Leadership, Innovation and **Performance** in Portuguese **Hotel Sector**

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Abstract | Leadership, innovation, and performance are essential factors to achieve the desired sustainable profitability of companies. The relationship between these variables is one of the keys to the organizational success, although their study has proved to be complex. The purpose of this article is to analyse the impact of leadership on the relationship between innovation and performance in the Portuguese hotel sector. To answer to this challenge, a survey was carried out to top and middle managers of four-star and five-star hotel units. The existence of a positive correlation between innovation and performance was found; however, leadership has not been shown to have a moderating effect on the relationship. The work highlights several important contributions to the hotel industry and identifies aspects that, when well implemented and developed, can lead to better performance in organizations.

Keywords | Innovation in hospitality, leadership in hospitality, performance in hospitality, transactional leadership, transformational leadership

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1. Introduction

Tourism is the largest industry in the world and is one of the most dynamic and vibrant sectors of the world economy (Costa et al., 2014; Devaraja & Deepak, 2014). The World Travel & Tourism Council's (WTTC, 2019) research reveals that the Tourism sector accounted for 10.4% of global GDP and 319 million jobs, or 10% of total employment in 2018. In fact, the tourism industry is an economic driver worldwide and, in Portugal, it was responsible for 20% of the country's exports and 58% of exports in the services area (Costa et al., 2018).

Tourism companies operate in a competitive world, where innovation is an essential condition for the survival of companies (Sundbo et al., 2007). A more dynamic and rapidly changing business environment has forced the hospitality industry to resort to effective leadership processes as a way of motivating employees to obtain the desired results (Huertas-Valdivia et al., 2019).

Leadership as a factor of the work environment is also important in the hotel industry context because of its dynamic and labour-intensive nature (Wong & Chan 2010; Clark et al., 2008), and plays a key role in promoting firm innovativeness (Khan et al., 2020). The definition of leadership has changed considerably in the last decades, the initially concept linked to the figure of "great man" fell out of use, the most recent approaches focus on the transformational dimension of the leader (Brownell, 2010). This dimension is reflected in a collaborative and relationship attitude, establishing open communication, forming and supporting the team effort and providing the necessary resources to fulfil a shared vision (Brownell, 2010; Humphreys & Einstein 2003; Stone et., 2004). Leadership is a critical factor in organizations, as it can affect goals, visions, strategy, social environment and employee motivation (Semuel, et., 2017; Yukl, 2013). Leadership is the ability to influence others to voluntarily make decisions that promote

the short and long-term growth of companies (Nejad & Rowe, 2009). To make the right decisions, managers need to know how to balance their technical and social skills in the right combination, promoting relationships and interactions that lead to communication processes that must be effective to motivate and lead others (Page & Connell, 2009). To survive in the present business changing environment, companies realized that the ability to change and adapt was inevitable. Leading change management has become the main concern of all executives. In this context, transformational and charismatic leadership theories arise (Gill et al., 2005).

Uncertainty and constant market changes lead companies to develop innovative activities, hoping that they will contribute to improving business performance (Chen, 2017). The relative role that innovation plays within organizations has attracted researchers to investigate its main antecedents, including the role of organizational leaders, in various sectors, such as hospitality (Robinson & Beesley, 2010). The literature related to the hotel industry indicates that innovation is a key success factor sustaining a hotel's competitive advantage (Chen, 2011; Tajeddini, 2011, Tsai et al., 2015). Many studies confirm that innovation has a positive impact on company performance. In an empirical study of companies listed on the Fortune 1000, it was concluded that the innovation was positively related to organizational growth and profitability (Cho & Pucik, 2005). Hua and Wemmerlöv (2006) investigated the relationship between the proportion of new products and performance in the personal computer industry, recording a positive impact on correlation between the two. Prajogo (2006) studied the Australian service industries and found that product innovation was an important determinant of growth and profitability in service business. Innovations are the basis for the success of organizations in the hospitality industry as they provide organizational efficiency, improvement of product quality, reduction of costs, higher customer

satisfaction, increased sales and profits, increased market share and differentiation in relation to the competitors (Ottenbacher et al., 2006; Chang et al., 2011). To create innovation, companies need to create an internal environment that facilitate a culture of innovation characterized by flexibility and speed to change for the sake of responding to new opportunities (Urbancova, 2013). Ispas (2012) noted positive interactions between managers and employees in the industry could improve employees' performance and the quality of customer service. However, this relationship between innovation and performance is not deterministic. it is affected by different factors, such as, internal capital, external market and other environmental issues (Huang & Rice, 2009).

