

THE ROLE OF INCUBATORS IN PROMOTING INNOVATION AMBIDEXTERITY AMONG START-UPS IN THE TOURISM AND HOSPITALITY INDUSTRY

Abstract

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Purpose - This study investigates the impact of incubators on knowledge management and sustainable innovation in early-stage tourism and hospitality firms. It explores whether incubators leverage innovation generated by these firms.

Methodology/Design/Approach - Survey data from early-stage tourism and hospitality firms were analyzed using latent variable modeling and Importance-Performance Matrix Analysis (IPMA).

Findings - The study reveals that incubators directly influence innovation exploitation but not innovation exploration. However, an indirect influence on exploration exists through human capital as a mediator.

Originality - This research advances understanding of the relationship between knowledge management and sustainable innovation in the tourism context. It pioneers the exploration of the incubator effect on innovation ambidexterity (simultaneous pursuit of exploration and exploitation) in early-stage tourism and hospitality firms.

Keywords Incubators; Knowledge Management; Sustainable Innovation; Innovation Ambidexterity; Early-Stage Tourism & Hospitality Firms.

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INTRODUCTION

The creation and dissemination of knowledge and information have been driving forces of economic landscapes and global development. These factors guide companies seeking better economic performance, market sustainability, and competitive advantage (Minello et al., 2017; Lubowiecki-Vikuk & Sousa, 2021). Increasing competition, partly fueled by economic globalization in recent decades, has brought new challenges to companies. The tourism and hospitality industry, currently recovering from the COVID-19 pandemic, is no exception.

Tourism is a key economic driver, ranking third in global export earnings and accounting for 10% of global GDP, according to the UNWTO (Santos et al., 2022). The industry's dynamic growth, though temporarily interrupted, naturally intensifies competition. To address this, companies must keep pace with innovation to survive, evolve, and remain competitive (Najda-Janoszka & Kopera, 2014). However, the industry is often seen as "low-tech," with innovation, especially service innovation, frequently underestimated (Hertog et al., 2011). Barriers to innovation, as noted by Hjalager (2002), include small enterprise size (leading to resource limitations) and high personnel turnover.

To support those navigating this complex market, auxiliary mechanisms like business incubators have emerged (Corvello et al., 2023). These incubators offer an alternative to traditional business formation and development (Sousa et al., 2023), serving as boosters for innovation, competitiveness, and economic growth (Fernandes, 2014). They are especially beneficial for start-ups facing financial, administrative, and operational constraints, aiding them in market entry and growth (Cooper et al., 2010). Tuan (2022) explored determinants of employee ambidexterity in this context.

Business incubators have become vital for innovation across sectors, including tourism and hospitality (Ferreira et al., 2019). They provide resources, mentorship, and networking, enabling startups to overcome limitations and market complexities (Cooper et al., 2010). In tourism, often perceived as "low-tech" (Hertog et al., 2011), incubators foster innovation and entrepreneurship. They offer platforms for experimentation, development, and access to industry expertise (Li et al., 2019). By nurturing early-stage ventures, incubators enhance sector competitiveness and resilience, particularly against challenges like the pandemic (Santos et al., 2022).

While researchers like Narvekar and Jain (2006) and Veloso et al. (2021) have explored knowledge management and innovation's impact on competitiveness and financial performance (Fernandes, 2014), such information is scarce for tourism and hospitality. Vo Thanh et al. (2020) found only 13 papers on organizational ambidexterity in tourism, with just one on innovation and none analyzing innovation ambidexterity in early-stage firms. They note the concept's under-investigation in tourism. Elche et al. (2021) stress researching optimal innovation orientations, while Dias et al. (2023) highlight the scarcity of research on early-stage tourism and hospitality firms.

This study addresses the gap by establishing a relation between innovation (dependent variable) and three knowledge management concepts (independent variables). Innovation is viewed as a process, with exploration and exploitation as its components. Independent variables include knowledge acquisition, assimilation, transformation, incubator, social capital, human capital, opportunity recognition, and entrepreneurial orientation.

The study's contributions are threefold: 1) It's the first to explore incubator effects on innovation in new tourism ventures. 2) It emphasizes the incubator's role in strengthening human capital, opportunity recognition, and resulting innovation. 3) It specifies incubator roles, such as promoting networking, entrepreneurship, and mentoring for new venture success.

