

The ambidextrous scorecard: a strategic tool for balancing exploitation and exploration in the hospitality sector

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Abstract

In today's organizations, the ability to exploit their current business while simultaneously seeking new opportunities has become a key strategy. This requires balancing activities that are often contradictory and challenging to pursue simultaneously to generate synergy between operational efficiency and innovation. This paper proposes a framework for managing exploitation and exploration activities using the Balanced Scorecard. To achieve this, a quantitative exploratory study was conducted in 48 four-star hotels in Puebla City, Mexico. Using a questionnaire, the exploitation and exploration activities undertaken by these hotels were characterized to design an Ambidextrous Scorecard proposal. The findings suggest that this tool facilitates decision-making and contributes to more effectively managing these activities in the hospitality industry.

Keywords: project management; organizational ambidexterity; exploitation; exploration; balanced scorecard; strategic management.

El Cuadro de mando ambidiestro: una herramienta estratégica para equilibrar la explotación y la exploración en el sector hotelero

Resumen

Para las organizaciones actuales, la capacidad de explotar su negocio mientras buscan simultáneamente nuevas oportunidades se ha consolidado como una estrategia clave. Esta demanda el equilibrio de estas actividades que suelen ser contradictorias y difíciles de desarrollar de manera simultánea, con el fin de generar sinergia entre la eficiencia operativa y la innovación. Este trabajo propone un marco para gestionar las actividades de explotación y exploración mediante el uso del Cuadro de Mando Integral. Para ello, se realizó un estudio exploratorio cuantitativo en 48 hoteles de cuatro estrellas de la Ciudad de Puebla, México. A través de un cuestionario, se caracterizaron las actividades de explotación y exploración llevadas a cabo por estos hoteles, con el objetivo de diseñar una propuesta de Cuadro de Mando Ambidiestro. Los resultados sugieren que esta herramienta facilita la toma de decisiones y contribuye a una gestión más efectiva de estas actividades en la industria hotelera.

Palabras clave: gestión de proyectos; ambidestreza organizacional; explotación; exploración; cuadro de mando integral; gestión estratégica.

1 Introduction

In Puebla City, Mexico, where tourism plays a pivotal role in the local economy, the hotel sector has established itself as a cornerstone. Hotels not only provide accommodation but also mirror the region's colonial architecture and cuisine, reflecting the region's culture, tradition, and hospitality. However, in such a saturated and ever-evolving market, hotels must continually

innovate without neglecting the operational efficiency that ensures their survival and success. Academic literature proposes organizational ambidexterity as a solution, stressing the need to balance innovation with efficiency. Despite its acknowledged significance, there is a lack of research on how to achieve this balance comprehensively. Numerous studies have tackled the subject in a fragmented manner, overlooking the intricacies and unique aspects of the hotel sector, especially in regional contexts

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such as Puebla's. Given this evident gap, this paper proposes a framework for managing exploitation and exploration activities using the Balanced Scorecard (BSC).

Organizational ambidexterity emphasizes balancing exploitation (efficiency and optimizing existing resources) with exploration (seeking new opportunities and adapting to change) activities within the organizational structure and strategy [1,2]. This dual capability, as described by Gibson and Birkinshaw [3], allows hotels to be both aligned (efficient) and adaptable (flexible) in response to current market demands while preparing for the future. Exploration activities, associated with search, variation, and experimentation [4,5], focus on discovering new opportunities and adapting to changing contexts [6,7]. Exploitation, on the other hand, aims to refine and leverage existing competencies for enhanced performance [8,9].

Striking a balance between these capabilities represents an inherent challenge since overemphasizing one can inhibit the other [4,10]. However, the literature suggests that organizational ambidexterity might be a competitive advantage, allowing organizations to adapt to environmental shifts while maintaining operational efficiency [3,11]. Furthermore, it is posited that ambidextrous organizations are more likely to achieve superior performance since they can innovate while keeping their current operations streamlined [12,13].