This article analyses the relationship between innovation and performance and looks at whether different leadership styles enhance this relationship. The application of a moderation model results from the application of a survey to professionals in the four and five-star hotel sector.

The results reveal the existence of a significant relationship between innovation and performance, in line with what is described in the literature. It was also noted that improvements in innovation have a positive effect on performance.

2. Theoretical framework

Leadership

Leadership is one of the most discussed topics today, but also one of the most difficult to understand. There is a consensus among authors in defining leadership as a process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives (Northouse, 2010; Yukl, 2013). Leadership is the ability to influence the competence and motivation of individuals and groups to

achieve specific goals (Hongdao et al., 2019; 2004; Nejad & Rowe, 2009). Leadership has been recognized as a social process that occurs in a group context where the leader influences the behavior of his followers so that organizational objectives are achieved (Hag & Chandio, 2017; Oke et al., 2009). The leadership style is an important management tool, its proper use can encourage close relationships with employees, improve the organizational climate and increase performance (Kozak & Uca, 2008).

Pioneering leadership studies originate from Ohio and Michigan Universities identified two main types of behavior among the surveyed leaders. Leadership oriented to people, as the leader is attentive to subordinates, respects their ideas and feelings and establishes mutual trust. On the other hand, task-oriented leadership, the degree to which the leader is task-oriented and directs subordinate work activities to achieve the goal (Daft, 2008).

Managers use different leadership styles in decision making with the aim of improving the organization's performance (Bass, 2008). Despite the differences, the various definitions of leadership have four common elements (Nahavandi, 2015):

- (i) Leadership is a social and group phenomenon; there can be no leaders without followers. Leadership is about others.
- (ii) Leadership involves interpersonal influence or persuasion and leaders move their followers through goals and actions;
- (iii) Leadership is goal-oriented and actionoriented. Leaders take an active role in groups and organizations, which in turn use influence to direct their followers and achieve goals.
- (iv) The presence of leaders in a group assumes a hierarchy. There are cases where this hierarchy is formal and well defined, keeping the leader at the top, in other cases it is informal and flexible.

The leadership style was initially conceptualized as transactional versus transformational in the 1970s and 1980s (Bennett, 2009). Burns (1978) was one of the first authors to work on the characteristics of both styles and Bass & Avolio (1990) provided the metrics for the respective assessment - the Multifactor Leadership Questionnaire (MLQ).

Transformational leaders link followers' work functions to a compelling vision of the organization's future, making followers see work as something important and meaningful, increasing their intrinsic motivating potential (Zhu, et al., 2009). Transformational leaders are recognized agents of change, visionary, trust people, valueoriented, and lifelong learning, capable of dealing with complexity, ambiguity and uncertainty (Peterson et al., 2009; Judge & Piccolo, 2004). These leaders influence and encourage their followers to be creative, innovative and motivate them to contribute more than was expected of them (Boerner et al., 2007; Hall et al., 2008). Transformational leadership focuses on the processes of transformation and change (Bass & Riggio, 2006). Rafferty and Griffin (2004) identify five dimensions for transformational leadership:

- (i) Vision refers to an idealized image of the future, based on the organization's values.
- (ii) Inspirational communication refers to positive and courageous messages about the organization, as well as statements that lead to motivation and confidence.
- (iii) Supportive leadership expresses concern for followers, always considering their individual needs.
- (iv) Intellectual stimulation stimulates the interest and awareness of employees about problems, as well as increasing their ability to see these same problems in a new way.
- (v) Personal recognition always rewards for recognition and effort in achieving goals.

Several authors address the topic of transformational leadership in the hospitality industry (Gill et al., 2006; Chiang & Jang, 2008; Erkutlu, 2008; Hinkin & Schriesheim, 2008; Scott-Halsell et al., 2008; Patiar & Mia, 2009; Khalili, 2016; Liang et al., 2017).

On the opposite side, transactional leaders have a traditional view of the organization and use power to ensure the execution of tasks. Transactional leadership presupposes two dimensions (Lai, 2011):

- (i) Contingent reward is a motivation-based system that is used to reward those employees that meet their goals. It can provide a positive reinforcement for a job well done.
- (ii) Management-by-exception This can be active or passive. Active leaders are always watching to evaluate performances of employees. Passive management only assess after the task has been done and will only let you know about problems after they occurred.

Leadership in hospitality

In the face of a more dynamic business environment and rapidly changing market needs, effective leadership has been widely recognized as a key element in hospitality for achieving positive employee outcomes (Huertas-Valdivia et al., 2019).