1. THEORETICAL FRAMEWORK

1.1. Key concepts

Organizational ambidexterity is a concept that has evolved over time. It refers to the "simultaneous combination of knowledge exploration and exploitation" (Elche et al., 2021, p. 1007). Alternatively, it can be defined as an organization's capacity to engage in both exploration and exploitation activities concurrently (Fu et al., 2020). In essence, ambidexterity is the skill of performing two seemingly incompatible or opposite actions at the same time. In the context of this study, the focus is on innovation ambidexterity, which encompasses a firm's ability to simultaneously pursue exploratory endeavors that yield radical innovations and exploitative activities that generate incremental innovations (Lin et al., 2013; Corchuelo Martínez-Azúa, et al. 2024).

This capacity represents a multidimensional principle encompassing five distinct concepts with varying objectives, structures, and strategies (Ali et al., 2016). Zahra and George (2002) initially identified four concepts: acquisition, assimilation, transformation, and exploitation. The fifth concept, exploration, will be discussed later, considering other authors' studies.

Knowledge acquisition is a company's capacity to identify and gather relevant knowledge from external sources (Ali et al., 2016). Several factors can influence this dimension, including pre-existing internal and external knowledge, prior investments, human resources, and communication (Miller et al., 2016). Knowledge assimilation is an organization's ability to internalize externally acquired knowledge, enabling it to thoroughly examine, process, and understand this knowledge within its operational framework (Ali et al., 2016). Factors influencing this process include educational levels, background diversity, organizational structure, internal communication, and human resources (Miller et al., 2016).

Knowledge transformation refers to the extent to which a company can develop and refine its internal routines, facilitating the integration of pre-existing and newly acquired knowledge (Ali et al., 2016). Influencing factors are similar to those mentioned for acquisition and assimilation, except organizational structure is replaced by organizational culture (Miller et al., 2016).

1.2. Hypotheses development

Exploitation measures an organization's ability to leverage assimilated knowledge within its established routines and processes. This enables the creation of new organizational procedures (Miller et al., 2016). Organizational structure, bureaucracy, and responsiveness can influence this process.

Exploration, on the other hand, can be defined differently depending on the author. Gilsing and Nooteboom (2006), for example, describe it as the search for and combination of science and technology (Li et al., 2008). However, for the purposes of this study, the most suitable definition is that of Atuahene-Gima (2005), who states that exploration is the investment in resources that allows for the improvement and expansion of knowledge, competencies, and product innovation processes. In essence, it involves investing in resources to acquire new knowledge and capabilities. Therefore, exploration encompasses areas such as research, risk-taking, experimentation, flexibility, and discovery (Miller et al., 2016; Duarte et al., 2023).

Even in organizations possessing these diverse capacities, successful entrepreneurship extends beyond classroom learning. Startups require a variety of resources to thrive in the industry. Without such support, they face challenges in remaining competitive (Ayad et al., 2022). A close relationship between business, science, technology, and other stakeholders is crucial for understanding and mastering the entrepreneurial ecosystem. It is in this context that incubators emerge.

Incubators provide a tangible platform for startups to launch new ventures, contributing to their survival and growth. They play a key role in the triple helix model of innovation, fostering collaboration between universities, industries, and government to drive economic development (Etzkowitz, 2003). Moreover, incubators facilitate the development of entrepreneurial culture and promote entrepreneurship (Li et al., 2019). It is important to acknowledge the growing relevance of the quintuple helix model, which recognizes the crucial roles of civil society and the environment in fostering innovation (Carayannis et al., 2018).

Zhang (2023) found that early-stage tourism entrepreneurs often leverage their unique talents and passions to create ventures they are passionate about. This informal process is enhanced when entrepreneurs receive assistance from an incubator. Incubators

offer a platform for these entrepreneurs to launch and grow their businesses, while also fostering entrepreneurial culture and promoting entrepreneurship (Li et al., 2019).

Incubators are hypothesized to influence both exploration and exploitation due to the multifaceted support they offer (Dias et al., 2023). By providing resources, mentorship, and networking opportunities, incubators can enhance a startup's capacity for knowledge acquisition, assimilation, and transformation (Soetanto & Jack, 2018), thereby fostering exploration. Simultaneously, incubators can facilitate the integration of this new knowledge into existing routines and processes, promoting exploitation (Patton & Marlow, 2011). Furthermore, the collaborative environment within incubators, often involving interactions with other startups, mentors, and industry experts, can stimulate the exchange of diverse perspectives and ideas (Dias & Lages, 2021), further fueling both exploratory and exploitative innovation. Having said that, it is possible to hypothesize:

H1a: Incubator positively related to Exploration.

