Linking transformational leadership to start-ups creativity

Relação entre a liderança transformacional e a criatividade das empresas em fase de arranque

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Abstract
This research aims to understand the contribution of transformational leadership to employee Portuguese startups’ creativity. An empirical study was conducted using a quantitative methodological approach, with the application of an online questionnaire sent to Portuguese startups. 102 employee responses were validated. The results obtained showed the existence of a positive and significant relationship between transformational leadership and creativity in Portuguese startups. Therefore, we conclude that it is recommended that startups use this leadership style so that, as a consequence, they can obtain higher results in terms of organisational creativity.

Keywords: Startups. Transformational Leadership. Organizational Creativity.

Resumo
Esta investigação tem como objetivo compreender o contributo da liderança transformacional para a criatividade dos colaboradores de startups portuguesas. Foi realizado um estudo empírico com uma abordagem metodológica quantitativa, com a aplicação de um questionário online enviado a startups portuguesas. Foram validadas 102 respostas de colaboradores. Os resultados obtidos evidenciaram a existência de uma relação positiva e significativa entre a

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Introduction

Firms’ strategies increasingly have to adapt to more competitive, demanding and global markets, making it essential to define methods and variables that are capable of contributing to the rise of an organization (Seetharaman, 2020). For this scholar, these needs represent opportunities for firms to be innovative, redesign and rethink existing products and services, as well as to seek new strategic positions and partners in the new ecosystem that is developing.

França and Rua (2016) state that the business universe has been continuously influenced by trends at the level of quality, innovation, modernisation of manufacturing processes, marketing, cooperation relations, social and environmental responsibility, organizational culture, information and knowledge, which affect business capabilities. However, they are vulnerable to global competition and need to develop unique capabilities and strategies, which can be achieved through exemplary leadership and organisational performance influenced by the will to achieve new goals, from innovative paths (Rua et al., 2018). In this way, it has also been perceived that the way firms deal with work commitment and leadership style can influence their success.

The lack of organizational competitiveness is often linked to low productivity, which can be produced, which can be attributed to existing leadership styles that do not promote trust and promote trust and commitment of human resources to the company’s objectives (Rua & Araújo, 2016). Thus, it becomes imperative to highlight the possible impact of leadership on organizational performance, particularly transformational leadership, because it is characterized by innovative strategies that involve the entire structure of the company. Additionally, the existence of different types of organizations and the multidisciplinarity of teams make organizational leaders obtain an even more relevant role, in the growth of organizations (Fraga, 2018). Consequently, understanding how leaders can influence the well-being of their employees should be one of the central concerns of organisations.
Transformational leadership has attracted the attention of firms as a leadership style that can generate a high level of organisational performance (Rawashdehet et al., 2021). Considering the increasing number of researchers studying the relationship between transformational leadership and organizational performance, there have been several empirical analyses conducted with the two constructs, as their results can be extremely important for the effective development of organizations. This leadership style is a crucial requirement if a firm wishes to achieve a certain level of productivity and, in turn, market positioning. This is where organizational creativity is inserted, managers and scholars alike have increasingly recognized the importance of creativity for an organization's capability to grow and prosper in progressively more complex, multi-stakeholder settings, which feature high levels of ambiguity, uncertainty and interdependence (Bechhy & Okhuysen, 2011).

Therefore, this study aims to analyse the relationship between transformational leadership and startups’ creativity, since they are innovative firms in their early stages, with great growth potential.

**Theoretical Framework**

2.1 Transformational Leadership

Leadership has been described as being a strong influencing factor in the success or failure of a group, organisation or even nation. In other words, every business has its challenges and needs the most appropriate leader and type of leadership to meet those challenges (Alrowwad et al., 2017). Thus, leadership is one of the major contributing factors to the overall well-being of organizations and nations (Odumeru & Ogbonna, 2013). Transformational leadership seeks to create motivation for both leaders and those led through high levels of freedom, justice, solidarity and equality, breaking with the concept of transactional leadership (Burns, 1978; Silva, 2020).

