



Transformational Leadership and Organizational Innovation in Hotels: Leveraging Intellectual Capital Through High Performance Work Practices

Liderança transformacional e inovação organizacional em hotéis: potencializando o capital intelectual por meio de práticas de trabalho de alto desempenho

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Abstract

Developing and managing innovation is a crucial way for hospitality businesses to gain competitive advantage, and hotels most often do this through organizational innovation, drawing on their stock of intellectual capital. Hospitality businesses should adopt appropriate management models to support the growth of their intellectual capital, and this research evaluates how the transformational leadership style can support this through high performance work practices. We propose a model of organizational innovation for hotels, which can be applied in hospitality businesses to gain competitive advantage. This research contributes to the literature on organizational behavior, leadership, intellectual capital, and innovation in hospitality through a conceptual framework that integrates leadership style, human resource practices, individual behaviors, and intellectual capital to explain the development of innovation capability. This underscores the critical role of human elements within intellectual capital, contributing to a nuanced understanding of how employees' knowledge, attitudes, and competencies shape an organization's innovative capacity.

Keywords: Hotel Management; Service Innovation; Organizational Innovation; Transformational Leadership; High Performance Work Practices; Intellectual Capital.

Resumo

Desenvolver e gerir a inovação é uma estratégia crucial para que empresas de hospitalidade obtenham vantagem competitiva, sendo que os hotéis geralmente alcançam isso por meio da inovação organizacional, utilizando seu capital intelectual. Para isso, é fundamental que adotem modelos de gestão adequados que apoiem o crescimento desse capital. Esta pesquisa avalia como o estilo de liderança transformacional pode contribuir para esse processo por meio de práticas de trabalho de alto desempenho. Propomos um modelo de inovação organizacional para hotéis, aplicável a negócios de hospitalidade que buscam vantagem competitiva. Esta pesquisa contribui para a literatura sobre comportamento organizacional, liderança, capital intelectual e inovação na hospitalidade, por meio de um framework conceitual que integra estilo de liderança, práticas de recursos humanos, comportamentos individuais e capital intelectual para explicar o desenvolvimento da capacidade de inovação. O estudo destaca o papel essencial dos elementos humanos no capital intelectual, contribuindo para uma compreensão mais aprofundada de como o conhecimento, as atitudes e as competências dos colaboradores moldam a capacidade inovadora de uma organização.

Palavras-chave: Gestão Hoteleira; Inovação em Serviços; Inovação Organizacional; Liderança Transformacional; Práticas de Trabalho de Alto Desempenho; Capital Intelectual.

1. Introduction

When facing competitive pressure, firms adopt new approaches to service delivery, product design, and organizational processes to enhance competitiveness. Innovation has become an integral part of successful firms' strategy and is embedded in their organizational culture to encourage creativity and continuous improvement (Pascual-Fernández et al., 2020). Since the COVID-19 pandemic ended, the global hospitality industry has faced multiple pressures on the journey back to pre-pandemic levels of activity and growth including skills shortages, depressed consumer confidence, and falling capital investment. Innovation, especially through the use of new technologies, is seen as fundamental to addressing many of these challenges (Chen, 2022; Elkhwesky et al., 2024).



An organization's ability to innovate and take advantage of innovations is a decisive factor in surviving, creating and maintaining competitive advantage in the market and a critical factor in improving what an organization does (Pascual-Fernández et al., 2021). Thus, it is necessary to promote continuous innovation, scenario development, and adaptability to change (Visentin et al., 2021), in hospitality businesses as well as in the broader service industries (So et al., 2022). Recent evidence from the hospitality industry further indicates that organizational responses developed under crisis conditions can evolve into longer-term resilient business strategies, reinforcing the importance of organizational adaptability beyond immediate periods of disruption (Ruppenthal & Rückert-John, 2024). The key to strengthening the long-term profitability and growth potential of hotels then lies in their ability to develop innovations to cope with frequent change in their external environment and dynamic competition (dos Anjos et al., 2024; Shin & Perdue, 2022).

Technology is the most prominent area in hospitality innovation research (Cao et al., 2022), reflecting the increasing pace of technological change in the service industries, but the human aspects of innovation have also received attention in the literature, especially in the field of employee innovative behaviour (Chen, 2022). However, a much more limited number of studies have examined the role of leadership in innovation in hospitality settings, despite its importance in driving organizational change (Elkhwesky et al., 2022).

The post-COVID hospitality industry environment necessitates new management models for innovation, where the manager's main goal is to lead and inspire employees, create a vision and work climate that encourages them to accept change and generate new ideas (Jovičić Vuković et al., 2018). Within this, leadership assumes a renewed importance in hotel management, as it has the power to influence, motivate, guide and attract employees towards the organization's goals (Radwan & Radwan, 2020). A person's work capacity is the embodiment of the knowledge and skills they possess. Employees with high work capacity can support the realization of the organization's vision and mission to advance and develop at pace.

The Transformational Leadership style has been researched increasingly frequently in the hospitality context, because of its positive influences on motivation, innovative behavior, organizational commitment, performance, creativity, and employee satisfaction (Alamir et al., 2019; dos Anjos & Kuhn, 2024; Gu et al., 2017; Jovičić Vuković et al., 2018). The inspirational and empowering aspects of transformational leadership ultimately lead to employee commitment beyond self-interest, with commitment to a vision and action that creates change agents, with enhanced perceptions of self-efficacy, inspirational motivation, and intellectual stimulation (Alamir et al., 2019). It has a multi-directional effect, as leaders directly affect individuals by inspiring them, while employee's enhanced impacts on their organization's culture directly affects other employees' motivation and behavior (Jovičić Vuković et al., 2018).