H1b: Incubator positively relates do Exploitation.

In addition to these theoretical approaches, other aspects, particularly those of an anthropological nature, must also be considered. Firstly, there is social capital, which can be simply defined as networking capacity. This capacity arises from accumulated relationships and networks, enabling individuals to interact in ways that promote organizational development and knowledge sharing. Some authors (e.g., Teece et al., 2005) consider social capital key to firm success due to its connection with communication processes. As a complex combination of work and friendship, social capital is a multidimensional concept.

Next, there is human capital, which is the result of entrepreneurial training and often recognized as a crucial determinant of firm performance (Fu et al., 2019). According to Mincer (1974), this theory posits that knowledge expands individual competencies, thereby enhancing performance (Felício, Couto, & Caiado, 2014). For the purpose of this study, three relevant characteristics of this approach will be considered: experience, professional proficiency, and cognitive ability. As previously mentioned, cognitive skills impact workers' behavior regarding task accomplishment.

Another key step in the entrepreneurial process is opportunity recognition, with the concept of opportunity itself being central to entrepreneurship studies. It is based on experiences, entrepreneurial characteristics, and subsequent entrepreneurial behavior (Anwar et al., 2021). Christensen (1989) defines it as the perception of potential for new profit. This can be achieved by observing external stimuli and exploiting them within the organization (Sambasivan et al., 2019). By strengthening opportunity recognition capabilities, entrepreneurs can better navigate increasing market complexity (Anwar et al., 2021).

Inextricably linked to opportunity recognition is entrepreneurial orientation. This orientation is characterized by innovation, proactiveness, and risk-taking (Kristinae et al., 2023). Thus, entrepreneurial orientation is undoubtedly related to organizational performance (Rezaei & Ortt, 2018) and is considered crucial for competitive advantage and success (Nusanee et al., 2021). In the current landscape of globalization and heightened competition (Susanto et al., 2023), organizations with a strong entrepreneurial orientation are more likely to exhibit superior performance indicators (Fan et al., 2021). Considering all of this, it is then possible to hypothesize:

H2a: Human Capital Experience and Opportunity Recognition act as mediators in the relation between Incubator and Exploitation.

H2b: Human Capital Experience and Opportunity Recognition act as mediators in the relation between Incubator and Exploration.

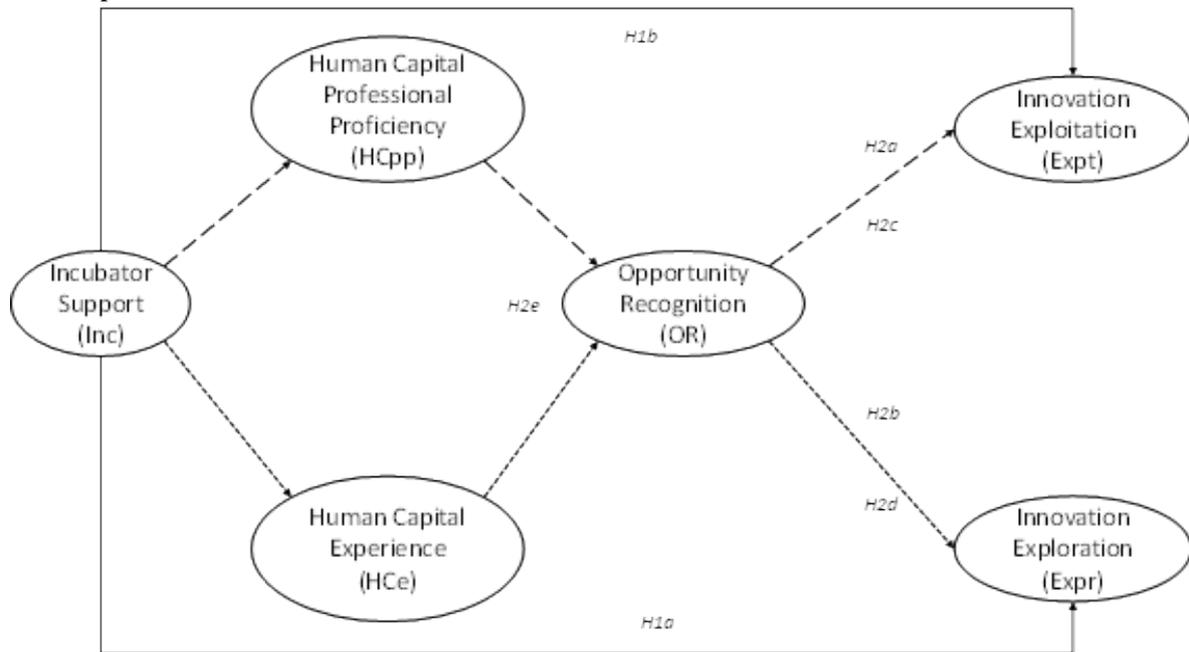
H2c: Human Capital Professional Proficiency and Opportunity Recognition act as mediators in the relation between Incubator and Exploitation.

