based on the study's insights, hotel managers should prioritize developing a more agile strategic approach, blending differentiation with adaptive service models. This could involve creating modular service packages that can be quickly reconfigured in response to market shifts. Policymakers should consider establishing a crisis response framework specifically for the hospitality sector, including targeted financial support and regulatory flexibility. Future research could explore the effectiveness of hybrid strategies that combine elements of differentiation, service development, and controlled diversification in enhancing hotel resilience. Additionally, investigating the role of digital transformation in enabling strategic agility within the hotel industry could provide valuable insights for both practitioners and policymakers.

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On the other hand, it is key to highlight that, to balance short-term survival with long-term strategic positioning, hotel managers should adopt a dual-focus approach. While implementing immediate cost-saving measures, they should simultaneously invest in building strategic resilience. This could involve creating scenario-based contingency plans, diversifying revenue streams through strategic partnerships, and investing in staff cross-training to enhance operational flexibility. Managers should also prioritize digital transformation initiatives that can improve efficiency and guest experience in both crisis and normal times. By fostering a culture of continuous innovation and adaptability, hotels can better navigate immediate challenges while positioning themselves for future growth and sustainability in an ever-evolving industry landscape.

Overall, this study contributes to the existing hospitality literature related to the set of competitive strategies undertaken by managers in the hotel industry and proposing an integrative model for explaining the context of their implementation as well as adding to studies on strategic reactions of the Colombian tourism in the face of difficulties when seeking to recover the tourism sector. Lastly, this study is a pioneering work in using fuzzy sets to quantitatively evaluate competitive strategies applied in crisis management in the hotel industry.

Despite its contributions, this study has some limitations. The study recognizes limitations in its methodology that may have influenced the outcomes and interpretation of the results. Notably, the sample is not representative of the broader hotel industry in Medellin since most hotels were closed at the time of data collection due to sanitary restrictions. This likely skewed the sample towards the perspectives and experiences of the few hotels that were able to remain open during this challenging period. As a result, the competitive strategies and insights captured may not fully reflect the broader hotel industry in the city. However, since the present study is an exploratory case study,

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statistical representativeness was not the primary goal. Instead, a purposive sampling approach coupled with the FAHP technique to generate rich and detailed data from 10 participating hoteliers allowed for an in-depth exploration of competitive strategy application in the hotel industry, even if the overall sample size was relatively small. Moreover, this study acknowledges the potential bias that can arise from purposive sampling, but also states that this was mitigated through transparent reporting and the collection of extensive comparative data from the participating hoteliers. This suggests that methodological process took steps to critically reflect on and contextualize the limitations of the sampling approach. To complement the findings of this present study, future studies should use a larger sample and be conducted in other geographical regions. In addition, this study was restricted to hotel managers, future research should include members of the hotel's top management for a holistic understanding of the phenomenon.

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Table 1. Characteristics of the hotels of the sample

Hotels surveyed	Number of stars	Size	Ownership
Hotel 1	4.5	Large	Chain
Hotel 2	4.0	Large	Independent
Hotel 3	4.0	Large	Independent
Hotel 4	3.5	Medium	Independent
Hotel 5	3.0	Medium	Independent
Hotel 6	3.0	Medium	Independent
Hotel 7	3.0	Medium	Independent
Hotel 8	3.0	Medium	Independent
Hotel 9	3.0	Medium	Independent
Hotel 10	3.0	Medium	Independent

Table 2. Linguistic scale for fuzzy pairwise comparison (based on Chang, 1996)