Research in hospitality has shown that the application of transactional leadership can result, but with less job satisfaction, less commitment to organization, low quality of service and low performance (Boerner et al., 2007). Transactional leadership is based on the concept of exchange between the leader and the follower - the leader provides followers with the necessary resources and rewards in exchange for motivation, productivity and effective task execution (Bass, 2008; Wang et al., 2011)

The hotel industry is highly customer-oriented and faces times of intense competition (McManus, 2013). The complex and changing environment of the hospitality industry presents a tremendous set of incentives, pressures and demands that have proven to be stressful, especially for frontline personnel (Kara et al., 2013). A key element of success for a hospitality company is the employee's motivation to reach their maximum potential, be engaged, embrace, change and make good technical decisions (Bennett, 2009). The hospitality industry has a unique culture and specificities when compared to the other different industries. It is a sector where the interaction between customers and employees is constant and continuous and plays a crucial role in service delivery (Terglav et al., 2016). Employee attitudes and behaviors have a major impact on the success and profitability of hospitality organizations (Úbeda-García et al., 2014). As noted earlier, transformational leadership distinguishes itself from the transactional one by its approaches in focus and behavior.

Effectiveness of transformational leaders is often enhanced by their charisma and the strong relationships they establish (Humphreys & Einstein. 2003). The hotel sector has registered a growing interest in transformational leadership as a key factor for the effectiveness of its activity (Brownell, 2010). Effectively, the most relevant leadership style in the hospitality industry in recent decades has been transformational (Bass, 2000; Bennis & Thomas, 2002; Avolio & Gardner, 2005). As early as the 1990s, Tracey and Hinkin (1996) had studied the results of transformational leadership in a hotel management company by exploring the measurement qualities and practical utility of two leadership assessment tools, including transforming the questionnaire's leadership scales of Multifactor Leadership (Bass & Avolio, 1990). Gill et al. (2006) questioned hotel and restaurant employees and found that with managers who exhibit behaviors of transformational leaders, employees had less work stress. Other survey that examined hotel

staff revealed that the values shared and inspired by leaders were among the most important factors for their motivation and satisfaction (Clark et al 2009).

Innovation

Innovation is a change in the status quo, involving discovering new things and new ways to sell them (Oke et al., 2009). Innovation is also seen as an essential component for competitiveness, it is incorporated into organizational structures, processes, products and services and is essential for the survival of organizations (Gunday et al., 2011). Innovation has become a critical competency for leaders operating in a world surrounded by challenges that require new thinking and solutions. Innovation is increasingly being acknowledged as a strategic imperative for sustainability and differentiation (Skarzynski & Gibson, 2008; Morris et al., 2011; Lowe & Marriott, 2007; Snyder & Duarte, 2003).

Innovation has been shown to be crucial to the success of an organization and individual creativity and innovation capacity must be key to innovation at the organizational level (DiLiello & Houghton, 2006). It is important to emphasize that the organizational climate can have a positive effect on creativity and innovation in organizations (Nybakk & Jenssen, 2012). Management needs to ensure that the organizational climate encourages, nurtures, and enhances individual performance creativity (DiLiello & Houghton, 2006; Hunter et al., 2007).

Creativity has been described as a complex outcome of person and situation interaction in an organisation (Amabile et al. 2004).

The recent literature considers innovation as a process with dynamic, social, complex and other characteristics, in which combinations or connections between variables are created so that new ideas emerge and manifest themselves as new technologies, applications, markets and organizational practices aimed at creation of value (Ungerer, 2011). The key to innovation comes from the need for firms to achieve better business performance and an increase in competitive advantage (Gunday et al., 2011). Innovation has a considerable impact on corporate performance generating a better market position that transforms into competitive advantage and superior performance (Walker, 2008). Many studies focus on the relationship between innovation and performance, the results of these studies indicate that the greater the degree of innovation, the greater the corporate performance (Garg et al., 2003; Wu et al., 2003). Creativity and innovation are considered the most relevant capabilities for all organizations that wish to seek competitive advantage (Gisbert-López et al., 2014). Previous research has focused on the antecedents of creativity and innovation, namely on personal (i.e., leadership) and contextual factors (favorable climate to innovation) (Černe et al., 2013; Wang et al., 2014). In a context of change, organizations need to be more innovative, namely at individual, group and organizational level, in order to improve its global degree of competences (Mumford et al., 2002). Innovative behavior is that which intentionally generates and promotes the realization of new ideas in a function, work group or organization and represents the key to competitiveness (Janssen & Van Yperen, 2004). The direct or indirect relationship between transformational leadership and innovative employee behavior has been previously identified in the academic literature (Kahai et al., 2003; Shin and Zhou, 2007). Research findings suggest that the success behaviors of innovation leaders are indeed different from the leadership behaviors that are deemed to be sufficient in conventional leadership development initiatives (Elkins & Keller, 2003; Govindarajan & Trimble, 2005; Hamel, & Labarre, 2011).