According to Maçães (2016), classical leadership theories focus on the behaviour of leaders in their relationship with employees. The era of transformational leadership represents the most promising phase in the development of leadership theory, its enormous improvements over previous eras rest on the fact that intrinsic motivation exists (King, 1990). Burns (1978) identified two types of approaches: transactional leadership and transformational leadership. Transactional leadership consists of two distinct dimensions: contingent incentive and active management by exception (Den Hartog et al., 2011). It occurs
when there is the initiative to contact someone to exchange something of value, whereas transformational leadership presupposes the involvement of followers and change in their beliefs, needs and values (Kuhnert & Lewis, 1987). Compared to transactional leaders, transformational leaders must be proactive rather than reactive in their thinking, more radical than conservative, more innovative and creative and more open to new ideas (King, 1990).

In transformational leadership theory, everyone within a group works towards the same goal, and change and adaptability are some of the main characteristics of this type of leadership (Hunt & Fedynich, 2019). Transformational leadership is a type of visionary leadership, in which leaders motivate their employees to exceed certain expectations. Transformational leaders can influence their employees as they have an emotional impact on them by offering them a vision of the future, communicating that vision and motivating them (Khan et al., 2014). A transformational leadership style provides individual development, and a common vision and encourages creative thinking by the employees of an organisation, which ultimately improves the individual performance of the employee and the organisation itself (Afriyie et al., 2019). The transformational leader encourages employee growth and development (empowerment), makes employees feel important, meets organizational goals and appeals to a high level of need for self-actualization (Bass, 1985; Burns, 1978; Lindebaum & Cartwright, 2010).

In this style, the leader uses less authority and acts as a guide and mentor by enhancing the followers’ vision (Jyoti & Bhau, 2015). Uddin et al. (2018) report that a transformational leader shows an intimate relationship with his followers, which leads to the achievement of sustainable organisational performance and expects followers to achieve more than what is expected of them by questioning the status quo and accepting challenges. Antonakis (2012) finds evidence that transformational leaders are associated with increased organisational effectiveness followed by greater satisfaction and motivation, however, it is not proven or implied that transformational leaders can cause a change in organisations.

The components of transformational and transactional leadership have been identified in various ways, such as in factor analyses, observation, interviews and descriptions of an ideal leader to a follower (Bass et al., 2005). Through the Multifactor Leadership Questionnaire (BLQ), Avolio et al. (1991), Avolio (2004) Avolio et al. (2022) identified four dimensions that construct the construct of transformational leadership.

The first dimension is “idealised influence” in which transformational leaders serve as role models for their followers. The leader shares risks with his followers and is consistent in his conduct, principles and values, motivating followers to achieve goals. The second
dimension suggested is “inspirational motivation” characterised by the motivation and inspiration generated by the leaders, giving meaning to the followers' work and providing a challenge, which also stimulates the followers to create a team spirit. Intellectual stimulation” is the third component, in which leaders recognise and stimulate their followers’ efforts to be innovative and creative by questioning preconceived ideas, repositioning problems and approaching old situations with new perspectives. Transformational leaders ensure that creativity and innovation are part of problem-solving processes. The last component is "individualized consideration" whereby transformational leaders pay special attention to the individual needs of each follower, which turns them into mentors. Idealised influence, inspirational motivation, intellectual stimulation and individualised consideration influence followers to exceed their own goals as they change their ideals, interests and values while being motivated to perform better than what would be expected (Amankwaa et al., 2019). Each of the aforementioned dimensions can be measured using the aforementioned Multifactor Leadership Questionnaire (MLQ). This instrument assesses dimensions of transformational leadership, transactional leadership and passive avoidant leadership. The original MLQ consisted of 73 items, which measured 5 factors, and these factors did not focus exclusively on the leader's behaviours. It should be noted that this questionnaire has been constantly adapted since it was first applied.