H2d: Human Capital Professional Proficiency and Opportunity Recognition act as mediators in the relation between Incubator and Exploration.

H2e: Human Capital Professional Proficiency act as mediators in the relation between Incubator and Opportunity Recognition.

As depicted in Figure 1, exploitation and exploration will be the two items representing innovation, the dependent variable. Acquisition, assimilation, transformation, incubator, social capital, human capital, opportunity recognition, and entrepreneurial orientation will be the independent variables.

Figure 1: Conceptual model



2. METHODOLOGY

2.1. Procedures and measures

To test the research hypotheses, data were collected through a 15-minute anonymous questionnaire, administered from May to October 2022. The questionnaire was developed based on established scales from the literature, adapted to the context of early-stage tourism and hospitality firms. It included items related to knowledge management processes (acquisition, assimilation, transformation, exploitation), incubator support, social capital (cognitive, social, structural), human capital (knowledge, experience, professional proficiency, cognitive ability), opportunity recognition, and entrepreneurial orientation. The questionnaire was pretested with a small group of entrepreneurs to ensure clarity and relevance.

Three Portuguese incubators agreed to participate by identifying relevant businesses and establishing contact with their incubated entrepreneurs. They were invited to participate and then permitted to share contact information with the research team. Following this initial procedure, the questionnaire was distributed via email and LinkedIn.

The variables were measured using existing scales from relevant literature. All were assessed on a 5-point Likert scale (1 - strongly disagree to 5 - strongly agree), except for Human Capital items, which used a scale of 1 (less important) to 5 (more important). The four knowledge management dimensions were measured with four items each from Flatten et al. (2011). Incubator support used six items from Li et al. (2019). Social Capital, divided into cognitive, social, and structural approaches, had four items each, adapted from Hoang and Truong (2021). Human Capital, also subdivided into knowledge, experience, professional proficiency, and cognitive ability, had three to six items per approach, adapted from Felício et al. (2014). Opportunity recognition was measured with five items from Guo et al. (2016), while entrepreneurial orientation used eight items from Fan et al. (2021). The final section included eight demographic questions: gender, nationality, year of birth, qualifications, current position, number of employees, years of experience, and current field of activity.

2.2. Sample

Collecting a sufficient number of responses for this study proved challenging due to the specific combination of firm characteristics sought: being incubated, in early stages (less than 5 years of operation), and belonging to the tourism industry (accommodation, food and beverage, travel agencies, tour operators, and other tourism-related services). As no comprehensive dataset of the total population exists, given that some firms are not yet formally established, a non-purposive sampling approach was adopted, yielding a sample size sufficient for PLS-SEM (Hair et al., 2017).

The collected sample comprises 31 entrepreneurs, with a fairly balanced gender distribution: 48% (15) male and 52% (16) female. The majority of respondents, 11 individuals (36%), fall within the 30-39 age range, followed by 9 (29%) in the 40-49 age range. The remaining age groups, 50-60 and 20-29, represent 19% and 16% of the sample, respectively.

Regarding educational attainment, 52% of the respondents hold a Master’s degree, followed by 32% with a Bachelor’s degree. This may be somewhat related to the participants’ current positions, with over half holding either top-level or middle-level management roles. Regarding their business experience, three respondents reported 30 or more years, sixteen reported 10 to 30 years, and eleven reported less than 10 years.

3. RESULTS AND DISCUSSION

The conceptual model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software (Ringle et al., 2015). PLS-SEM was chosen due to its alignment with the exploratory research questions, ability to accommodate both formative and reflective constructs, suitability for complex models, and robustness to smaller sample sizes, all characteristics of the current study.