Literature indicated that innovation contributes to hotels performance in various ways. Some research suggests differentiation, customisation and personalisation of service offerings are effective to satisfy and maintain customers (Enz et al. 2010), and satisfied customers became loyal customers (Roy 2011). Today's challenging and dynamic hotel industry requires organisations to consider innovation and differentiation in their daily practices (Nagy 2014). Leaders need to be creative not just to survive, but to compete in today's fast-changing world; in this way, leadership plays an active role in influencing, adapting, moving first and learning, to lead and innovate (Buekens, 2013; Vargas, 2015). Fraj et al. (2015) regarded innovativeness in the hotel industry as the ability to respond faster and more flexibly to environmental changes.

Innovation leadership seems to be a new trend that deals with new complexities in the realization of value and the role of innovation in dealing with them. Innovative leaders are those who consistently create and drive the organization to make changes. Innovative leaders are recognized with a set of distinctive characteristics, namely (Metcalf & Morelli, 2015):

- (i) Clarify and align vision with strategic initiatives
- (ii) Create effective teams and help colleagues.
- (iii) Cultivating alliances and partnerships.
- (iv) Anticipate and respond to challenges and opportunities.
- (v) Develop robust and resilient solutions.
- (ii) Develop and test hypotheses, evaluate, learn and continually improve.

A study by Carmeli and Waldman (2010), examined the importance of leadership in innovation in the strategic alignment of the organization with its environment and in the improvement of various economic, relationship and product performance results. The results suggest that leadership in innovation has significantly improved the company's performance.

Performance

In today's world, where change becomes the main determinant, the survival of organizations and their ability to developing high performance depends on your ability to understand environmental changes and create innovations that respond to those changes (Kalmuk & Acar, 2015). Performance is one of the most debated concepts and for which there has never been an agreement between the researchers (Jenatabadi, 2015). In the hospitality sector, performance measurement is increasingly important due to the growing importance of valuing human resources and competitiveness, which implies the constant search for ways to improve the level of quality, reputation and increase profits (Maia & Costa, 2021). Recently, the definition of organizational performance has focused on an organization's ability to efficiently use the available resources to achieve the objectives set by the company, considering the relevance of all its users (Peterson, 2003). This definition highlights the three main elements, "efficiency", "effectiveness"and "relevance". The organization must be able to align performance with organizational objectives (effectiveness), organizational resources (efficiency), and, with the stakeholders' expectations (relevance). For Osaze and Anao (2000) organizational performance means the degree of fulfilment that the organization's goals are being achieved. The control of this performance can be categorized in two dimensions (Tseng, 2010): Internal performance - related to product quality, costs and profit levels and benchmarked performance - Comparing the company's performance, product quality, costs, operations and customer satisfaction in reference to the sector. Maltz et al. (2003) proposed five performance indexes, namely, financial performance, market/customer,

process, people development, and future. Robinson et al., (2005) suggest that cultural approaches are important for improving performance and sustaining innovation in terms of technologies, processes and products, namely, through knowledge management and organizational learning.

Leadership, Innovation and Performance's interrelationship

Research has shown that leadership is a significant factor in hotel innovativeness (Hongdao et al., 2019; Martinez-Ros & Orfila-Sintes, 2009). Leaders need to be creative not only for survival, but also to compete quickly in an ever-changing world; therefore, leadership plays an active role, influencing, adapting, moving, to lead and innovate (Buekens, 2013; Vargas, 2015). According to Jung et al. (2003), leaders can influence the followers' innovation process in both direct and indirect ways through motivation and higher-level needs. Organizational leaders are often faced with a workforce that is resistant and reluctant to change. It is reported that changing employee mindsets and attitudes towards change is a greater challenge for those managing change in organizations compared to other factors such as cost overruns and project complexity (Jørgensen et al., 2009). Several researchers have proven that leadership and organizational innovation are associated (Nijstad et al., 2014; Pieterse et al., 2010; Vaccaro et al., 2012). Also, that some empirical investigations found a negative relationship or no relationship between leadership and organizational innovations (Osborn & Marion, 2009). It is extremely important to have the right type of leadership to drive innovation efficiently and effectively. Unique leadership resources are the hallmark of companies capable of successfully managing different types of innovative activities (Oke et al., 2009). Innovation has become crucial in a highly challenging hotel industry (Sandvik et al., 2014), marked by ever-mounting