Linguistic scale	Triangular fuzzy scale	Triangular fuzzy reciprocal scale
Equally preferred	$\tilde{1} = (1,1,1)$	$\tilde{1}^{-1} = (1,1,1)$
Judgements values between equally and moderately	$\tilde{2} = (1,2,3)$	$\tilde{2}^{-1} = \left(\frac{1}{3}, \frac{1}{2}, 1\right)$
Moderately more preferred	$\tilde{3} = (2,3,4)$	$\tilde{3}^{-1} = \left(\frac{1}{4}, \frac{1}{3}, \frac{1}{2}\right)$
Judgement values between moderately and strongly	$\tilde{4} = (3,4,5)$	$\tilde{4}^{-1} = \left(\frac{1}{5}, \frac{1}{4}, \frac{1}{3}\right)$
Strongly more preferred	$\tilde{5} = (4,5,6)$	$\tilde{5}^{-1} = \left(\frac{1}{6}, \frac{1}{5}, \frac{1}{4}\right)$
Judgment values between strongly and very strongly	$\tilde{6} = (5,6,7)$	$\tilde{6}^{-1} = \left(\frac{1}{7}, \frac{1}{6}, \frac{1}{5}\right)$
Very strongly more preferred	$\tilde{7} = (6,7,8)$	$\tilde{7}^{-1} = \left(\frac{1}{8}, \frac{1}{7}, \frac{1}{6}\right)$
Judgement values between very strongly and extremely	$\tilde{8} = (7,8,9)$	$\tilde{8}^{-1} = \left(\frac{1}{9}, \frac{1}{8}, \frac{1}{7}\right)$
Extremely more preferred	$\tilde{9} = (8,9,9)$	$\tilde{9}^{-1} = \left(\frac{1}{9}, \frac{1}{9}, \frac{1}{8}\right)$
If factor i has one of the above numbers assigned to it when compared to factor j, then j has the reciprocal value when compared with i		Reciprocals of above: $$M_1^{-1} \approx \left(1/u_1, 1/m_1, 1/l_1\right)$$

Note: reciprocal equation variables mean u = upper value; m = middle value; l = lower value.

Table 3. Preferences of the general strategies

	C1			C2			C3			C4			C5			Fuzzy weights			Defuzzified weights	Normalized weights
C1	1	1	1	3.1	3.6	4.0	0.9	1	1.1	3.6	4.3	4.8	0.9	1.1	1.2	0.2501	0.3239	1.2613	0.4678	0.3200
C2	0.2	0.3	0.3	1	1	1	0.9	1.2	1.4	2.2	2.6	3.0	0.4	0.5	0.5	0.1171	0.1532	0.6167	0.2244	0.1535
C3	0.9	1	1.2	0.7	0.9	1.1	1	1	1	2.1	2.5	3.0	0.8	1	1.3	0.1675	0.2191	0.8918	0.3226	0.2207
C4	0.2	0.2	0.3	0.3	0.4	0.5	0.3	0.4	0.5	1	1	1	0.7	0.8	0.9	0.0723	0.0907	0.3672	0.1337	0.0915
C5	0.8	0.9	1.1	1.8	2.2	2.6	0.8	1	1.2	0.9	1	1.1	1	1	1	0.1650	0.2132	0.8615	0.3132	0.2143

CR=0.0803

Table 4. Preferences of the intensive strategies

	C11			C12			C13			C14			Fuzzy weights			Defuzzified weights	Normalized weights
C11	1	1	1	4.7	5.2	5.6	0.5	0.5	0.5	1.1	1.2	1.4	0.2505	0.2928	0.3418	0.2951	0.2927
C12	0.2	0.2	0.2	1	1	1	0.3	0.3	0.4	0.3	0.3	0.4	0.0739	0.0842	0.0991	0.0857	0.0850
C13	1.9	2.0	2.2	2.7	3.0	3.2	1	1	1	1.1	1.2	1.4	0.3139	0.3634	0.4199	0.3657	0.3629
C14	0.7	0.8	0.9	2.6	3.0	3.3	0.7	0.8	0.9	1	1	1	0.2193	0.2596	0.3052	0.2614	0.2593

CR=0.0579

Table 5. Preferences of the integration strategies

	C21			C22			C23			Fuzzy weights			Defuzzified weights	Normalized weights
C21	1	1	1	2.8	3.2	3.5	1.3	1.4	1.6	0.4356	0.5076	0.5844	0.5092	0.5055
C22	0.3	0.3	0.4	1	1	1	0.7	0.8	0.9	0.1670	0.1928	0.2252	0.1950	0.1936
C23	0.6	0.7	0.8	1.2	1.3	1.5	1	1	1	0.2599	0.2997	0.3497	0.3031	0.3009

CR=0.0363

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Table 6. Preferences of the defensive strategies

