

Impact of Leadership on the Relationship Between Innovation and Performance: 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 superior performance in organizations.

KEYWORDS

Hotel Management, Innovation, Innovation in Hospitality, Leadership in Hospitality, Organizational Performance, Performance in Hospitality, Transactional Leadership, Transformational Leadership

1. INTRODUCTION

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 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

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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 (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).

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).

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 have to be effective in order 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). 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). 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).

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).

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.

2. LITERATURE REVIEW

2.1 Leadership

Leadership is the ability to influence the competence and motivation of individuals and groups to achieve specific goals (Hongdao et al., 2019; Ellemers et al., 2004). 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 (Haq & 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). 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):

1. Leadership is a social and group phenomenon; there can be no leaders without followers. Leadership is about others;
2. Leadership involves interpersonal influence or persuasion and leaders move their followers through goals and actions;
3. Leadership is goal-oriented and action-oriented. Leaders take an active role in groups and organizations, which in turn use influence to direct their followers and achieve goals;
4. 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, value-oriented, 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:

1. Vision - refers to an idealized image of the future, based on the organization's values;
2. Inspirational communication - refers to positive and courageous messages about the organization, as well as statements that lead to motivation and confidence;
3. Supportive leadership - expresses concern for followers, always taking into account their individual needs;
4. 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;
5. 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):

1. 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.
2. Management-by-exception - This is 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.

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). 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 (1994) 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).

2.2 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).

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 (ie, 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, & Lassar, 2011).

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):

- Clarify and align vision with strategic initiatives;
- Create effective teams and help colleagues;
- Cultivating alliances and partnerships;
- Anticipate and respond to challenges and opportunities;
- Develop robust and resilient solutions;
- 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.

2.3 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).

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.

2.4 Leadership, Innovation and Performance's Interrelationship

Leadership is essential for the success and innovativeness of a firm (Hongdao et al., 2019). 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, in order 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. 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). 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). 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.

The theory of resources and capabilities also states that organizations need the capabilities, resources and technologies to implement a new 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). Innovation in the hospitality sector is essentially of an intangible nature. 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).

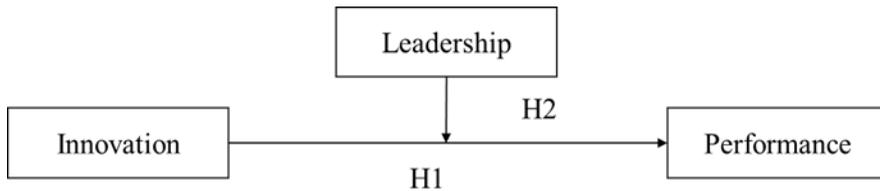
Current research trends reveal that transformational leadership plays a vital role in a company's innovation capacity (Amankwaa et al., 2019). Vaccaro et al. (2012) found that transformational leadership is the antecedent of the innovation company.

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

Figure 1. Conceptual Model



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 et al., 2009). Therefore, the objective of this article is to research the relationship of the variable's leadership, innovation and organizational performance. A conceptual model is proposed to analyze leadership as a moderator variable in the relationship between innovation (independent variable) and performance (dependent variable) (Figure 1).

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.

3. METHODOLOGY

3.1 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 question 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.

3.2 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 has 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%.

3.3 Calculation of Leadership, Innovation and Performance

Table 2 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. All of these values belong to the interval from .75 to .85, which means that each set of items shows an acceptable to good

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

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 query 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) and Figure 2 displays the corresponding box plots, which also prove the absence of outliers.

3.4 Normality Tests

In order 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 $\text{Sig.} > .05$, therefore we should not reject the null hypothesis: these variables are normally distributed. On the other hand, Leadership has $\text{Sig.} = .02 < .05$ which means that we should accept the alternative hypothesis: it is not normally distributed.