demands of customers (Enz et al., 2010). Innovations are the basis for the success of organizations in the hospitality industry as they provide organizational efficiency, improvement of product quality, reduction of costs, higher customer satisfaction, increased sales and profits, increased market share and differentiation in relation to the competitors (Cham, Gong & Shum, 2011). Failing to innovate can increase the threat to sustainability; therefore, organizations and their leadership consider it extremely important to promote a climate in which innovation can be created among employees (Shanker et al., 2017). Macey and Schneider (2008) argued that high levels of employee involvement in innovation contribute to better organizational performance. In their study, Harter et al. (2002) concluded that building an environment that enhances and supports employee innovation can significantly increase the possibility of business success. Employees, when applying their thoughts and actions, play an important role in the continuous innovation process, which is crucial for improving the achievement of better organizational profitability, growth and market value (De Jong & Den Hartog, 2010). Intellectual capital is a critical element of value creation in organizational performance capable of contributing to sustainable and superior financial performance (Silva, Costa & Loureiro, 2021). Consistently, several exploratory studies suggest that an innovation environment promotes innovative work behaviors and organizational performance (e.g., Crespell & Hansen, 2009; King, et al., 2007; Nybakk & Jenssen, 2012). Other authors have pointed out how innovative behavior at work can help organizations gain competitive advantage and improve organizational performance (e.g., Janssen & Van Yperen, 2004; Yuan & Woodman, 2010; Shih and Susanto, 2011). Morales et al, (2008) argue that innovation is essential to improve organizational performance and show that organizations that focus on innovation are more successful in ensuring greater market share which can lead to high income and profitability.

A large body of researchers has identified innovation as a critical factor to effectively respond to market challenges and remain competitive (Fraj et al., 2015; Kattara & El-Said 2013). Innovation contributes to the financial performance of the hotel industry (Chang et al., 2011), to sales growth and market value (Nicolau & Santa-Maria 2013) to increase customer loyalty and satisfaction (Enz et al., 2010) and sustain a hotel's competitive advantage (Fraj et al., 2015). Liao and Rice (2010) developed a mediated model by which they examined the impact of innovation on firm performance mediated through a firm's market engagement and transformation strategies. Neely et al. provided a reference model to research the relationship between business performance, innovation and the internal and external factors which can facilitate innovation within a company. Zott (2003) pointed out that the firm's market position plays a mediating effect between innovation and firm performance.

The theory of resources and capabilities also states that organizations need the capabilities, resources and technologies to implement an innovation strategy that will be a challenge for competitors to emulate, and that allows organizations to have sustainable competitive advantages and achieve greater organizational performance (Bommer & Jalajas, 2004; Calantone et al., 2002). Competitiveness in the hospitality sector is particularly dependent on innovation to achieve lower costs and higher quality results (Ottenbacher & Gnoth, 2005). The competitiveness and performance of hotels likely depend on managers' capability to stimulate innovation within their firms (Moghimi, 2016). Innovation in the hospitality sector is essentially of an intangible nature. Failing to innovate can put organizations at risk and diminish their sustainability and ability to gain a competitive advantage. The challenge of being competitive can be overcome if organizations recognize that their ability to innovate is intrinsically linked to the way their leaders, people, climate, culture and structures support innovation and creativity (France et al., 2007). The internal environment favorable to innovation is crucial for organizations that use innovation to create a competitive advantage and improve performance (Kissi et al., 2012).

Therefore, they are difficult to monitor and evaluate in terms of frequency and time of execution (efficiency) and also their contribution to customer satisfaction and profitability (effectiveness) (Ottenbacher & Gnoth, 2005). The incorporation of technologies in hotels has promoted productive efficiency and a greater capacity for differentiation, factors that improve the service provided and translate into competitive advantage (Orfila-Sintes et al., 2005). Although, interviews conducted with hospitality managers indicate that the most critical factors in the development of new services in the hospitality sector are the employee's motivation (Ottenbacher & Show, 2002).

In the tourism and hospitality sector, competitiveness depends on the level of innovation in terms of high-quality and low-cost production of its services, which meet or exceed the customer's need with a certain level of novelty and sophistication (Hjalager, 2002). Current research trends reveal that transformational leadership plays a vital role in a company's innovation capacity (Amankwaa et al., 2019). Vaccaro et al. (2012) found that transformational leadership is the antecedent of the innovation company.