	C31			C32			C33			C34			Fuzzy weights			Defuzzified weights	Normalized weights
C31	1	1	1	2.8	3.2	3.6	3	3.4	3.7	1	1.1	1.2	0.3158	0.3729	0.4382	0.3756	0.3725
C32	0.3	0.3	0.4	1	1	1	1.8	2.0	2.2	0.2	0.2	0.2	0.1018	0.1182	0.1408	0.1203	0.1193
C33	0.3	0.3	0.3	0.5	0.5	0.6	1	1	1	0.2	0.2	0.3	0.0761	0.0858	0.1022	0.0880	0.0873
C34	0.8	0.9	1.0	4.5	5.1	5.5	3.8	4.3	4.5	1	1	1	0.3604	0.4231	0.4895	0.4243	0.4208

CR=0.0407

Table 7. Preferences of the diversification strategies

	C41			C42			C43			Fuzzy weights			Defuzzified weights	Normalized weights
C41	1	1	1	2.3	2.7	2.9	1.3	1.5	1.6	0.4307	0.4984	0.5628	0.4973	0.4946
C42	0.3	0.4	0.4	1	1	1	1	1.1	1.1	0.2061	0.2306	0.2645	0.2337	0.2325
C43	0.6	0.7	0.8	0.9	0.9	1	1	1	1	0.2438	0.2710	0.3082	0.2743	0.2729

CR=0.0456

Table 8. Preferences of the generic strategies

	C51			C52			C53			Fuzzy weights			Defuzzified weights	Normalized weights
C51	1	1	1	0.2	0.2	0.2	0.5	0.6	0.6	0.1063	0.1168	0.1361	0.1198	0.1192
C52	4.9	5.6	5.9	1	1	1	3.3	3.7	3.9	0.6028	0.6862	0.7668	0.6853	0.6819
C53	1.6	1.8	1.9	0.3	0.3	0.3	1	1	1	0.1768	0.1970	0.2258	0.1999	0.1989

CR=0.0067

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Table 9. Global weights of specific strategies

General strategies	General weights	Specific strategies	Global weights	Global ranking
Intensive	0.3200	Market penetration (C11)	0.0937	3
		Market development (C12)	0.0272	12
		Service development (C13)	0.1161	2
		International strategies (C14)	0.0830	5
Integration	0.1535	Backward integration (C21)	0.0776	7
		Forward integration (C22)	0.0297	11
		Horizontal integration (C23)	0.0462	8
Defensive	0.2207	Share risk (C31)	0.0822	6
		Retrenchment (C32)	0.0263	13
		Divestiture (C33)	0.0193	17
		Liquidation (C34)	0.0929	4
Diversification	0.0915	Concentric diversification (C41)	0.0452	9
		Conglomerate diversification (C42)	0.0213	16
		Horizontal diversification (C43)	0.0250	15
Generic	0.2143	Cost leadership (C51)	0.0255	14
		Differentiation (C52)	0.1461	1
		Focus (C53)	0.0426	10