Transformative Leadership has been shown to positively impact employee performance in hospitality (Aftab et al., 2023) through its impact on the attitudes and behaviors of subordinates (Gui et al., 2022). However, surprisingly little is known about the relationship between transformational leadership and high performance in the workplace (Ogbonnaya & Nielsen, 2016), despite the growth of research into high performance work practices, including in hospitality settings (Murphy et al., 2018). Specifically, the relationship between transformational leadership and aspects of high performance linked to innovative behaviors have only been researched in a limited number of studies (Nieves & Osorio, 2017; Úbeda-García et al., 2016).

An organization can only gain competitive advantage through innovation by leveraging its intellectual capital. Some of this relates to the skills and capacities of its staff, but the full stock of intellectual capital is held more holistically by the organization across a number of sources, including its history, policies and procedures and its organizational culture. Thus, intellectual capital has been proposed as one of the most important drivers of business growth over time (Baima et al., 2020). Intellectual capital is the source of intellectual competitive advantage, including innovation, which is the main source of sustainable competitive advantage in the long term (Bontis et al., 2015).

This fragmentation represents an opportunity to advance hospitality innovation research beyond the examination of isolated organizational antecedents. By integrating transformational leadership, HPWPs, individual innovative behavior, intellectual capital, and innovation capability within a single framework, this study provides a more comprehensive perspective on how leadership and human resource practices are connected to organizational resources and innovation outcomes. In doing so, the study connects previously fragmented streams of leadership, human resource management, intellectual capital, and innovation research within the hotel context. From a managerial perspective, understanding these relationships can help hotel organizations identify how leadership development, human resource practices, employee innovative behavior, and intellectual capital can be jointly managed to strengthen organizational innovation capability.

With this background, this research aimed to investigate the relationships between transformational leadership, innovation, intellectual capital and high performing teams in the hospitality industry by answering the following research questions:

RQ1: What is the relationship between transformational leadership and the innovative capability of hospitality businesses?



RQ2: What is the relationship between high performance work practices and the innovative capability of hospitality businesses?

RQ3: What is the relationship between employees' innovative behaviors and the innovative capabilities of hospitality businesses?

RQ4: What is the relationship between an organization's Intellectual Capital and the innovative capabilities of hospitality businesses?

To answer these questions, each of the concepts introduced so far, and the relationships between them, were reviewed in the following section. From this review, a conceptual model was developed and tested using structural equation modelling, based on a survey of 453 hotel managers from North America, Asia, Europe and South America. The inclusion provides a geographically diverse empirical setting for examining the proposed relationships beyond a single national context. This international scope contributes to assessing the proposed framework across managers operating in different geographical contexts, thereby broadening the empirical basis of the study. The findings have been used to create a new model of hospitality business innovation that can be used by leaders and managers to gain competitive advantage through the application of transformational leadership to drive the innovative capacity of hospitality businesses.

2. Literature review

2.1 Transformational Leadership and High-Performance Work Practices

Implementing an effective leadership style to improve employee performance, remain innovative, and meet the continuous changes in customer demand is vital for the success of hospitality businesses (Radwan & Radwan, 2020). Implementing a transformational leadership style has been proposed as a way that successful organizations can achieve this, because it encourages an organization-wide commitment to quality and to enhancing the effectiveness of teams (Portela Maquieira et al., 2020).

Leadership style has a direct influence on employee job satisfaction and commitment, which in turn influences and shapes their intentions and behaviors (Radwan & Radwan, 2020). When leaders value progressive human resource practices, this will help to prepare their employees for the future and enable the development of their skills (Safavi & Karatepe, 2018). In the same way, it will strengthen their feeling of job security, decreasing uncertainty and increasing individual empowerment (Wang et al., 2024; Zacharatos et al., 2005). A good leader should recognize the importance of their employees for the achievement of organizational goals and, therefore, motivate them to help achieve them. Transformational leadership has been defined as the process of influencing major changes in the attitudes and assumptions of organizational members, and building their commitment to the mission or goals of the organization (Bass et al., 1987; Emery & Barker, 2007).

Managing an environment that values the generation of ideas brings out positive results and transforms individuals so that they will have a greater predisposition to, and acceptance of, innovative challenges (Cangialosi et al., 2020). Encouraging and engaging employees in creative thinking is considered a distinguishing characteristic of leadership that supports organizational transformation. More recent evidence further suggests that transformational leadership can stimulate proactive employee behaviors by encouraging followers to use their strengths and demonstrate personal initiative, which subsequently contribute to positive work outcomes (Bakker et al., 2023). Organizations should develop a supportive organizational structure and culture that enables leaders to provide an environment that encourages employee creativity (Radwan & Radwan, 2020). From this perspective, the positive relationship between transformational leadership and innovative behavior, can drive organizational change and help businesses maintain their competitiveness by encouraging innovation (Gu et al., 2017).

Innovative behavior refers to individual behaviors that introduce new and useful ideas, processes, or problem-solving procedures into the workplace, tasks, or organizations (Ottenbacher & Gnoth, 2005). Individual innovative behavior in hotel organizations should be encouraged, as hotel operations typically involve the generation, adoption, and implementation of ideas for continuous process improvement and enhanced quality assurance that involve individual team members (Gu et al., 2017). Research into employee behavior in the service sector highlights the importance of leadership support for the implementation and enhancement of new ideas, showing the importance of leadership for understanding employees' innovative behavior (Atitumpong & Badir, 2018).