The results were analyzed and interpreted in two steps: first, the reliability and validity of the measurement model were assessed, and second, the structural model was evaluated following the recommendations of Risher and Hair (2017). All standardized indicator loadings were above 0.6 and significant, confirming individual indicator reliability. Cronbach’s Alpha and Composite Reliability values exceeded the 0.7 threshold, indicating good internal consistency reliability.

Model quality was assessed through several procedures. Convergent validity was established by three criteria: significant standardized factor loadings for each indicator, CR values above 0.70 for all constructs, and AVE values exceeding 0.50, as recommended by Bagozzi & Yi (1988). Discriminant validity was confirmed using the Fornell and Larcker (1981) criterion (square root of AVE exceeding the highest correlation with any other construct) and the cross-loadings criterion (each item loading higher on its own construct than any other). Table 1 demonstrates that both criteria were met for all constructs.

R-squared (R^2) and Q-squared (Q^2) values were examined for the endogenous variables. R^2 coefficients for Human Capital Professional Proficiency, Human Capital Experience, Opportunity Recognition, Exploitation, and Exploration were 67.3%, 69.4%, 75.6%, 70.2%, and 80.9%, respectively, all exceeding the 10% threshold suggested by Falk and Miller (1992), indicating a good model fit. All Q^2 coefficients were positive (ranging from 0.072 to 0.435), suggesting the model’s predictive relevance. Parameter estimates were tested for significance using bootstrapping with 5,000 subsamples. Variance Inflation Factor (VIF) values were calculated to assess collinearity, with the maximum VIF value of 2.226 falling below the recommended limit of 5, indicating no collinearity issues.

Table 1: Composite Reliability, Average Variance Extracted, correlations and discriminant validity checks

Latent variables	CR	AVE	1	2	3	4	5	6
(1) Exploration	0.834	0.715	0.846					
(2) Exploitation	0.775	0.634	0.613	0.796				
(3) Human Capital Professional Proficiency	0.814	0.688	0.539	0.578	0.829			
(4) Human Capital Experience	0.872	0.579	0.482	0.559	0.742	0.761		
(5) Incubator support	0.909	0.668	0.379	0.846	0.585	0.643	0.817	
(6) Opportunity Recognition	0.784	0.646	0.645	0.555	0.632	0.828	0.550	0.804

Note: Below the diagonal are the correlations between the constructs. The diagonal represents the square root of the AVE.

The results in table 2 revealed that Incubator had no significant impact on Exploration ($\beta=0.027$, n.s.), which rejected H1a. However, Incubator had a significant positive influence on Exploitation ($\beta=0.775$, $p<0.001$), which supported H1b. The mediation hypotheses (H2a-H2e) were tested by following the recommendations of Risher & Hair (2017). We used bootstrapping to test the mediating effects (Preacher & Hayes, 2008). The result of the mediation analysis presented in Table 3 reveals that the only significant indirect effect was that of Incubator on Exploration through the mediators of Human Capital Experience and Opportunity Recognition ($\beta=0.328$, $p<0.01$), which confirmed H2b. The other mediating effects were not significant.

Table 2: Structural Model Assessment

Path	Original sample (O)	Standard deviation (STDEV)	T Statistics (O/STDEV)	P values
H1a: Incubator → Exploration	0.027	0.215	0.125	0.900
H1b: Incubator → Exploitation	0.775	0.154	5.021	0.000