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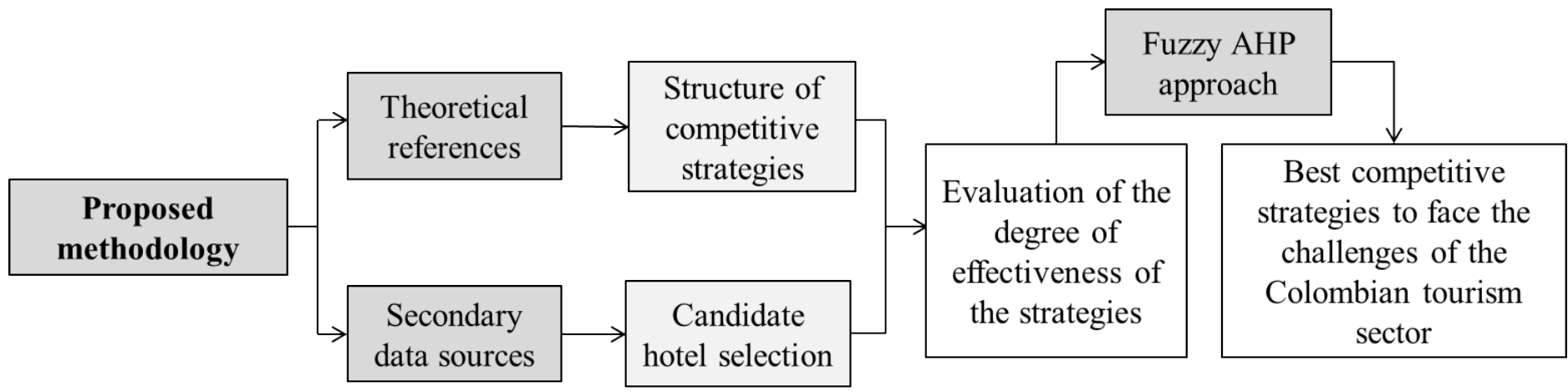
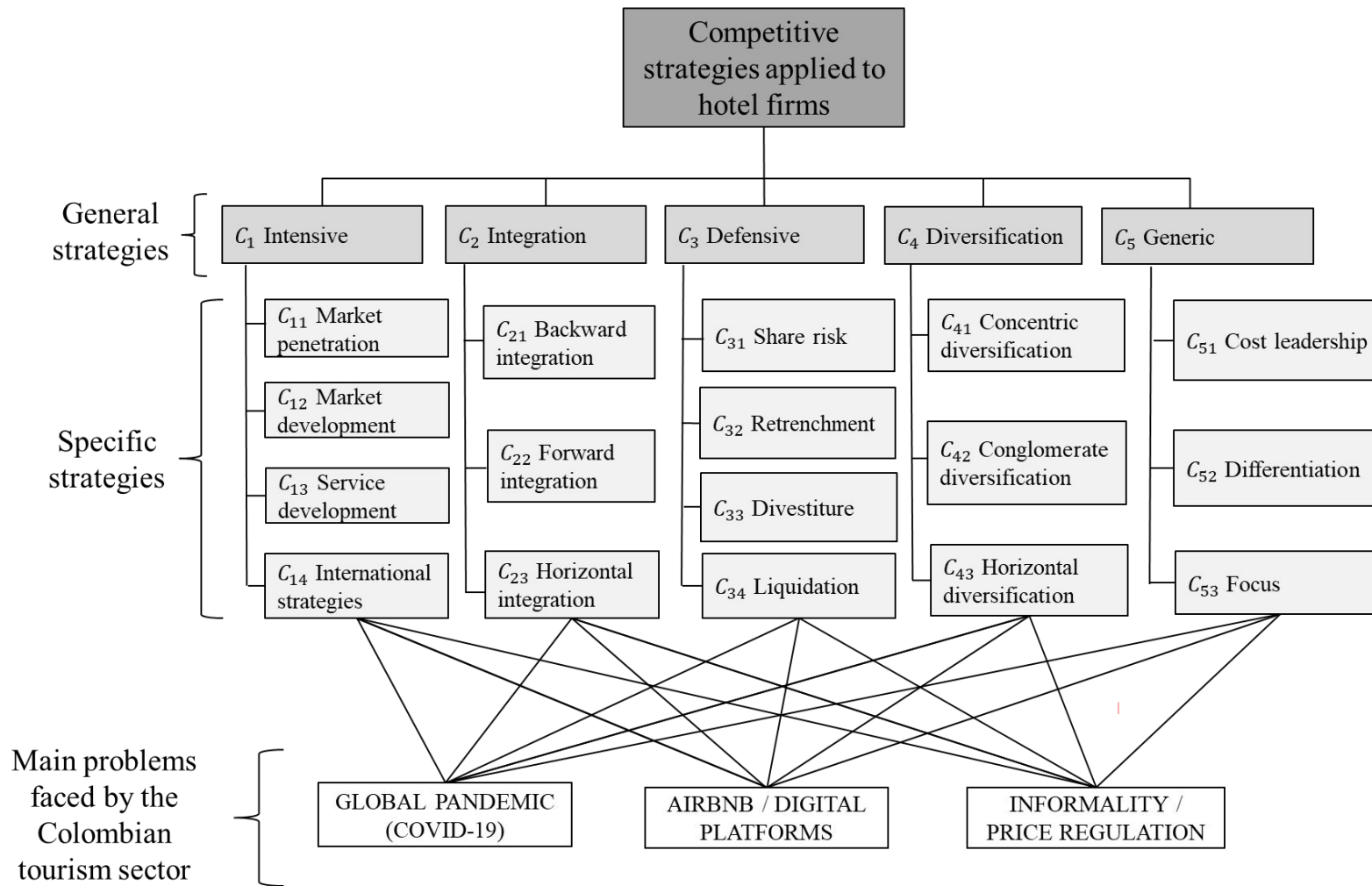**Figure 1.** Flow process of the proposed methodology