The intellectual stimulation component of transformational leadership explicitly focuses on employee creativity and innovation. Transformational leaders motivate followers to experiment, take risks, and think outside the box continuously to perform tasks and innovations. Ford (2002) suggests that creativity and innovation depend on leadership and argued that leaders who are concerned with the effectiveness of the current system and promote actions to instigate change, creativity and dynamic capabilities. Transformational leadership attributes, such as coaching, training, group cohesion, knowledge sharing, psychological training, supportive behavior, and emphasis on extra-role performance, all contribute to the company's innovation.

The literature refers to a relationship between leadership and innovation and it is also agreed that the transformational leadership style is significantly related to creativity and organizational innovation (Al-Husseini & Elbeltagi, 2012; Hu, et al., 2012; Tipu et al., 2012). On the other hand, several studies show that innovation is positively related to superior performance (Oke et al., 2012; Nybakk & Jenssen, 2012; Durán-Vázquez et al., 2012). Also, several research studies using the Multifactor Leadership Questionnaire (MLQ), to measure the behaviors involved in transformational and transactional leadership, positively relate transactional and transformational leadership to indicators of leadership effectiveness, such as subordinate satisfaction, motivation and performance (Oke el al., 2009).

3. Methods

Therefore, the objective of this article is to research the relationship of the variable's leadership, innovation and organizational performance. conceptual model is proposed to analyze leadership as a moderator variable in the relationship between innovation (independent variable) and performance (dependent variable) (Figure 1).



Figure 1 | Conceptual Model

The moderator variable affects the strength of the relationship between the dependent and independent variable in correlation (Judd, 2015). In this way it is intended to verify the following hypotheses:

H1: Innovation positively influences the hotel's performance.

H2: Leadership positively influences the relationship between innovation and hotel performance.

Data collection instrument

To test the proposed hypotheses, a quantitative study was carried out and primary data were collected from the answers to a questionnaire. The questionnaire consists of two parts. The first part aims to collect socio-demographic information and the second part consists of 37 questions, divided by the three variables.

The first 12 questions are related to leadership and supported in the item-scale of Yukl (2013), the following 11 ones concerned to innovation and the last 14 are related to performance. The innovation and performance questions were supported on the literature. A pre-test process was carried out to validate the consistency of the constructs.

Sample's socio-demographic characterization

The target population was people who work in the Portuguese hotel industry and hold positions of leadership in 4 and 5-star hotels. Questionnaires were sent to 82 hotels and 34 responses were subsequently validated.

The dataset features of 34 answers have the following characteristics: 17 male (50%) respondents. Ages between the 26-35 years and 36-45 years, were the most representative, respectively with 38% and 35%. The graduation degree represents 47% of the sample and 65% of the people come from 4-star hotels. 73% are middle management professionals and the most relevant range

of professionals has up to three years old on the organizations, 44%.

4. Results

Calculation of Leadership, Innovation and Performance

Table 1 presents the Cronbach's Alpha values which were calculated for each set of questions measuring each one of three latent variables from our conceptual model.

Table 1 | Cronbach's Alpha for sets of items measuring each

latent variable					
	α	N items			
Leadership	.75	12			
Innovation	.85	11			
Performance	.83	14			

All of these values belong to the interval from .75 to .85, which means that each set of items shows an acceptable to good internal consistency (Streiner, 2003). We have also calculated Cronbach's Alpha coefficients for each removed item in each group and found out that there are no significant internal consistency improvements upon removal of any particular item. Since it was not feasible to perform a pre-test to our query (given the difficulty of collecting even a small sample), this reliability analysis confirms that the guery is well built and therefore we will measure each latent variable through the simple average of all of the corresponding items. We have calculated the simple average of the corresponding items to compute the values of the three latent variables of our conceptual model: Leadership, Innovation and Performance.

Table 2 shows their descriptive and inferential statistics (for N=34 valid observations).

Table 2 Descriptive	and inferential	statistics for	the latent	variables

						95.0% CI for μ			95.0% CI for σ		
	Min	Max	Mdn	М	M SE	Lower	Upper	SD	Lower	Upper	
Leadership	2.58	4.42	3.75	3.67	.08	3.51	3.84	.46	.37	.80	
Innovation	2.36	4.82	3.55	3.45	.10	3.24	3.66	.61	.49	.92	
Performance	3.14	4.86	3.89	3.92	.08	3.77	4.07	.44	.35	.78	

Normality Tests

To test the three variables normality distribution hypothesis, and given that our sample size N>30, we have chosen to perform Kolmogorov-Smirnov normality tests (at 5% significance level), whose results are shown in Table 3.