In transformational leadership the four components presented above are present, followed by the components of transactional leadership, contingent reward and management by exception (active). These two components show that in transactional leadership, followers can expect to receive as much as they have given to the organisation. That is, followers are motivated to achieve the set objectives and are reprimanded when this is not the case. Management by exception (active) happens when the leader intervenes due to some problem (Chaves, 2019).

In laissez-faire leadership and its components, the leader is inactive, whereas, in exception management (passive), the leader only acts when problems worsen. In the laissez-faire component, the leader does not show leadership behaviour, being absent whenever leadership behaviours, being absent whenever it is necessary to make decisions and solve problems (Agostinho, 2014).

Behaviours based on transformational leadership can make sources of work more available to the leader's workers and followers, as they will feel greater support from the leader and greater autonomy in performing their tasks. Moreover, when the transformational leader delegates tasks based on the competencies and needs of workers and followers, it means that
each of them will face a new challenge, which will help them to develop and create (Kovjanic et al., 2013; Martinez et al., 2020).

2.2 Organizational Creativity

Managers and scholars alike have increasingly recognized the importance of creativity for an organization’s capability to grow and prosper in progressively more complex, multi-stakeholder settings, which feature high levels of ambiguity, uncertainty and interdependence (Bechhy & Okhuysen, 2011). Organizational creativity is widely regarded as a key predictor of innovation and high performance (Damanpur & Aravind, 2012).

Research suggests that team communication is related to team creativity and innovation, but only when communication is collaborative and open, and team members feel safe (Edmondson, 2004). Team communication interacts with the social process of collaboration and psychological safety in influencing team creativity and innovation; However, research evaluating these interactions is limited, prior findings should be replicated, and additional variables should be investigated (Acar et al., 2012). Similarly, various social processes may influence one another; for example, communication may increase when team members feel safe, but psychological safety may also be a result of open communication (Edmondson, 2004). In turn, team conflict can directly influence team cohesion, but cohesion may affect how conflict is interpreted (Salas et al., 2005).

Organizational creativity has been defined as the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system (Woodman et al., 1993). In a search for a clearer understanding of organizational creativity, Puccio et al. (2007) provide a model for creative change that will help better frame the set of variables and factors that play into the development of said organizational creativity: (1) leadership (combining person with the process, and its environment), where interactions lead to, (2) product (e.g., theories, solutions to problems, ideas, services, inventions, etc.), and the adoption leads to (3) creative change (e.g., social change, personal change, innovation, etc.).

This model reveals the most dominant factors that affect creativity inside an organization.
(a) The person, which is essentially referring to individual creativity. Researchers identified the set of skills related to individual creativity to be domain-relevant skills, creativity-relevant skills, and intrinsic task motivation.
(b) Environment, where we find an increased interest in the impact that the environment has on creative behaviour, national culture, external environment, organizational culture, organizational structures, climate, and physical space to be the environmental influencers of organizational creativity.

c) Leadership. This part of the model, long ignored, is now very trendy in the field of organizational creativity. Knowing that leaders play an important role in nurturing creativity at work, suddenly, shifts the view of the type of skills the leaders should have. “They identified these qualities and skills as follows: tolerance for ambiguity; ability to assess and be comfortable with risk; ability to quickly and effectively assess an individual; ability to balance passion and objectivity; and ability to change.” (Sternberg, 2010).

d) Process. This final element is very important since it tackles the methods and strategies to take measured decisions and not leave them to chance.

2.3 Hypotheses Derivation: Linking Transformational Leadership and the Organizational Creativity

Shin and Zhou (2003) state that creativity and transformational leadership have a positive effect. Transformational leadership behaviours closely match the determinants of creativity in the workplace, some of which are vision, support for innovation, autonomy, encouragement, recognition, and challenge (Elkins & Keller, 2003). This leader’s behaviours are likely to act as “creativity enhancing forces”: individualized consideration “serves as a reward” for the followers by providing recognition and encouragement; intellectual stimulation “enhances exploratory thinking” by providing support for innovation, autonomy, and challenge; and inspirational motivation “provides encouragement into the idea generation process” by energizing followers to work towards the organization's vision (Bass & Avolio, 1995; Sosik et al., 1998). The resulting intrinsic motivation felt by the followers is an important source of creativity (Tierney et al., 1999).