Managers' leadership styles can greatly influence employee behavior (Xie et al., 2016). Employees with high capabilities can support the realization of the organization's vision and mission to advance and develop immediately. Factors that encourage employees to reach their maximum competencies should be encouraged (Indrayani & Wahyudi, 2020). In this regard, human resource activities that influence employees to perform at high levels are of utmost value and have been characterized as High Performance Work Practices (HPWP) (Karatepe, 2013). Studies on HPWP in hospitality have identified several dimensions of these, including:

- a) **Employee behavior:** commitment, job satisfaction, innovative behavior, sense of fairness, and the development of ambidexterity;
- b) **Performance:** the employee's creative performance, service quality, and business performance;



c) **Customer-orientation:** the perception of value, service quality, and customer satisfaction. (Ashton, 2018; Karatepe & Olugbade, 2016; Lee, 2020; Tang & Tang, 2012; Úbeda-García et al., 2016; Xin & Choi, 2020).

Transformational Leadership could exert a positive influence on the adoption of HPWPs, certain dimensions of which have a relationship with innovative behavior. This research proposes that understanding the factors which stimulate innovation in hospitality businesses is of extreme value, as they will contribute to the improvement of performance, competitive advantage and consequently the creation of value. Based on this review, the following hypotheses are proposed:

H1 - Transformational Leadership influences HPWPs.

H2a - Transformational Leadership influences Employee Innovative Behavior.

H2b - Transformational Leadership influences the Leader's Innovative Behavior.

H4a - HPWPs influence employee Innovative Behavior.

H4b - HPWPs influence the leader's Innovative Behavior.

2.2 Intellectual Capital

Intellectual Capital is a core strategic resource for hospitality businesses, which influences firms' capacities to capture opportunities. It is a key attribute in the value creation process, as well as promoting organizational growth and survival (Dahash & Al-Dirawi, 2018). Knowing this helps managers to understand "how" a company creates, delivers, and captures value (Baima et al., 2020). It can help companies respond to changing customer needs, respond quickly to market opportunities, and achieve better results (Rossi et al., 2016).

The development of intellectual capital is important to improve innovation performance and overcome market challenges (Liu, 2017). However, most previous research in hospitality has focused on case studies of the influence that intellectual capital exerts on performance, mainly through the evaluation of financial results, without exploring its interrelationships with other managerial and innovation factors (Bontis et al., 2015; Chowdhury et al., 2019; Khaliq & Mansor, 2016; Zeglat & Zigan, 2014). To understand intellectual capital, it is necessary to review the ways in which it is manifested in the human, structural and relational capital held by organizations.

Businesses leverage human capital to optimize the efficiency of their workforce, drawing upon its skills, experience, and education for a competitive edge (Liu, 2017). Structural capital, on the other hand, encompasses an organization's capacity to establish business processes and structures that facilitate overall performance (Khaliq & Mansor, 2016). Finally, relational capital encapsulates the spectrum of business relationships an organization maintains with diverse stakeholders, whether formalized or informal (Zeglat & Zigan, 2014).

Studies which have examined the relationship between intellectual capital and business management initially focused on the disclosure and naming of its informational role in market reports. More recently, research has moved towards exploring it and its components, and their relationship with innovation, value creation and economic-financial performance (Baima et al., 2020). In studies that have explored the role of intellectual capital within the hospitality industry, this has been investigated in the context of: antecedents to innovative behavior, knowledge sharing and HPWP; and as a consequence of organizational ambition, opportunity capture and knowledge absorption capacity; finally, its influence on organizational performance, competitive advantage and innovation has also been researched (Allameh, 2018; Astuti et al., 2019; Dahash & Al-Dirawi, 2018; Gürlek, 2021; Khaliq & Mansor, 2016; Liu, 2017; Zeglat & Zigan, 2014). Based on this review, the following hypotheses on the role of intellectual capital in the context of this research are proposed:

H5 - HPWPs influence Intellectual Capital.

H7a - Employee Innovative Behavior influences Intellectual Capital.

H7b - The Leader's Innovative Behavior influences Intellectual Capital.

2.3 Innovation Capability

Innovation in a hospitality organization is a complex process that includes the search for knowledge and information, idea generation, and the selection and application of new ideas to improve organizational performance. A company whose employees have innovative behavior can achieve an advantage over their competitors (Liu, 2017; Ottenbacher & Gnoth, 2005). The innovative capability of a business can be understood as the ability: to adapt or change related to new ideas generated from an organizational culture in which learning, participatory decision-making, and collaboration prevail (Hurley & Hult, 1998); to apply useful knowledge from various resources (Tang et al., 2015); to continuously achieve innovations and add value to the organization (Saunila, 2016); and to adopt or implement more technical and managerial innovations with greater embedded novelty relative to the competition (Pascual-Fernández et al., 2021).



Typically, hotel management is not concerned with radical innovation, when compared to many other industries that devote significant investment to developing new products and exploring technological innovation. Hotel companies do, however, pursue organizational innovation, which can incrementally improve management operations to better serve guests and to keep them satisfied (Gu et al., 2017). Despite this, there is often a gap between what a business wants to do and what it can achieve, which frequently results in a failure of innovation initiatives or difficulties in sustaining innovation performance. Thus, it becomes paramount for companies to develop organizational capabilities to manage and create innovation.