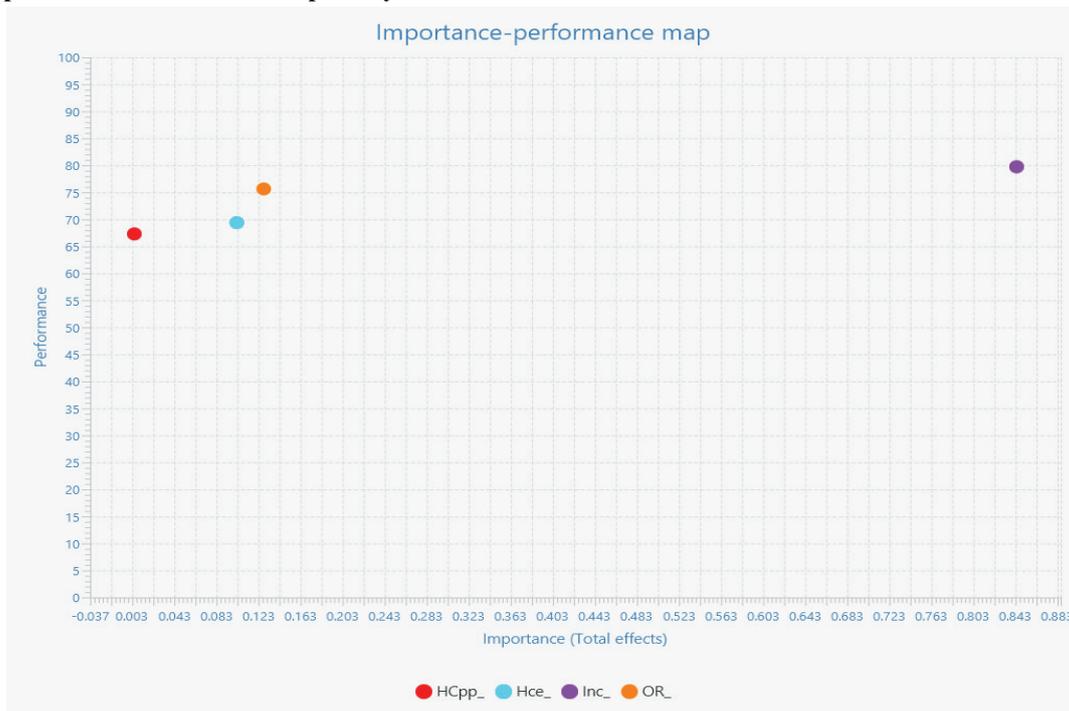
Table 3: Bootstrap results for indirect effects

Indirect effect	Original sample (O)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
H2a: Inc→Hce→OR→Expt	0.066	0.091	0.726	0.468
H2b: Inc→Hce→OR→Expr	0.328	0.126	2.610	0.009
H2c: Inc→HCpp→OR→Expt	0.003	0.025	0.115	0.909
H2d: Inc→HCpp→OR→Expr	0.014	0.072	0.199	0.842
H2e: Inc→Hcpp→OR	0.022	0.110	0.203	0.839

To obtain additional insights we conducted an IPMA to compute the importance of the hypothesized relationships. In PLS-SEM, the IPMA is a helpful analysis that turns the standard path coefficient into a more practical approach. This means that IPMA does not analyze solely the performance of an item, but it also assigns its importance (Hair, et al., 2019). Following that, the IPMA results give management insight into how to handle and enhance the identified high-importance and low-performance areas (Ringle & Sarstedt, 2016).

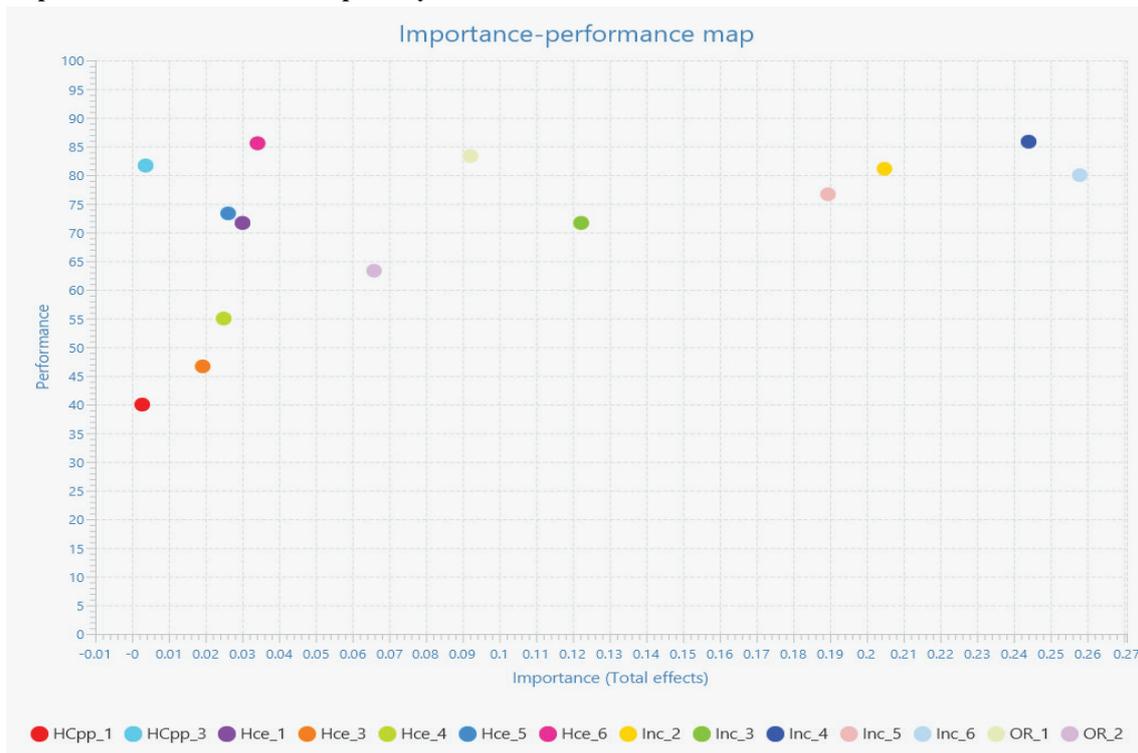
This analysis was carried out and the results are shown in figure 2. The results provide important insights from the managerial perspective regarding the predictive power of the exogenous constructs (Hair et al., 2017). The key construct is the incubator influence, with an importance of 0,844, followed by opportunity recognition with an important of 0,128. This not only allows to confirm previous studies regarding the influence of incubators on tourism entrepreneurship (c.f. Ayad et al., 2022; Zhang, 2023) but also to expand existing knowledge by defining incubators as a priority when defining policies and firm strategies for innovation development.