The BSC emerged as a fundamental tool for organizational management, offering a holistic view that transcends traditional financial metrics [14]. It empowers organizations, like hotels, to effectively address environmental challenges and stakeholder demands [15,16]. This is particularly relevant for the hotel industry, where balancing exploitation (efficiency) with exploration (innovation) activities is crucial for long-term success. The BSC's design, based on cause-and-effect relationships and balancing financial and non-financial indicators [17-19], positions it as a strong candidate to support ambidexterity efforts. By linking actions across various perspectives (financial, customer, internal process, and, learning and growth), the BSC provides an integrated management framework to help hotels navigate the challenges of balancing short-term performance with long-term innovation [20].

The implementation of the BSC can vary based on a hotel's organizational maturity. Some hotels might adopt a simpler version focused on key performance indicators (KPIs), while others might strive for a more comprehensive approach to influencing strategic direction [21-23]. However, challenges exist, including overcoming resistance to change and adapting the BSC to the hotel's specific context [24,25]. These challenges mirror those encountered when pursuing organizational ambidexterity, as both require significant cultural and structural shifts [13]. Despite these hurdles, the BSC's strength lies in its ability to bridge strategy with action, translating the hotel's vision into concrete initiatives [26]. This focus on action is particularly valuable for achieving ambidexterity in the hotel industry, as it empowers hotels to balance the competing demands of exploitation (efficiency) and exploration (innovation) for long-term success.

Organizational ambidexterity, as defined by Duncan [27], refers to an organizational structure that fosters both

innovation and efficiency simultaneously. This dual capability, as Lubatkin et al. [28] suggest, necessitates an organization's ability to exploit existing capabilities while actively exploring new opportunities. Essentially, it allows hotels to cater to current markets while innovating for the future [12]. Achieving this balance often requires specific tools and approaches. The BSC developed by Kaplan and Norton [29] is a strategic management tool well-suited for this challenge.

2 Materials and methods

A quantitative-deductive approach was adopted to analyze the relationships between study variables in a cross-sectional non-experimental design. To identify patterns and correlations [30,31] a sample of 48 four-star hotels in Puebla City was selected, representing 24.74% of the hotels' total. Despite a rejection rate of 14.58%, data was collected at a single point in time, avoiding manipulation of variables [32].

A structured survey was chosen as the measurement instrument, divided into three sections. The first section aimed to establish trust with participants, explaining the research objective and guaranteeing data confidentiality. The second section collected sociodemographic information about both the respondent and the hotel, to characterize the sample and establish possible relationships with the study variables. Finally, the third section, the core of the survey, inquired about the hotel's exploitation and exploration activities from the four perspectives of the BSC.

To validate the survey content, the Delphi method was employed. Following López-Gómez's guidelines [33], a panel of tourism and hospitality experts was formed. Upon receiving feedback, the experts confirmed that the instrument effectively measured the variables, although they suggested minor adjustments to the wording.

Subsequently, a pilot test was conducted with a sample of twenty tourism professionals from Colombia, Spain, and Mexico. The results obtained from eleven questionnaires allowed for an assessment of the survey's reliability. Using Cronbach's alpha coefficient, internal consistency was determined to be adequate, with a general value of 0.759 and individual construct values exceeding 0.70. This result aligns with criteria established by various authors [34-37], who consider a coefficient of 0.70 or higher to indicate good internal consistency in exploratory research (Table 1).

When comparing the correlations of the variables with the values on the diagonal formed by the alpha coefficients, it was observed that the former was lower than the latter. This result suggests that the survey items adequately measure the construct being evaluated (Table 2).

Table 1.
Cronbach's Alpha reliability for analyzed variables.

Variable	Cronbach's Alpha
Global	0.759
Financial	0.768
Customer	0.752
Internal	0.764
Learning & Growth	0.701

Source: Prepared by the authors.

Table 2.
Correlation Matrix and Cronbach's Alpha Coefficients.

	Financial	Customer	Internal	Learning & Growth
Financial	0.768			
Customer	0.426	0.752		
Internal	0.595	0.692	0.764	
Learning & Growth	0.249	0.238	0.537	0.701

Source: Prepared by the authors.

Table 3.
KMO and Barlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.784
Barlett's Test of Sphericity	Approx. Chi-Square value	210.45
	Degrees of Freedom	10
	Significant Value	0.0001

Source: SPSS results.