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Figure 2. Hierarchical structure of the proposed competitive strategies

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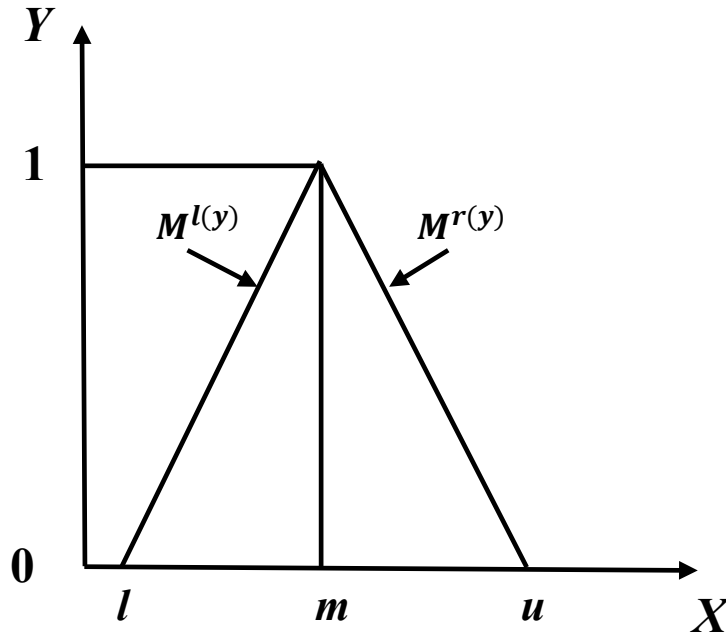46
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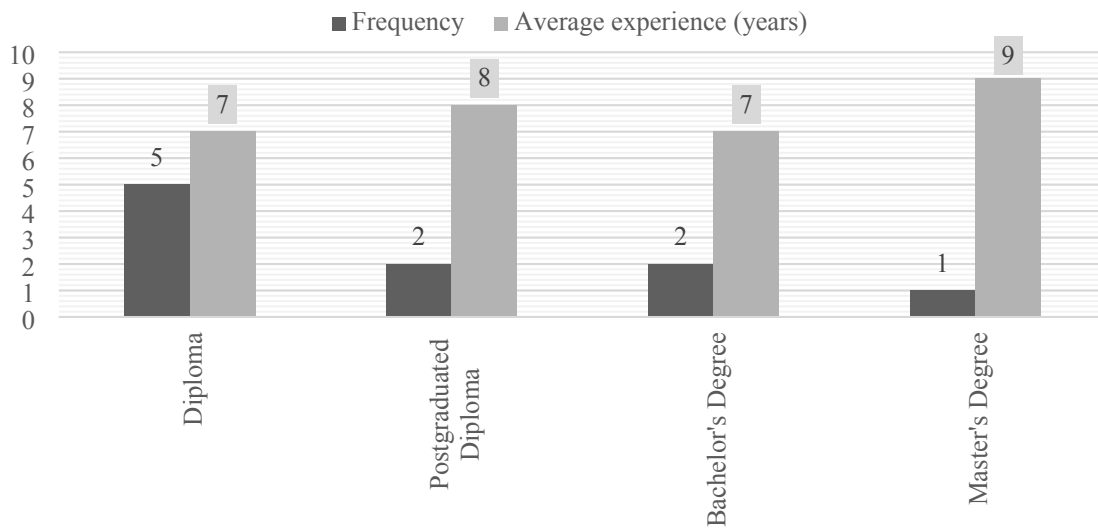**Figure 3.** Triangular fuzzy number's structure (based on Chang, 1996)

Figure 4. Profile of hotel managers

Bounce-Back Strategies: Revitalizing the Hotel Industry Post-Pandemic

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