Organizational innovation is considered a strategy for gaining competitive advantage in business operations, and transformational leadership has been identified as one of the determinants affecting organizational innovation (Gu et al., 2017). Recent evidence from hospitality organizations reinforces this relationship, showing that transformational leadership is associated with organizational innovation while also indicating that employee-related mechanisms, such as organizational citizenship behavior and organizational commitment, can mediate this relationship (Abdulmawla et al., 2025). A large pool of organizational knowledge can provide new market information and inspire employee creativity, which is associated with employee innovation behavior, which will subsequently increase organizational innovation capacity (Liu, 2017).

When the leadership of a hospitality business is dedicated to innovation and takes responsibility for managing the resources for these activities and properly training and communicating this to employees, it can achieve the goal of innovation (Metaxas et al., 2019). Leadership is an effective tool to implement organizational innovation because it can provide adequate resources, grant employees the freedom to make necessary changes, and formally recognize subordinates' creative behavior (Hassi, 2019).

It is essential that companies have the organizational capacity and skills necessary to conceive and implement promising innovations. A systematic approach to this strengthens internal relationships, because organizations that have an adequate level of intellectual capital will be more innovative, transferring knowledge and new ideas and increasing the number of employees able to understand and apply these (Allameh, 2018). The development and implementation of new ideas require specific organizational preconditions, such as know-how, innovative staff and behavior, time and resource slack. Since innovations are part of the systems that make them, a precondition for the successful implementation of an innovation is organizational innovation capability (Kessler et al., 2015). Based on the above arguments, the following hypotheses about innovation capability are proposed:

H3 - Transformational Leadership influences Innovation Capability.

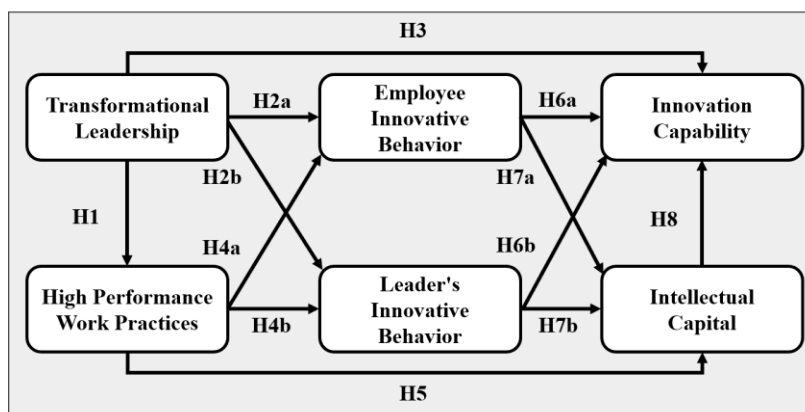
H6a - Employee Innovative Behavior influences Innovation Capability.

H6b - The Leader's Innovative Behavior influences Innovation Capability

H8 - Intellectual Capital influences Innovation Capability.

From the literature review, a model of organizational innovation in hotels is proposed in Figure 1, which is supported by 12 hypotheses. The model presents the structural relationship of these hypotheses, reflecting the proposition of the model of this study.

Figure 1- Structural relationship of the Hypotheses of the study model.



Source: Prepared by the Authors.

3. Methodology

The primary research for this study involved hotel managers because they possess the greatest amount of information and knowledge about the supply-side aspects of innovation and its relationship to leadership, within hospitality businesses. The data collection was carried out using an online questionnaire, through Amazon's Mechanical Turk (MTurk) crowdsourcing platform. This



platform, when previously utilized by researchers in hospitality and tourism, has demonstrated significant advantages for survey research, particularly in terms of participant confidentiality (Parvez et al., 2022), and has been shown to yield psychometrically valid results (Hu & Kim, 2018). The survey began with questions about the respondents' industry and job title to filter and select hotel managers, excluding those outside the target group. To enhance data reliability, attention-check questions were included, as recommended by Cobanoglu et al. (2021), along with geographic restrictions to ensure a balanced representation of participants from diverse backgrounds.

A minimum sample size of 400 respondents was targeted, following Barbetta's (2002) guideline, considering a 5% margin of error. Non-probability sampling by judgment was used, with individuals from the population selected due to previously defined characteristics (Cooper & Schindler, 2016). Given the non-probability nature of the sampling strategy, the sample should not be considered statistically representative of the broader population of hotel managers, and the generalization of the findings should therefore be approached with caution.

To verify the functionality of the collection instrument and the conceptual model proposed, a pilot study was conducted with 150 hotel managers in the United States of America, a population like the target universe. The final data collection, using an international sample of hotel managers, was conducted in September 2021 via MTurk. Geographic restrictions were applied to promote the participation of respondents from different geographical regions. The survey link was accessed by 623 people, with a completion rate of 76.24%. To recognize and eliminate possible outliers, Mahalanobis distance interpretation was used at a probability of 0.0001 in the χ^2 test. A final sample of 453 valid respondents was achieved (Field, 2009; Hair et al., 2009).

When a conceptual model is developed from several sources, it is necessary to conduct preliminary tests to verify the behavior of the estimates and the adequacy of the items (Brown, 2015; Hair et al., 2009; Muthén & Muthén, 2010). The construction of the research instrument is outlined in Table 1, using items from prior studies in this field, identified in the literature review for this study. The instrument comprised 73 items distributed across five constructs, as detailed in Table 1.

Table 1- Construction of the collection instrument.