Moreover, since feelings of self-efficacy lead to higher creative performance (Mumford & Gustafson, 1988; Redmond et al., 1993), transformational leaders who develop their followers’ self-efficacy (Bass, 1990) can positively affect their followers’ creativity. Employees with enhanced self-efficacy are more likely to be motivated to generate novel ideas and solutions. Furthermore, the emotional relationships a transformational leader builds with his or her followers (Bass, 1990) might be another creativity-enhancing force as emotional
attachment is likely to lead to higher levels of creativity (Hunt et al., 2004); that is, employees are more likely to respond to this leader's challenge and support for innovation by exhibiting more creativity in their tasks, given their emotional ties with their leader.

Bass (1995) argues that transformational leadership is more likely to emerge in collectivist cultures than in western individualistic cultures. Jung and Yammarino (2001) report that the effects of this kind of leadership are stronger among collectivists than among individualists. According to Sosik et al. (1998), leaders who instil a vision into the organization can increase creative output. Jong (2006) found that a creativity-based vision can encourage innovative work behavior. It explains that the vision will provide direction for activities and establish general guidelines for the future. Effective leadership plays an essential role in having a supportive climate in exposing knowledge (Uddin, et al., 2017).

The relationship between transformational leadership and organizational creativity is measured by looking at the organization’s size, corporate culture, and culture in a country. It can be concluded that transformational leadership plays an essential role in organizational creativity. Leaders who use a transformational leadership style will try and provide more excellent opportunities for creativity. Organizations must encourage a transformational leadership style to bring about change and innovative ideas. Every leader or manager must adopt a transformational leadership style so that they and their employees can improve themselves to better and higher levels of motivation and morality (Malik & Awan, 2016). Previous research has found that transformational leadership can influence creativity, especially the trend toward organizational creativity (Gumusluouglu & Ilsev, 2009). Good leaders will encourage creative ideas that promote innovation in organizations (Sosik et al., 1998). Transformational leadership is suggested to have an impact on innovation. Transformational leadership increases creativity in an organization; in other words, the organization's desire to innovate. Leaders use inspirational motivation and intellectual stimulation, which is essential because this is useful and can develop organizational creativity (Elkins & Keller, 2003). Jung et al. (2003) have examined the direct and indirect impact of transformational leadership on organizational creativity; the results explain that the relationship has a positive and significant effect. Gumusluouglu and Ilsev (2009) also tested and produced the positive and significant impact of transformational leadership on organizational creativity.

Through individualized consideration, transformational leaders show consideration, empathy, and support for their followers, which may help them overcome the fear of challenging the status quo, thus leading to a higher level of creativity (Gong et al., 2009).
Transformational leaders also give followers autonomy to a great extent so that the followers can be empowered to take initiative, participate actively, and be self-starters (Jung et al., 2002).

The majority of researchers held the first view and postulated that transformational leadership is one of the driving forces for the organization to generate creative ideas. Transformational leaders motivate their followers by envisioning an appealing or evocative future and making them perform beyond their initial expectations (Mumford, 2002). The high levels of motivation, self-esteem and self-worth generated by transformational leadership will benefit organizational innovation (Mumford et al., 2002). Individualized consideration is a reward from transformational leaders to their followers. Intellectual stimulation promotes exploratory thinking while inspirational motivation encourages the process of new idea generation (Sosik et al., 1998).