3.5 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 in order to predict Innovation from Performance. 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 $B_0 = 1.95$

Table 2. Descriptive and inferential statistics for the latent variables

	Min	Max	Mdn	M	M SE	95.0% CI for μ		SD	95.0% CI for σ	
						Lower	Upper		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

Figure 2. Box plot of the latent variables

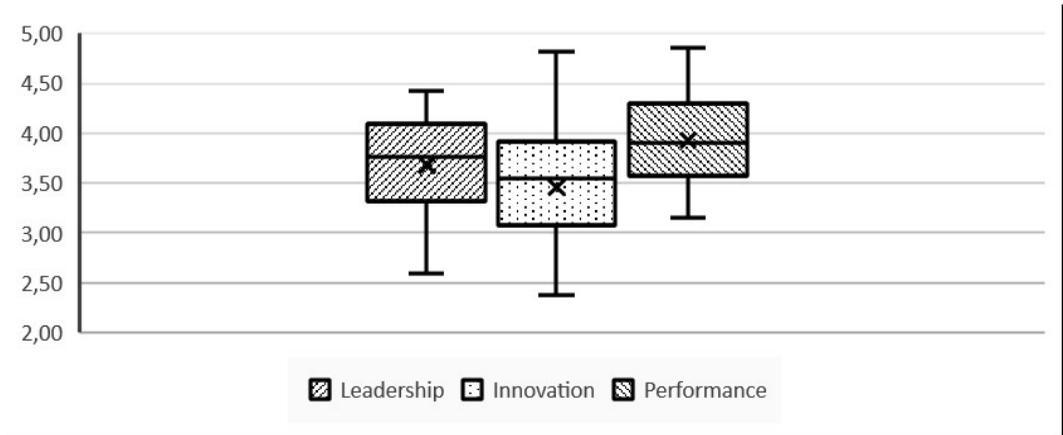


Table 3. Kolmogorov-Smirnov normality test

	Statistic	Sig.
Leadership	.165	.020
Innovation	.120	.200*
Performance	.086	.200*

*This is a lower bound for the true significance

is significant ($p < .001$) and its 95% CI is [1.41, 2.50]. The regression coefficient for the predictor Innovation $B_1 = .57$ is significant ($p < .001$) and its 95% CI is [.41, .73]. The regression equation is:

$$\text{Performance} = 1.95 + .57 * \text{Innovation}$$

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).

3.6 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 non-transformational (the least desirable one). The reason for choosing three classes instead of four (or more) is due to the fact that 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 to be suitable, given the distribution of the continuous variable Leadership (see Figure 2). 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

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

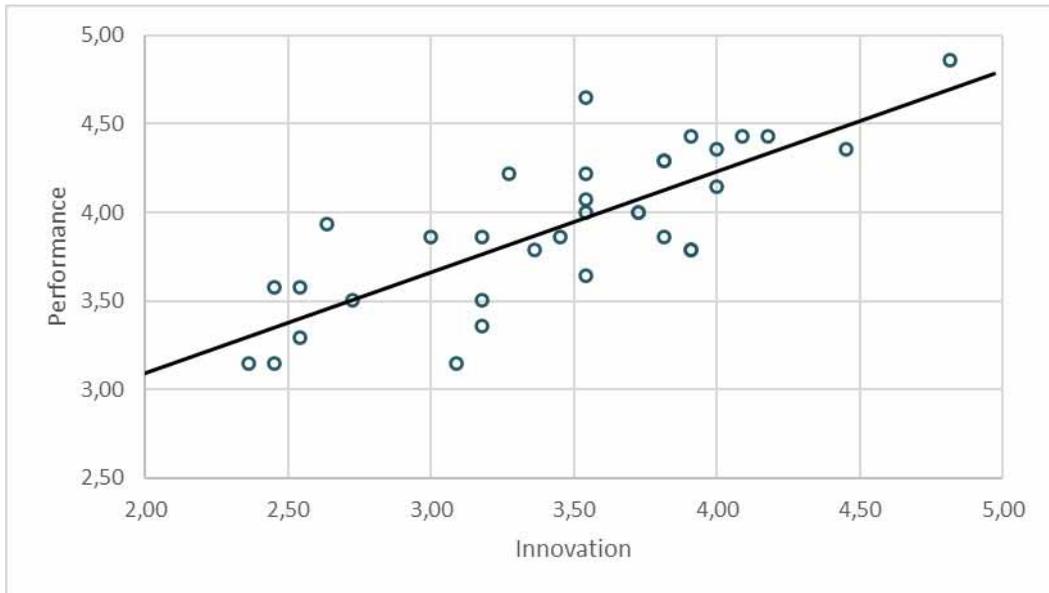


Table 4. Frequency table for Leadership Type, and corresponding class intervals

Leadership Type	Class Interval	Frequency	Percent
Transformational (1)		12	35.29
Neutral (0)		11	32.35
Non-transformational (-1)		11	32.35

of this model will tell us if the coefficients of the three linear regressions for the three Leadership groups are statistically significantly different.