The Sig. values for the variables Innovation and Performance satisfy Sig. > .05, therefore we should not reject the null hypothesis: these variables are normally distributed. On the other hand, Leadership has Sig. = .02 < .05 which means that we should accept the alternative hypothesis: it is not normally distributed.

Table 3 | Frequency table for Leadership Type, and corresponding class intervals

Leadership Type	Class Interval	Frequency	Percent
Transformational (1)	[4.5; 5.0]	12	35.29
Neutral (0)	[3.5; 4.0[11	32.35
Non-transformational (-1)	[1.0; 3,5[11	32.35

Innovation and Performance Linear Relationship

Given that Innovation and Performance are continuous (scale) variables, with verified normal distribution hypothesis and having no significant outliers, a simple linear regression was run to predict Innovation from Performance. Figure 2 displays the corresponding box plots, which also prove the absence of outliers.

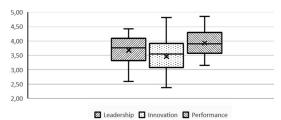


Figure 2 | Box plot of the latent variables

The results F (1.32) = 53.15, p < .001 showed that Innovation is a significant predictor of Performance, with a Pearson correlation coefficient R=.79 proving the existence of a strong positive linear correlation, and $R^2 = .62$ meaning that 62% if the total variation of Performance can be explained by the predictor Innovation. The regression constant coefficient B0=1.95 is significant (p < .001) and its 95% Cl is [1.41, 2.50]. The regression coefficient for the predictor Innovation B_1 =.57 is significant (p < .001) and its 95% Cl is [.41; .73] (Figure 3). The regression equation is: Performance = 1.95 + .57 * Innovation

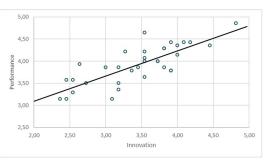


Figure 3 | Scatter plot and regression line for Performance and Innovation

This means that a unit increase in Innovation implies an approximate Performance increase of .57 (or between .41 and .73 if we consider the 95% CI).

Leadership's moderation of Innovation and Performance's relationship

In the foregoing section we have proved the existence of a positive strong linear relationship between Innovation and Performance. In this section we test whether Leadership is a moderator of that relationship. We chose transforming the continuous variable Leadership into a nominal variable with three possible leadership styles: transformational (the most desirable one), neutral, and nontransformational (the least desirable one). The reason for choosing three classes instead of four

(or more) is since a higher number of classes (with N=34 observations) would generate at least one class with fewer than 10 observations (which would affect the statistical significance of the hypothesis' test), as well as adding an unnecessary level of complexity to the analysis. On the other hand, three classes seemed suitable, given the distribution of the continuous variable Leadership. The 33rd percentile of Leadership is approximately 3.5 and the 67th percentile is approximately 4.0. Therefore, we defined the following class intervals to obtain the ordinal version of Leadership.

To test the Leadership mediating hypothesis, we studied the patterns of interactions and associations between the three latent variables through a General Linear Model. In short, the outcomes of this model will tell us if the coefficients of the three linear regressions for the three Leadership groups are statistically significantly different (Table 4).

Table 4 | General Linear Model parameter estimates for the dependent variable "Performance"

Table 4 General Enteal	WIOGCI	parameter	Jacinnat Ca Tor	the depe	ndent variable	1 cirormanec	
Parameter	В	Std. Erro	r t	Sig.	95% Confidence Interval		
					Lower Bound	Upper Bound	
Intercept	1.88	.73	2.56	.02	.38	3.38	
[Leadership Type =-1]	.39	.91	.43	.67	-1.46	2.24	
[Leadership Type =0]	.10	.99	.10	.92	-1.92	2.12	
[Leadership Type =1]	0 ^a						
Innovation	0 ^a						
[Leadership Type=-1] *	.46	.18	2.63	.01	.10	.82	
Innovation							
[Leadership Type =0] *	.55	.19	2.90	.01	.16	.93	
Innovation							
[Leadership Type =1] *	.60	.19	3.21	.00	.22	.99	
Innovation							
^a . This parameter is set to zero because it is redundant.							

The reference model for the General Linear Model will be the linear regression for the Transformational Leadership Type (Leadership Type = 1). The regression line parameters for this group are B0=1.88 (statistically significant, as Sig.=.02<0.05) and B₁=.60 (statistically significant, as Sig.=.00<0.05) with R²=.55. The corresponding linear regression equation for the Transformational Leadership Type, which will be

our reference model is: Performance = 1.88 + .60* Innovation

Consider the Neutral Leadership Type (Leadership Type = 0). The intercept parameter is $B0{=}0.10$ which is not statistically significant, as Sig. = .92 > .05, but the corresponding new intercept would be $B_0{=}1.88 + 0.10{=}1.98$. The Innovation coefficient is $B1{=}.55$, which is statistically significant (Sig. = .01 < .05) and $R^2{=}.42$.