The Kaiser-Meyer-Olkin (KMO) test, conducted following Shrestha's [35] recommendations, yielded a value of 0.784, indicating satisfactory sample adequacy for factor analysis, according to the author (Table 3). This result confirms the suitability of the data for the study.

Using SPSS statistical software, the collected data was organized into a tabulation matrix. Variables were classified according to the BCS perspectives (financial, customer, internal process and, learning and growth) to analyze the integration of exploitation and exploration activities. Quantitative techniques, such as descriptive statistical analysis and Pearson correlation, were employed to obtain detailed information and determine the relationships between variables.

3 Results

Exploitation activities, which focus on efficiency, consolidation, and optimization, are vital for organizations aiming to refine and maximize the performance of their existing products, services, and processes. Considering that revenue management within exploitation activities is crucial, the findings show that 88.9% of the hotels increased the prices of their products and services. This decision, characteristic of an exploitation strategy, aims to maximize the benefits of the hotel's current capacities. On the other hand, the hotel occupancy rate, a key indicator of operational efficiency, exhibited significant adaptation to external challenges. Despite dropping from 57% in 2019 to 41% in 2022, a decline attributed to the COVID-19 pandemic, the hotels demonstrated resilience—a core trait of exploitation activities—by showing signs of recovery in 2021.

Staff training, regarded as an investment in enhancing existing capabilities, emerged as a predominant exploitation activity where 80% of the hotels invested in training with an emphasis on customer service and the utilization of digital tools, aiming to improve the efficiency and quality of the service provided. These were also prominent strategic alliances, which can be perceived to exploit shared capacities and resources with other sector stakeholders. 72.7% of the

hotels established alliances primarily to develop new products or services and diversify marketing options, thus maximizing their market reach and efficiency.

Exploration activities that drive experimentation, innovation, and discovery are fundamental for organizations seeking to develop new products, services, or capabilities. In this regard, it was found that 80% of the hotels in Puebla invest in entirely brand-new innovation projects, reflecting a strong inclination towards exploration activities. However, only 50% of these establishments have staff dedicated to such initiatives. This distribution suggests a diversity in how hotels approach innovation. While some are structuring their resources to favor exploration, others are balancing both activities without a clear division. Nonetheless, it is essential to note that not all hotels investing in innovation have exclusive personnel for it, indicating that some hotels may be sequentially or contextually balancing exploration and exploitation.

Funding is a key indicator for understanding the priority of innovation within organizations. In this light, 62.5% of hotels allocate between 5% and 10% of their annual budget to innovative projects. While this figure might seem modest, it translates into financing two or three projects, revealing a strategic and selective approach. Notably, these projects vary in focus, ranging from process innovation aimed at optimizing operations to innovations in business models, organizational structure, products, services, and distribution channels.

Referring to identifying and capturing new market segments, 45.5% of the hotels employ up to three different strategies to attract new clientele. These strategies span from traditional environmental and target audience analyses to more contemporary approaches, such as bolstering their presence on social media platforms. This shift toward the digital sphere underlines the sector's evolution in response to current trends. Even though only 8.8% of hotels introduce new product or service categories, most employ multiple strategies to encourage innovation among their staff, including understanding client needs and analyzing competition.

In this context, technology plays a pivotal role. At least 36.4% of hotels have acquired new technologies to enhance their processes and operations, with tools such as direct booking systems and contactless financial transactions becoming essential, in response to the shifting demands of the post-pandemic market. Nevertheless, human resources remain essential despite the significance of exploration and technology. A notable 90% of hotels have succeeded in enabling their staff to gain new knowledge and skills. The strategies to motivate this acquisition vary, but promotions and personal self-realization stand out as predominant, highlighting the importance of intrinsic motivation in the sector.

The hotel industry in Puebla City is characterized by a multitude of activities about both exploitation and exploration. These manifest across a range of dimensions, including the allocation of resources, the structure of organizational entities, the adoption of technology, and the training of personnel. Although Puebla's hotels navigate a complex and ever-evolving environment they can

remarkably balance exploitation and exploration in their daily operations. This allows them not only to adapt to a changing environment, but also to innovate and uncover new opportunities, all while ensuring the efficiency and efficacy of their existing operations.