Hirst et al. (2009) found that one of the dimensions of transformational leadership, inspirational motivation, is a moderator to the relationship between team identification and the creative effort of the employees such that the positive relationship is stronger when leaders are engaged in higher levels of inspirational motivation. First, inspirational motivation will convey the value of group activities reinforcing the identified views of employees and encouraging them to keep exerting high levels of effort to tackle challenges. Second, inspirational motivation espouses collective aims and helps team members to prioritize their goals. Third, the positive messages conveyed by inspirational stimulation make the employees fearless of errors, so they are more willing to try new approaches. Moreover, inspirational motivation reframes challenges as opportunities, which promotes the approach of adaptive problem-solving. Basu and Green (1997) postulated that transformational leadership will moderate the relationship between autonomy, leader support for followers, commitment, and innovative behaviour, respectively, but their hypotheses are not supported by the data.

Gumusluoglu and Ilsev (2009) found that transformational leadership behaviour acts as a creativity-enhancing force. Gong et al. (2009) define creativity as introducing new and useful ideas that increase the entire organizational process’ effectiveness. A study reveals that transformational leadership fosters employee creativity (Henker et al., 2015). Researchers have suggested that to lead creativity; we must motivate employees to generate creative ideas, making leadership an essential prerequisite for creative outcomes (Tierney, 2008). Leaders who have personal relationships with employees tend to feel a work climate that supports employees to be more creative than they should be (Jaiswal & Dhar, 2015). Transformational leadership has implications for positive effects on employee creativity (Mittal & Dhar, 2015).
Some of the studies undertaken have proved that a positive relationship does exist, including a study conducted by Mittal and Dhar (2015). The purpose of that study was to observe the effect of transformational leadership on employees’ creativity. The findings were derived from a hierarchical regression analysis which revealed that transformational leadership is positively associated with employees’ creativity; transformational leadership was also suggested to foster employees’ creativity and develop a creative work environment; moreover, transformational leaders could act as role models by setting an example for their followers and encouraging them to be creative. Finally, the study conducted by Mittal and Dhar (2015), advised organizations to adopt a transformational leadership style because this is one way that they can develop and enhance the creative skills of their employees. In addition, the applied study by Kasasbeh et al. (2015) had 176 employees at mid and high-management levels to identify the impact of transformational leadership on creativity in industrial companies; the findings also supported the positive relationship between the two, and found that respondents have shown high awareness of the dimensions of transformational leadership and toward creativity; finally, it recommended that industrial organizations strengthen their reliance on transformational leadership style to increase their employees’ creativity. Different studies (Hu et al., 2013; Shin & Zhou, 2003) have also agreed that there is a positive relationship between transformational leadership and employees’ creativity and that transformational leadership can influence creativity both directly and indirectly. Finally, according to Herrmann and Felfe (2013), a positive relationship does exist between transformational leadership and employees’ creativity, and it will lead to a higher level of employees’ creativity. However, even though there are many studies which support this relationship, a study conducted by Basu and Green (1997) stated that transformational leadership was negatively related to the creative behaviour of employees as under certain circumstances transformational leadership can deter creativity; moreover, where followers are intimidated by a charismatic leader this intimidation results in a lower incidence of creativity. Wang and Rode (2010) through their study of 55 organizations and 212 employees indicated that transformational leadership was also not significantly related to employees’ creativity. According to Chen et al., (2009), transformational leadership has a relatively small effect on employees’ creativity based on the data collected from 50 companies in Taiwan. In addition, Jaussi and Dionne (2003), and Redmond et al. (1993) indicated that there was no significant relationship between transformational leadership and employees’ creativity.

Leaders aim to offer employees goals beyond their interests by appealing to their values, ideals, and interests (Vera & Crossan, 2004). It is intended to motivate employees to
Linking transformational leadership to start-ups creativity

Contribute to organizational performance (Bass et al., 2005). Apart from addressing employee motivation, leaders also act as role models or mentors and empower their employees. This is intended to improve employee abilities and self-confidence and increase employees' ability to contribute to achieving organizational goals (Bass et al., 2005). Transformational leadership develops enthusiasm among organizational members to achieve organizational goals to create the desired future (Junni, 2016). Thus, by emphasizing the importance of organizational innovation, leaders can motivate organizational members to be more creative and develop new ideas and solutions regarding organizational structures, processes, and practices.