DIMENSION	SUB DIMENSION	VARIABLE	REFERENCE
Transformational Leadership	Idealized Influence Inspirational motivation Individualized consideration Intellectual stimulation	12 items	(Portela Maquieira et al., 2020)
HPWP	Equitable reward system Empowerment Teamwork	13 items	(Karatepe & Olugbade, 2016; Tang & Tang, 2012)
Innovative behavior	Employee Behavior Manager Behavior	12 items	(Karatepe et al., 2020; Liu, 2017)
Intellectual capital	Human Capital Structural Capital Relational Capital	13 items	(Astuti et al., 2019; Gürlek, 2021)
Innovation capability	Ideation and organizational structures. Work climate and well-being Know-how development Regeneration External knowledge Individual activity	23 items	(Saunila, 2014)

Source: Prepared by the authors.

The collection instrument used the items as statement structures to obtain the managers' information about their observations at the level of agreement. The items were preceded by the question 'To what extent do you agree with the following statements about your Hotel [...]?' For this, a Likert scale was used, consisting of five measurement categories ranging from 'strongly disagree' to 'strongly agree'. The constructs were operationalized using reflective indicators, with the observed items representing manifestations of their respective underlying latent constructs (Hair et al., 2009).

To validate the adaptability results, a confirmatory factor perspective was used. Confirmatory Factor Analysis (CFA) is a statistical method that tests how well the measured variables represent the constructs and, analytically, a conceptually based model (Hair et al., 2009). The CFA included the assessment of construct reliability and convergent and discriminant validity. Discriminant validity was also assessed within the CFA by examining the relationships among the latent constructs, confirming that the retained constructs represented empirically distinct dimensions (Brown, 2015).

The examination of the relationships between the dimensions proposed by the hypotheses was performed via Structural Equation Modeling (SEM) procedures, with the aid of the Mplus software version 7. This consists of a combination of regression and factor



analyses, which form a sequence of robust statistical tests, allowing for the estimation of cause and effect relationships in complex models with latent variables (Brown, 2015; Hair et al., 2009; Muthén & Muthén, 2010).

4. Results

The pilot study was carried out during August 2021 using MTurk. CFA served to verify the validity of the dimensions, implemented using the Weighted Least Squares Mean and Variance Adjusted (WLSMV) estimation method, which is appropriate when dealing with ordinal data and offers a stable method in cases of non-normality of samples (Li, 2016).

The evaluation of the indices achieved good fits, following the criteria: χ^2 should not be significant; the χ^2/df ratio being preferably < 3 , but acceptable at < 5 ; the CFI and TLI values, both seeking values > 0.900 , but preferably > 0.950 ; as well as the RMSEA expected values < 0.080 or more indicated < 0.060 (Brown, 2015; Hair et al., 2009).

During CFA there was an occurrence of Heywood Cases. These produce results that are logically impossible because they imply an error of less than 0% in an item and a dependency explanation above 100% (Hair et al., 2009). This situation is common in factor analysis and SEM (Kolenikov & Bollen, 2012). Interpretations of the correlations between the sub-dimensions indicated that the transformational leadership construct should be unidimensional, as should the innovation capability construct. After adjustments, the CFA results indicated good fit indices. A total of 453 valid respondents were obtained through the final data collection (Field, 2009; Hair et al., 2009). Sample characteristics are detailed in Table 2.

Table 2 - Characteristics of the sample.

Characteristics	n	%	Characteristics	n	%
Gender			Location by continent		
Female	182	40,18%	North America	240	52,98%
Male	271	59,82%	Europe	63	13,91%
			Asia	97	21,41%
Hotel Rating			South America	53	11,70%
1 star	13	2,87%	Age range		
2 stars	27	5,96%	21 to 30 years	222	49,01%
3 stars	133	29,36%	31 to 40 years	152	33,55%
4 stars	128	28,26%	41 to 50 years	55	12,14%
5 stars	152	33,55%	Over 50 years old	24	5,30%

Source: Prepared by the authors.

The SEM estimation process involves two stages: the evaluation of the measurement model by CFA guidelines; and the validation of the structural model by estimation of the fits and validation of cause-and-effect relationships. The data being ordinal and with a non-normal distribution, the estimation method was WLSMV (DiStefano & Morgan, 2014; Li, 2016). The fit indices follow the guidelines: χ^2 not significant; $\chi^2/df < 5$; CFI and TLI > 0.950 ; RMSEA < 0.080 (Brown, 2015; Hair et al., 2009; Muthén & Muthén, 2010).

The analyses again indicated illogical estimation parameters among the factor correlations, leading to the occurrence of Heywood Cases. A training readjustment was necessary in the intellectual capital construct, which in the pilot study had behaved well with three-dimensional training. This indicates the treatment of the items as unidimensional constructs, and in this empirical scenario the distinction of the components is not identified, but rather the construct as a whole (Kolenikov & Bollen, 2012). Table 3 summarizes the results of the adjustments of the dimensions, verifying that the adjustment indices followed the theoretical guidelines for this study.

Table 3 - Summary of the CFA adjustments

Construct	Factor	χ^2	df	χ^2 / df	RMSEA	CFI	TLI	Factorial Load	CC
Transformational Leadership	Unidimensional	103,16	35	2,95	0,064	0,978	0,972	$> 0,641$	0,896
HPWP	Equitable reward system	209,99	62	3,39	0,071	0,965	0,955	$> 0,644$	0,784
	Empowerment							$> 0,617$	0,757
	Teamwork							$> 0,616$	0,806
Innovative Behavior	Employee Behavior	184,54	53	3,48	0,072	0,970	0,962	$> 0,681$	0,870
	Leader behavior							$> 0,630$	0,849
Intellectual Capital	Unidimensional	191,21	65	2,94	0,065	0,967	0,960	$> 0,588$	0,908
Innovation Capability	Unidimensional	510,44	230	2,22	0,052	0,964	0,961	$> 0,604$	0,950

Source: Prepared by the authors.