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 $B_0 = 1.88$ (statistically significant, as $Sig. = .02 < 0.05$) and $B_1 = .60$ (statistically significant, as $Sig. = .00 < 0.05$) with $R^2 = .55$. The corresponding linear regression equation for the Transformational Leadership Type, which will be our reference model is:

$$\text{Performance} = 1.88 + .60 * \text{Innovation}$$

Consider the Neutral Leadership Type (Leadership Type = 0). The intercept parameter is $B_0 = 0.10$ 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 $B_1 = .55$, which is statistically significant ($Sig. = .01 < .05$) and $R^2 = .42$. Therefore, the linear regression equation changed to:

$$\text{Performance} = 1.98 + .55 * \text{Innovation}$$

Table 5. General Linear Model parameter estimates for the dependent variable “Performance”

Parameter	B	Std. Error	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] * Innovation	.46	.18	2.63	.01	.10	.82
[Leadership Type =0] * Innovation	.55	.19	2.90	.01	.16	.93
[Leadership Type =1] * Innovation	.60	.19	3.21	.00	.22	.99

^aThis parameter is set to zero because it is redundant.

Finally, let us consider the Non-transformational Leadership Type (Leadership Type = -1). Although the intercept parameter is $B_0 = .39$, it is not statistically significant, as $\text{Sig.} = .67 > .05$, but the corresponding new intercept would be $B_0 = 1.88 + 0.39 = 2.27$. But the Innovation coefficient $B_1 = .46$ is statistically significant ($\text{Sig.} = .01 < .05$), $R^2 = .46$ and the corresponding linear regression equation is:

$$\text{Performance} = 2.27 + .46 * \text{Innovation}$$

As we have seen, 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 ($B_1 = .60$, $B_1 = .55$ and $B_1 = .46$) we cannot claim that they are significantly different, as their 95% CI overlap: for the transformational leadership style, we have $\text{CI} = [.22, .99]$; for the neutral leadership style, we have $\text{CI} = [.16, .93]$ and for the non-transformational leadership style, we have $\text{CI} = [.10, .82]$.

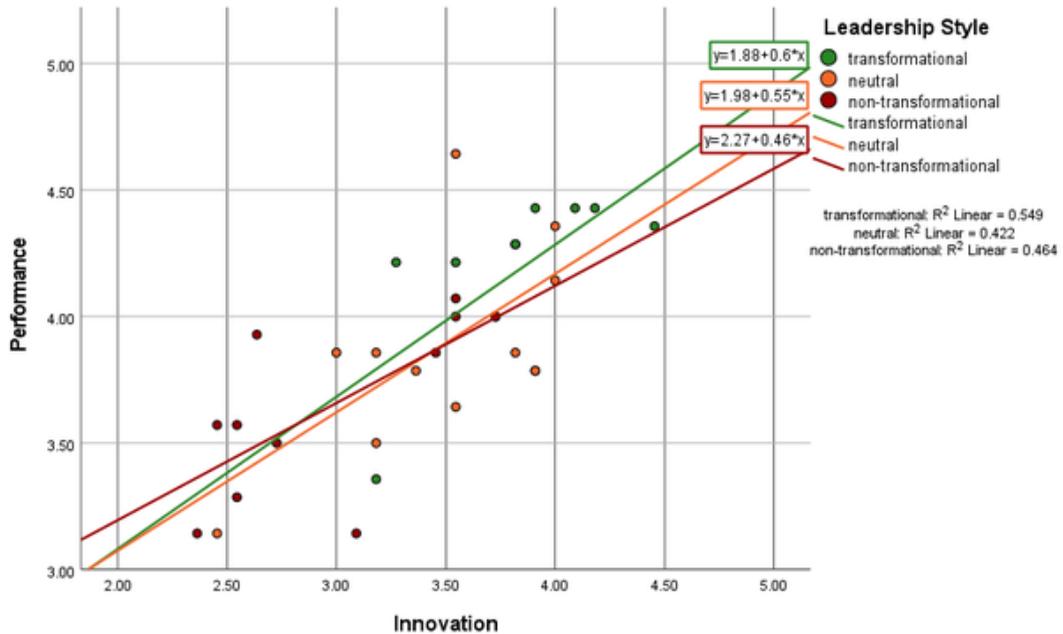
This means that the hypothesis “Leadership style is a moderator of the relationship between Innovation and Performance” could not be proved, given that there are no statistically significant differences in the regression models when we consider different Leadership style groups.