Figure 2: Importance-Performance Map Analysis for the constructs



The Importance-Performance Map Analysis (IPMA) technique allows for a more in-depth analysis at the indicator level (Hair et al., 2017). Figure 3 presents these results. The indicators with the highest importance relate to the incubator’s effect, particularly the following: Inc_6: This indicator states that the incubator serves as a valuable platform for young entrepreneurs to launch new businesses and foster entrepreneurship (importance = 0.258). Inc_4: This indicator states that the mentoring and coaching sessions at the incubator help incubatees gain direction and follow the right path to start a new business (importance = 0.244). Inc_2: This indicator states that working in a shared space with like-minded professionals helps ventures solve common problems and share networks and resources (importance = 0.204). Inc_5: This indicator states that the incubator’s networking services provide opportunities for young entrepreneurs to connect with various stakeholders in the entrepreneurial ecosystem (importance = 0.189).

Figure 3: Importance-Performance Map Analysis for the indicators



The results, though exploratory due to the methodological approach and sample size, suggest potential pathways through which incubators can influence startups' ambidextrous innovation capabilities, contributing to the nascent body of knowledge in this field. This study reveals that incubators can play a pivotal role in fostering innovation and driving performance improvements within startups. This reinforces previous studies carried out by Spender et al. (2017) and Weiblen & Chesbrough (2015) where it became clear that innovation is a key component if companies want to compete successfully in today's competitive market and globalized economy. Moreover, even though the authors mentioned in the literature review had already studied the relations between the variables presented and their impact on the organization's performance, the indirect effects were not explored in detail. After this study, it is now possible to conclude that these indirect relations – incubator and exploration through means of human capital and opportunity recognition – can, in fact, be significant. Ultimately, this enables the enhancing and refining of knowledge in this area, especially by recognizing the direct influence of the incubators on innovation exploitation, and indirect effect on innovation exploration via human capital experience, providing further details on previous research (c.f. Strobl & Kronenberg, 2016) regarding the role of networking on early stages.

Our study also extends existing knowledge by establishing a ranking for the activity's priorities based on the prediction power provided by the IPMA, as suggested by (Hair, et al., 2017). Accordingly, the most important aspect of the incubators is its capacity for enhance young entrepreneurs' capabilities to start a new business, followed by mentoring and coaching offered by the incubator. In third place, our results recognize the importance of the incubator as a common place for problem solving, and in fourth in the ranking, the contact with different stakeholders in the entrepreneurship ecosystem.

CONCLUSION

The results of this study reveal that incubators play a crucial role in fostering innovation within tourism and hospitality firms. Although the survey yielded slightly over 30 responses, this study offers valuable insights into how incubators can influence knowledge management and innovation in the tourism industry. The conclusions presented here can benefit both incubators and incubated companies, providing a fresh perspective on how to achieve mutual efficiency and profitability. The originality of this research lies in its focus on the under-explored topic of incubators specifically within the Portuguese tourism and hospitality sector.