The constructs of the measurement model showed internal consistency and convergence in measuring the theoretical dimensions. The levels of composite reliability are above 0.700, and the loadings are significant, with estimation values above 0.500 (Raykov, 1997; Valentini & Damásio, 2016).

After verifying the measurement model, the cause-and-effect relationships that are implied by the hypotheses were analyzed, leading to the verification of the structural model proposed in the research. The overall adjustments ($\chi^2/df = 1.60$; RMSEA = 0.036; CFI = 0.956; and TLI = 0.954) of the model are within the parameters indicated in the literature, already presented in previous steps (Brown, 2015; Hair et al., 2009; Muthén & Muthén, 2010).

The SEM operation was performed with the structuring of 12 hypotheses that support the proposition of the model shown in Figure 1. Of these, 4 hypotheses did not obtain significant values (p-values greater than 0.05), thus being rejected as the results did not support their significance in this empirical situation (Bagozzi & Yi, 2012; Hair et al., 2009; Muthén & Muthén, 2010). Table 4 presents the analysis of each hypothesis from the model in turn, along with the conclusions on whether they were supported by the results of this analysis.

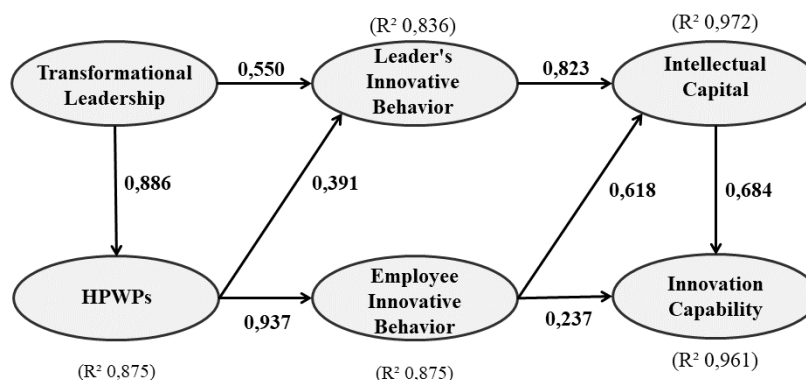
Table 4- Summary of the hypothesis analysis.

	SECONDARY HYPOTHESIS	Relationship load	S.E.	Load / S.E.	p-value	Conclusion
H01	TL → HPWPs	0,886	0,028	31,643	0,000	Supported
H02a	TL → EIB	-0,002	0,236	-0,008	0,995	Rejected
H02b	TL → LIB	0,550	0,112	4,911	0,000	Supported
H03	TL → InC	0,073	0,107	0,682	0,495	Rejected
H04a	HPWPs → EIB	0,937	0,231	4,056	0,000	Supported
H04b	HPWPs → LIB	0,391	0,108	3,620	0,000	Supported
H05	HPWPs → IC	-0,424	0,241	-1,759	0,078	Rejected
H06a	EIB → InC	0,237	0,106	2,236	0,026	Supported
H06b	LIB → InC	0,013	0,194	0,067	0,946	Rejected
H07a	EIB → IC	0,618	0,187	3,305	0,001	Supported
H07b	LIB → IC	0,823	0,111	7,414	0,000	Supported
H08	IC → InC	0,684	0,226	3,027	0,002	Supported

Source: Prepared by the authors.

To assess the overall model that was proposed, it is necessary to evaluate its internal structure. The model's structure can only be considered partially valid, since of the twelve hypotheses only eight were supported. However, the idealized dimensions in the model were maintained with a new structure. It can then be inferred that the model can be validated by means of a repair of the structural proposal of the relationships between its constructs. The result of this structural equation modeling led to the adaptation of the model for new relationships, presented in Figure 2.

Figure 2- Hotel Management Model of Organizational Innovation.



Note: Estimation correlations between observable variables and constructs have been omitted from the figure for pictorial simplification purposes and are not of priority theoretical interest.

Source: Prepared by the authors.



5. Discussion

The structural model provides important insights into the relationships between transformational leadership, HPWPs, innovative behavior, intellectual capital, and innovation capability. For H1, the transformational leadership style explains 87.5% of the variance in the HPWPs adopted in the hotel; the estimation load is strong, indicating a strong positive and significant influence. A transformational leader tends to pay close attention to and strengthen efforts towards employee needs. Being a leader in this style means working on communication and motivation, being an individual who inspires your employees (Ashton, 2018; Erkutlu, 2008).

The relationship between the adopted HPWPs and innovative behavior was tested by hypotheses H4a and H4b, both of which had positive and significant values. 93.7% of the variance in employee innovative behavior was explained by the adopted HPWPs, having an estimation load with great strength.

Working in a hotel where employees can take advantage of several HPWPs makes employees highly engaged in their work, resulting in improved creative performance. This is understood as the number of new ideas generated and new behaviors exhibited in the performance of their work activities (Karatepe & Olugbade, 2016).

Among the practices measured in HPWPs, teamwork is consistently identified as an essential organizational factor in developing and supporting innovation. This finding is established by the fact that trust, respect, and cooperation are improved within teams, all of which are determinants of employee innovative behavior (Wang et al., 2024; Anderson et al., 2004). In the same way, an individual's innovative behavior has motivation and satisfaction as strong predictors, which are known results of good human resources practices (Bani-Melhem et al., 2018).