4. CONCLUSION

Leadership is one of the most discussed topics today, but also one of the most difficult to understand. The literature shows different definitions and views, albeit with elements in common. 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,

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



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, in order to exceed clients expectations and stimulate the increase of its performance. Further studies of this model in Portugal and in other countries would allow a greater sample size and external validation of the results achieved in this study. Other, in specific leadership styles as moderators of the relationship between innovation and performance, in this and other sectors, would be of great interest to the scientific community and to business managers, as well as studies of the impact of technological innovations, segmented by target customers value recognition, in hospitality industry performance.

The results obtained reveal interesting information about the guidelines and behaviors followed in the hotel business regarding innovation, performance and leadership, providing a broader knowledge of these themes. Considering that human capital is a key factor in innovation, leaders must commit to sharing ideas with their employees, creating environments that foster innovation, constant learning and development.

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APPENDIX

Questions

It is requested to complete this questionnaire completely, elaborated in the scope of the study of the Impact of Leadership in the relationship between Innovation and Performance in the Hotel Sector.

Part I - Respondent Socio-Demographic Data

1. Sex: Male ___ Female ___
2. Age: ≤ 25 ___ 26-35 ___ 36-45 ___ 45-55 ___ 56-65 ___ > 65 ___
3. Nationality: _____
4. Academic graduation: PhD _____ Master _____ Graduation _____
Other _____
5. Hotel category: 4 stars _____ 5 stars _____
6. Position: Managing Director _____ Department Manager _____ Middle Management _____
Other _____
7. Department: Administration: ___ Finance ___ Sales & Marketing ___ Operations ___
8. Professional seniority: _____ years
9. Seniority at current hotel: _____ years

Part II- Read the questions below carefully, consider the scale below and mark an X for the option that best characterizes your reality at the hotel where you currently work.

5-point Likert scale (1- Never; 2 -Rarely; 3 – Sometimes; 4- Often; 5 – Always)

Table 6. Questionnaire

Leadership		1	2	3	4	5
Q1	I encourage the initiative of the followers in the implementation and development of innovation.					
Q2	I accept criticisms and suggestions from the followers.					
Q3	I promote and support the ideas of the followers.					
Q4	Employees have goals and targets related to innovation.					
Q5	I recognize, value and reward when the followers reach the goals in innovation.					
Q6	I help and accompany the followers in their individual development.					
Q7	I advise your team members on the importance of good implementation of innovation and explain its advantages for the organization.					

continued on following page

Table 6. Continued

Q8	I promote the debate on problems to solve them with the followers.					
Q9	I have new approaches to problems.					
Q10	I actively intervene in conflict management.					
Q11	I help the followers to understand the meaning of their work.					
Q12	I inform the followers of the procedures for carrying out their daily tasks.					
Innovation		1	2	3	4	5
Q13	I am an entrepreneur and I have many ideas of what to do to improve the service I provide.					
Q14	I often share my ideas for improving the service with the rest of the management and employees.					
Q15	I am the first to support change and help to implement it.					
Q16	I am always available to learn.					
Q17	I have creative thinking.					
Q18	The company introduces a new or improved product for the national and / or international market, with some regularity.					
Q19	I implement innovations and process improvements at least once a month.					
Q20	I look for new technologies, processes and / or techniques for the service.					
Q21	I am not afraid to take risks.					
Q22	Innovation and its results are an important part of the organization's strategy.					
Q23	As a rule, methods for sharing knowledge and information are developed or improved.					
Performance		1	2	3	4	5
Q24	I think that my team has a good performance evaluation.					
Q25	I believe that my team uses the available technological resources appropriately.					

continued on following page

Table 6. Continued

Q26	I am satisfied when employees continue to operate in the same way.					
Q27	I share what I think about the performance of each team member.					
Q28	I commit to the established goals and objectives.					
Q29	I keep myself updated and informed in my area of expertise.					
Q30	I maintain good communication in order to interact with others.					
Q31	I implement more appropriate actions when I detect an error in my work					
Q32	I take the initiative and take advantage of opportunities to improve results.					
Q33	I prepare my daily work based on knowledge of the company's structure and policies.					
Q34	I contribute with alternatives for solving problems and improving processes.					
Q35	Meetings are held between managers and colleagues to discuss and evaluate performance.					
Q36	I recognize the impact of the result of my work on other areas.					
Q37	I adapt to changes in my daily work.					

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