4 Discussion

The hospitality industry, particularly in cities like Puebla, faces significant challenges in maintaining the quality and tradition expected by visitors while simultaneously innovating to meet the evolving demands of the globalized market. Based on this premise, this study addresses the need to balance exploitation and exploration activities [3], acknowledging that strategies to achieve this can vary across organizations. Although existing approaches to organizational ambidexterity have provided significant benefits, they tend to separate these activities into distinct units or reduce them to the development of specific skills in employees.

While these strategies have proven effective, their success can be limited by potential conflicts between units or teams, hindering collaboration and stifling innovation. In response to this challenge, the concept of integrated or holistic ambidexterity is proposed, an approach that seeks to fully integrate exploitation and exploration activities throughout the organization. With this perspective, organizational ambidexterity is not viewed as an isolated element but rather sought to be incorporated into all business areas and processes. To achieve this, the Ambidextrous Scorecard (ASC) is proposed as a tool that facilitates the monitoring and integrated management of both activities, providing a holistic view of the organization and enabling more informed decision-making.

This approach, by promoting a balance between exploitation and exploration, requires an organizational structure that facilitates interdepartmental collaboration and fosters processes that stimulate communication and learning among different units. Table 4 details the key aspects of this proposal.

The implementation of this approach within organizations presents a new challenge that can be addressed from the perspective of the ASC. This tool plays a pivotal role in monitoring and aligning an organization's short-term and long-term objectives and actions, harmonizing exploitation and exploration activities. A distinctive feature of the ASC is its ability to identify and prevent conflicts between these activities, which is crucial for organizations seeking to balance them effectively. Moreover, the ASC provides a holistic view of the business, supporting informed decision-making, the development of dynamic capabilities, and the creation of a sustainable competitive advantage.

The ASC emerges as a response to the inherent challenges of exploitation and exploration activities, which have been addressed through various approaches. However, the ASC goes a step further by seeking a holistic alignment of these activities with the organization's strategy and resources. The introduction of the ASC in the hospitality sector represents a significant advancement in the management of exploitation and exploration activities, proposing a set of key generic factors to address them effectively.

Table 4.
Critical Aspects of Integrated Approach.

Orientation	Advantages	Disadvantages	Usage conditions
Holistic, encompassing the entire organization	Maintains a clear orientation towards strategic objectives.	Risk of lack of focus and clear strategic direction.	When a strategic and integrated approach to exploitation and exploration is required.
	Allows agile adaptation and continuous innovation.	It is challenging to implement in large or complex organizations.	Suitable for organizations facing a complex and dynamic environment.

Source: Prepared by the authors.

Table 5 details the ASC proposal, presenting 11 strategic objectives and 23 indicators. While this is a generic proposal, each hotel or organization must adapt it to its specific needs and circumstances. It is worth noting that the empirical basis of this proposal is derived from the applied questionnaire, reinforcing its relevance and applicability in the hospitality context.

Table 5.
Proposed Ambidextrous Scorecard for the hotels of Puebla City.

Perspective	Strategic Objectives	Strategic Indicators (SI)
Financial perspective (F)	Exploitation	SI1. Rate of cost reduction to total revenues. SI2. Net profit margin.
		SI3. Percentage of revenue from new products/services relative to total revenue.
	Exploration	SI4. Percentage of expenses allocated to research and development activities relative to total operating expenses.
		SI5. Percentage of customers who have used new products/services in the last quarter.
Customer perspective (C)	Exploitation	SI6. Customer satisfaction index with new products/services. SI7. Increase in revenue per available room due to the new products/services offered.
		SI8. Customer satisfaction index with the service received.
	C2. Identify and anticipate customer needs	SI9. Number of customer complaints