Leaders' innovative behavior was explained by the relationship with their own leadership style and the high performance practices adopted in the hotel. H4b has a weak and positively significant relationship, however, H2b has been shown to be of medium strength and positively significant. This result is also consistent with a process-based interpretation of transformational leadership. Bakker et al. (2023) demonstrated that transformational leadership stimulates proactive follower behaviors, including personal initiative and strengths use, which subsequently contribute to work outcomes. Accordingly, the nonsignificant direct relationship observed in H2a may indicate that transformational leadership requires intermediate behavioral or organizational mechanisms through which its influence is translated into employee outcomes.

H2a cannot be supported, as an estimate of negative value of -0.002 is shown, considered practically null and not significant. However, it is a result that suggests to some extent that transformational leadership does not have a positive effect on the individual in terms of creativity, but rather in terms of team cohesion and work, which can be recognized in HPWPs (Jausi & Dionne, 2003).

The relationship between transformational leadership and employee innovative behavior needs to be supported by an environment that provides incentives and respect, aspects that also come from human resources practices (Schuh et al., 2018). This characteristic can be taken into account to interpret the large indirect effect (0.830) that leadership exerts on innovative employee behavior by mediating the adoption of HPWPs.

The importance of practices involving human resources, aligned with a leadership that motivates and encourages innovative thinking, is evidenced when it is stated that the management of a workplace will have a positive return in the transformation of employees into creative individuals predisposed to accept innovations, when they are provided with a favorable environment for generating ideas (Cangialosi et al., 2020; Eldor, 2017).

The direct relationship between transformational leadership and innovation capability proposed in H3 was not supported. However, the absence of a direct relationship does not necessarily imply that transformational leadership is irrelevant to innovation capability; rather, its contribution may depend on intermediate organizational and behavioral mechanisms. Recent evidence from the hospitality sector supports this interpretation, as Abdulmawla et al. (2025) found that transformational leadership contributed to organizational innovation through employee-related mechanisms, particularly organizational citizenship behavior and organizational commitment. Similarly, Abbas (2024) suggests that transformational leadership may operate as an enabling condition that strengthens organizational capabilities through which innovation is developed, rather than acting solely as a direct determinant of innovation outcomes. Although the mechanisms examined in these studies differ from the HPWPs and intellectual capital considered here, their findings reinforce the importance of indirect pathways and are consistent with the present results, in which transformational leadership strongly influenced HPWPs while its direct effect on innovation capability was not significant.

The innovative behavior of hotels' employees and leaders demonstrated strong and positively significant relationships with the development of intellectual capital in the organizations. Hypotheses H7a and H7b demonstrated an explanatory power (R^2) of 97.2% of the variation in the intellectual capital construct. In relation to capital, the relationship of HPWPs practices and their influence on intellectual capital was also evaluated; however, H5 was not confirmed. Although intellectual capital comprises



human, structural, and relational dimensions, the present findings do not support attributing these relationships to one specific component of intellectual capital. In the final model, intellectual capital was examined as an integrated construct; therefore, the results indicate effects on the broader intellectual capital base rather than specifically on human, structural, or relational capital. Future research could examine whether these relationships differ across the three components, particularly in technology-intensive hotel environments.

An important construct in the proposed model of organizational innovation for hotels is the dimension of capacity for innovation, with 96.1% of the variance in this construct explained through its relationship with intellectual capital and innovative behavior of the employee, showing that these relationships were positively significant.

H8 was confirmed with a median strength estimation load, while H6a had a weak positive correlation estimate. However, its indirect relationship through mediation to intellectual capital should also be taken into account. Adopting this interpretation, the direct and indirect employee innovative behavior effect size has a median value of 0.659. The result corroborates the similar relationship between the innovative behavior of retail workers and innovative performance, where a positive relationship was supported (Pugas et al., 2017).

Hypothesis H6b cannot be supported as it has a non-significant p-value. The possible influence of leadership behavior on capacity is through the indirect effect (0.563) mediated by intellectual capital. At this stage, it should be noted that intellectual capital has a relevant mediating role between the behavior of individuals and the organization's capacity for innovation. It is important to recall that within intellectual capital there is a human component. Human capital encompasses the knowledge stock of an organization that exists in its employees, and employees generate this capital through their intellectual competence, attitudes and agility (Baima et al., 2020).

5.1 Theoretical Implications

This research makes a theoretical contribution to the literature on organizational behavior, leadership, intellectual capital, and innovation in the context of hospitality. First, the study advances this literature by integrating transformational leadership, high-performance work practices (HPWPs), individual innovative behaviors, intellectual capital, and innovation capability within a single conceptual framework. Rather than examining these organizational factors separately, the proposed Hotel Management Model of Organizational Innovation provides an integrated explanation of how leadership and human resource practices contribute to the development of innovation capability in hotels.

Second, the findings provide a more nuanced understanding of the role of transformational leadership in organizational innovation. Although transformational leadership did not exert a significant direct influence on innovation capability or employee innovative behavior, it strongly influenced HPWPs, which in turn had a positive and significant influence on employee innovative behavior. This finding reinforces the importance of considering the organizational mechanisms through which leadership contributes to innovation, rather than assuming that its influence occurs primarily through direct relationships. In this sense, the study emphasizes the intricate relationship between transformational leadership and the management of HPWPs and highlights the role of human resource practices in translating leadership into innovative employee behaviors.