Therefore, the linear regression equation changed to Performance = 1.98 + .55 * Innovation

Finally. consider let us the transformational Leadership Type (Leadership Type = -1). Although the intercept parameter is $B_0 = .39$, it is not statistically significant, as Sig. = .67 > .05, but the corresponding new intercept would be B0=1.88 + 0.39 = 2.27. But the Innovation coefficient $B_1 = .46$ is statistically significant (Sig. = .01 < .05), R2=.46 and the corresponding linear regression equation is Performance = 2.27 + .46 * Innovation.

As we have seen (Figure 4), the two intercepts for the neutral and non-transformational Leadership Styles are not significantly different from the reference intercept (for the transformational Leadership Style). On the other hand, although the Innovation coefficients for the three cases are different (B1=.60, B_1 =.55 and B_1 =.46) we cannot claim that they are significantly different, as their 95% CI overlap: for the transformational leadership style, we have CI = [.22, .99]; for the neutral leadership style, we have CI = [.16, .93]and for the non-transformational leadership style, we have CI = [.10, .82].

This means that the hypothesis "Leadership style is a moderator of the relationship between Innovation and Performance" could not be proved, given that there are no statistically significant differences in the regression models when we consider different Leadership style groups.

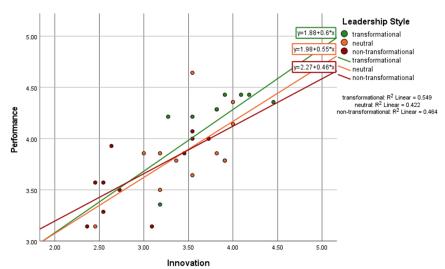


Figure 4 | Scatter plot and linear regression according to Leadership Style

5. Conclusion

In an era of globalization and technological change, the hospitality industry is increasingly competitive. Due to the volatile nature of the global business environment and the strong need to respond to the challenges faced by local and international competition, organizations have increased their flexibility, responsiveness and efficiency, and therefore a greater need for continuous innovation

of products and services, as well as internal processes and behaviors.

Literature on hotels and resorts industry recognises the imperative role of innovation and differentiation as means for organisations to transform opportunities to change and remain competitive. The knowledge and performance of employees is crucial for organizations to innovate and develop a competitive advantage. It is therefore essential to know how to create an organizational climate that cultivates innovation among employees.

Innovation is recognised to convert opportunities to new business ideas and increase an organisation's profitability and competitiveness by offering differentiated products and services.

Leadership is a process in which leaders affect and are affected by their followers positively or negatively. Leadership is about influence, the ability to influence your subordinates, your peers, and your bosses in a work or organizational context. The literature presents different definitions and visions of leadership, although with common elements. Transformational leadership is one style that the academy has given greater importance to recently. A good transformational leader is innovative, open to change, explores new approaches, motivates people to learn and to have a strategic and clear thinking, which would lead to good performance of teams and, consequently, to the desired business profit.

In this study, it was found that there is a strong relationship between innovation and performance, in line with what is described in the literature. The results also indicate that the improvement of innovation has positive consequences on performance. However, the generalized linear model showed that leadership is not a moderating variable in the relationship between innovation and performance, in the hotel sector. This result may be explained by the leadership style that more frequently occurs in this sector, that is, probably, still not transformational enough. The new ways of working require new approaches by administrations and managers, which should better inspire their teams to be proactive, to be aligned with the company's strategy and vision, create clear targets and encourage them to handle change as a friend.

Leaders have the authority to set specific goals and encourage employees to implement innovation. Administrators have the need to select transformational leaders or to pressure managers for a style change. In fact, performance depends on the ability to innovate. When performance increases, innovation tends to be more frequently implemented and the control of non-financial performance indicators, often not given much importance in the sector, is a must.

In practical terms, this could mean that without good leadership, and good development and implementation of innovation, it is unlikely that a company will succeed. However, it should be noted that, contrary to expectations, in the hotel sector, innovation and organizational performance showed weak values, which is why it is considered worthwhile to think about new innovative strategies, namely, technological innovations, bringing the opportunity to new environmental experiences and forms of communication with customers in this sector, to exceed clients' expectations and stimulate the increase of its performance.

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