Perspective	Strategic Objectives	Strategic Indicators (SI)
Internal Process perspective (P)	Exploration	received relative to the total number of customers. SI10. Customer retention rate.
		SI11. Percentage of revenue from new market segments relative to total revenue.
		SI12. The growth rate of the new market segments about the existing ones. SI13. Customer satisfaction index for the new market segments served.
	Exploitation	SI14. Percentage of customer satisfaction, number of complaints or claims received, average response time to customer requests.
		SI15. Number of strategic alliances established, percentage of improvement in operational efficiency through established alliances, and return on investment (ROI) from the alliances.
	Exploration	SI16. Number of environmental analysis reports conducted, accuracy percentage in forecasting market trends, response rate, and adaptation to environmental changes.
		SI17. Number of innovative ideas proposed, percentage of successfully implemented ideas, average implementation time.
	Exploitation	SI18. Percentage of employees trained in skills relevant to the business. SI19. Turnover rate of trained employees. SI20. Employee satisfaction index.
Learning and Growth Perspective (LG)	Exploitation	SI21. Percentage of new skills developed about market needs. SI22. Percentage of employees trained in new skills. SI23. The adoption rate of new skills in job performance.

Source: Prepared by the authors.

As shown in Table 5, the original four perspectives of the BSC bifurcate into two dimensions: exploitation and exploration. From a financial perspective, while exploitation focuses on operational efficiency, reflected in indicators such as 'net profit margin', exploration is oriented toward revenue diversification, as evidenced by metrics like the 'percentage of revenue from new products/services relative to total revenue'. This duality ensures sustainable hotel management that is adaptable to market fluctuations.

From a customer perspective, the importance of satisfying both current and potential customers is highlighted. Exploitation is manifested in the continuous improvement of the current offering, while exploration is oriented towards capturing new market segments and improving customer experience. These objectives underscore the direct relationship between customer satisfaction and profitability. In terms of internal process, exploitation focuses on service quality and the consolidation of strategic alliances, while exploration seeks constant innovation. This duality reinforces the need for a balance between operational efficiency and adaptability to changing market demands. Finally, the learning and growth perspective highlights the importance of human capital, where exploitation refers to leveraging the current skills of personnel, while exploration focuses on developing new competencies. The combination of these objectives ensures that the organization benefits from both accumulated experience and newly acquired skills.

5 Conclusions

This research focused on proposing a framework for managing exploitation and exploration activities using the Balanced Scorecard in the hotel sector of Puebla City, Mexico. The findings reveal that, instead of considering exploitation and exploration activities as isolated elements, it is essential to integrate them into all organizational areas and processes through the Ambidextrous Balanced Scorecard (ASC). Moreover, it is evident that such integration not only enhances performance in each of the original perspectives of the Balanced Scorecard (financial, customer, internal process, and learning and growth) but also significantly contributes to the overall performance of hotel organizations, effectively balancing the exploitation of current resources and competencies with the exploration of new opportunities.

When comparing these results to existing literature, it was found that they were consistent with previous studies that highlight the need to integrate exploitation and exploration activities into both organizational structure and strategy. However, this work went a step further by delving into the relevance of the ASC as an essential tool for integrated management, emphasizing how the combination of these activities within this framework provides a new perspective on how hotel organizations can improve their performance and adaptability in an ever-evolving market that presents increasingly complex challenges.

The practical implications of these findings suggest that hotels that effectively integrate exploitation and exploration activities with the help of the ASC can position themselves more competitively by anticipating trends and responding swiftly to market demands. Furthermore, this study

theoretically reinforces the idea that efficiency and adaptability are complementary in the hotel context and that it is important to consider exploitation and exploration activities from a holistic perspective.

Nevertheless, it is important to acknowledge the limitations of this study. Despite the meticulous effort to comprehensively address the hotel sector in Puebla City, Mexico, it is emphasized that the findings should be interpreted with caution and the particularities of the studied context should be considered. However, looking to the future, it is suggested to explore how this approach can be implemented in other sectors or geographic regions. Additionally, it would be relevant to delve deeper into how emerging trends, such as digitalization, sustainability, or changing consumer preferences, influence exploitation and exploration activities within the hotel industry.

Ultimately, this study unveiled the significance of integrating exploitation and exploration activities within the Balanced Scorecard. Beyond empirical findings, the potential of the ASC proposal is highlighted to enhance performance and adaptability in the hotel industry, offering a valuable contribution to both academia and hotel industry professionals and decision-makers.

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