Third, the study advances the understanding of intellectual capital as a mechanism connecting individual innovative behavior with organizational innovation capability. The innovative behaviors of both employees and leaders were positively associated with intellectual capital, while intellectual capital, in turn, positively influenced innovation capability. The study therefore advances a perspective on the mediating role of intellectual capital, recognizing its fundamental influence in transforming individual behaviors into innovative organizational results. This underscores the critical role of human elements within the broader intellectual capital framework, contributing to a nuanced understanding of how employees' knowledge, attitudes, and competencies shape an organization's innovative capacity.

5.2 Practical Implications

In practical terms, the findings provide guidance for hotel managers seeking to strengthen their organizations' innovation capability. The results suggest that transformational leadership should be accompanied by organizational practices that provide employees with the conditions and resources needed to translate leadership support into innovative behavior. In particular, the strong relationship between transformational leadership and HPWPs, and between HPWPs and employee innovative behavior, highlights the managerial relevance of practices based on teamwork, employee empowerment, and equitable reward systems. Therefore, hotel managers should not rely solely on direct leadership actions to stimulate innovation but should institutionalize these principles through human resource practices that create a supportive environment for generating and implementing new ideas.

Hospitality businesses should also invest in sustained employee training as part of their continuous professional development. This should not solely relate to training on the skills and competencies necessary for specific job roles, but should also include external



training opportunities that bring new knowledge into the business, helping to increase and diversify the human stock of intellectual capital available to be deployed through HPWPs. This is particularly relevant given the positive relationships identified between employees' and leaders' innovative behavior and intellectual capital, as well as between intellectual capital and innovation capability. Accordingly, managers should consider the development of intellectual capital as an organizational resource through which individual knowledge and innovative behaviors can contribute to the hotel's broader capacity to develop and implement innovation.

Finally, hospitality businesses seeking to increase their innovative capacity and strengthen their competitive advantage should support their leadership teams in developing a transformational leadership style. This will help to create an environment conducive to the adoption of HPWPs, which this study has shown can increase employees' and managers' innovative behavior, thereby supporting the development of intellectual capital and, ultimately, organizational innovation capability. In managerial terms, this means that leadership development, human resource practices, employee development, and knowledge management should be treated as complementary rather than isolated initiatives when designing strategies to foster innovation in hotels.

6. Conclusions

This study examined the relationships between transformational leadership, innovation, intellectual capital, and high-performing teams in the hospitality industry. The literature review emphasized leadership styles, particularly transformational leadership, and explored prior empirical studies on adopting HPWP in the sector. Organizational innovation was the central focus, given its critical role in achieving competitive advantage in hospitality. The study highlighted the importance of developing a business's capacity for innovation, as neglecting this can hinder both the generation of innovative ideas and their sustained implementation.

This study proposed a new Hotel Management Model of Organizational Innovation (Figure 2) to assist hospitality businesses in implementing innovative solutions for competitive advantage. The model illustrates how transformational leadership stimulates employees' innovative behavior through HR practices emphasizing teamwork, employee empowerment, and fair reward systems. These findings highlight the critical role of leadership attitudes in hotel operations and their indirect contribution to expanding the organization's knowledge base, thereby increasing intellectual capital. The research demonstrates that supporting innovation in hospitality requires enhancing intellectual capital, which, combined with employee behavior, strongly influences a hotel's ability to develop and implement innovative ideas.

As with all research, this study has limitations that provide opportunities for future research. First, the cross-sectional design limits temporal and causal interpretations of the relationships between constructs. Future studies could adopt longitudinal designs to examine how transformational leadership, HPWPs, innovative behavior, intellectual capital, and innovation capability interact over time.

Second, the study employed non-probability judgment sampling through the MTurk platform. Although screening questions, attention checks, and geographic restrictions were used to improve data reliability, these methodological choices may limit the generalizability of the findings. Moreover, more than half of the international sample was located in North America. Future research could replicate the model using alternative sampling approaches and more geographically balanced samples, examining its consistency across different countries and hospitality contexts.

Third, data were obtained exclusively from hotel managers due to their knowledge of supply-side innovation and leadership. However, relying on a single respondent group may restrict the understanding of organizational processes involving different actors. Future studies could adopt multi-source designs, triangulating data from managers, employees, and guests to provide complementary perspectives.

Finally, future research could further examine the indirect relationships identified in the model, particularly the roles of HPWPs in connecting transformational leadership with employee innovative behavior and intellectual capital in connecting innovative behaviors with organizational innovation capability. Examining the model across different hotel categories and hospitality settings could also help assess the robustness and applicability of the proposed Hotel Management Model of Organizational Innovation.

Declaration on the Use of Artificial Intelligence

ChatGPT-5.6 Sol was used exclusively for copy-editing the authors' original text to improve language clarity, grammar, and readability. No AI tool was used to generate research content, data, results, or interpretations. The authors reviewed and validated all AI-assisted edits and retain full responsibility for the final content.

CRedit authorship contribution statement

Helen Rita Menezes Coutinho: Conceptualization, Methodology, Formal analysis, Investigation, Writing – original draft, Visualization.



Sara Joana Gadotti dos Anjos: Conceptualization, Methodology, Investigation, Supervision, Writing – review & editing, Validation.
 Vitor Roslindo Kuhn: Formal analysis, Data curation, Visualization.
 Francisco Antônio dos Anjos: Methodology, Supervision, Validation.
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