The contributions of this study are threefold. First, it addresses the concept of ambidexterity by analyzing both the direct and indirect effects incubators have on the two types of innovation: exploration and exploitation. While Vo Thanh et al. (2020) established that ambidexterity is inherent to the tourism industry, our findings provide a deeper, more nuanced understanding of the processes through which these organizations generate both types of innovation. Our results indicate that while incubator influence more directly affects the processes leading to innovation exploitation, the processes leading to innovation exploration are more dependent on accumulated experience. This highlights the impact of resource investment on facilitating knowledge and competency expansion, as well as the adoption of innovative processes.

Second, our findings detail the incubator dimensions that most significantly influence innovation. Notably, the ability of these organizations to attract young entrepreneurs emerges as the most critical factor for innovation generation. Additionally, the study emphasizes the importance of incubators developing mentoring and coaching programs to enhance entrepreneurs' innovation capabilities.

Third, the study reveals that incubators are not merely learning platforms. They also foster the development of entrepreneurs' social capital, a key element for innovation in the tourism industry (Dias et al., 2022), by serving as a shared space for problem-solving and facilitating connections with diverse stakeholders within the entrepreneurial ecosystem.

The findings of this study can inform decision-making and improve practices within the tourism industry. Based on the IPMA results, several practices can be prioritized. First, attracting young entrepreneurs is crucial, as they are often more likely to bring fresh ideas and a willingness to take risks. Second, incubators should develop tailored mentoring and coaching programs to cultivate entrepreneurs' innovation capabilities. Third, fostering social capital through networking opportunities with other entrepreneurs, investors, and industry experts is essential. Fourth, creating a collaborative space for problem-solving can facilitate idea-sharing and mutual learning among entrepreneurs. In addition to these recommendations, incubator decision-makers should consider available resources and the regulatory environment in which they operate.

While this study offers valuable insights, it is important to acknowledge its limitations. The small sample size may limit the generalizability of the findings to the broader population. However, the in-depth qualitative insights obtained, combined with rigorous PLS-SEM analysis, contribute significantly to the theoretical understanding of incubators' role in fostering innovation ambidexterity. Furthermore, the focus on incubated companies in the tourism industry may restrict generalizability to other types of organizations. Additionally, political and economic factors may have influenced the results. Given these limitations, the findings should be interpreted with caution and considered exploratory in nature. Future research could address these limitations by using larger, more diverse samples and employing different methodological approaches.

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APPENDIX

Variables	Items	Adapted from
Incubator Support	Our venture, while being incubated, grooms the entrepreneurial skills and capabilities of young entrepreneurs.	(Li, Rehman, & Asim, 2019)
	Our venture considers that working at a common place with similar professionals helps us to solve the common problems and to share each other's network and resources.	
	Our venture, while being incubated, benefits from a wonderful professional environment that boosts the motivation and productivity of young entrepreneurs.	
	At our venture's incubator, the mentoring and coaching sessions help the incubates to get directions quickly, and follow the right track to start a new business.	
	Our venture's incubator networking service gives opportunity to young entrepreneurs to meet with the different parties that are involved in entrepreneurship ecosystem.	
	Our venture's incubator is a good platform to start new business by young entrepreneurs to promote entrepreneurship.	
Human capital Experience	Business experience	(Felício, Couto, & Caiado, 2014)
	Management/leadership experience	
	Technical/technological work experience	
	Commercial work experience	
	Industry experience	
	Diversified experience	
Human capital Professional proficiency	Professional proficiency in a technological area	(Felício, Couto, & Caiado, 2014)
	Professional proficiency in a company management	
	Widespread knowledge	
	Communication skills	
Opportunity recognition	Our venture searches and identifies opportunities from changes in customer demand and preferences.	(Guo, Su, & Ahlstrom, 2016)
	Our venture searches and identifies opportunities from changes in technological environment.	
	Our venture searches and identifies opportunities from changes in economic environment.	
	Our venture searches and identifies opportunities from changes in regulatory environment.	
	Our venture searches and identifies opportunities from changes in political environment.	
Exploration	Our venture looks for novel technological ideas by thinking "outside the box".	(Flatten, Engelen, Zahra, & Brettel, 2011)
	Our venture's looks for creative ways to satisfy its customers' needs.	
	Our venture aggressively explores new market segments.	
	Our venture actively targets new customer groups.	
Exploitation	Our venture launches innovative products/services promptly with regard to its research.	(Flatten, Engelen, Zahra, & Brettel, 2011)
	Our venture's management supports the development of prototypes.	
	Our venture regularly reconsiders technologies and adapts them in accordance with new knowledge	
	Our venture has the ability to work more effectively by adopting new technologies.	