Thus, we intend to test the following hypothesis:

H1: Transformational leadership has a positive and significant effect on startups’ creativity.

Methodology

3.1 Sample and Data Collection

This study was applied to Portuguese startups. All firms were contacted via e-mail, with the link to access the google forms questionnaire, where the study was presented and cooperation was requested. The response to the questionnaire was entirely anonymous, therefore no questions were asked that might break anonymity or that might require confidential responses.

Thus, after confirmed consent, the answers were collected and organised through the Google Forms platform, between the dates of 5 May and 03 June 2022. The sample of this study consists of 102 responses from employees of Portuguese startups.

Once the process of data collection is complete, it is necessary to convert the data into information so that it can be analysed and interpreted to test the research hypothesis formulated earlier.

3.2 Measures

The constructs under study were measured using scales adopted from previous research.

Transformational leadership was analysed through 23 of the 28 items scales recommended by Podsakoff et al. (1990), subsequently translated into the studies of Rezende.
Linking transformational leadership to start-ups creativity

(2010) and Rua and Araújo (2016). Items 2, 6, 13, 15 and 17 were not considered since they refer to the assessment of transactional leadership. It should be noted that items 3, 11 and 17 of the questionnaire have an inverted quotation. All the referred items of transformational leadership were presented on a five-point Likert-type scale (1 – Strongly disagree to 5 - Strongly agree).

To measure organisational creativity we adopted the scale developed by Musek (2020). This scale translates into a questionnaire which consists of 20 items which the respondent will have to classify according to a five-point Likert-type scale (1 – Not characteristic at all to 5 - Highly characteristic).

Results

4.1 Descriptive Analysis

The reliability analysis was performed using Cronbach’s alpha; the analysis guaranteed the consistency and stability of the answers while taking into account the heterogeneity of the respondents and their opinions (Pestana & Gageiro, 2008). The sample reliability was excellent for all variables (0.958).

Table 1 shows the descriptive statistics of the sample’s demographics.

<table>
<thead>
<tr>
<th>Item</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41.2</td>
</tr>
<tr>
<td>Female</td>
<td>58.8</td>
</tr>
<tr>
<td>Age (years old):</td>
<td></td>
</tr>
<tr>
<td>20-30</td>
<td>23.5</td>
</tr>
<tr>
<td>31-40</td>
<td>29.4</td>
</tr>
<tr>
<td>41-50</td>
<td>29.5</td>
</tr>
<tr>
<td>51-60</td>
<td>17.6</td>
</tr>
<tr>
<td>Academic qualifications:</td>
<td></td>
</tr>
<tr>
<td>bachelor degree</td>
<td>52.9</td>
</tr>
<tr>
<td>master degree</td>
<td>47.1</td>
</tr>
<tr>
<td>Professional experience (years):</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>23.5</td>
</tr>
<tr>
<td>2-3</td>
<td>17.6</td>
</tr>
<tr>
<td>4-5</td>
<td>17.6</td>
</tr>
<tr>
<td>6-10</td>
<td>35.6</td>
</tr>
<tr>
<td>&gt;10</td>
<td>5.9</td>
</tr>
<tr>
<td>Firm size:</td>
<td></td>
</tr>
<tr>
<td>small</td>
<td>82.4</td>
</tr>
<tr>
<td>medium</td>
<td>5.9</td>
</tr>
<tr>
<td>large</td>
<td>11.8</td>
</tr>
<tr>
<td>Firm experience (years):</td>
<td></td>
</tr>
<tr>
<td>&lt;5</td>
<td>11.8</td>
</tr>
<tr>
<td>6-10</td>
<td>29.4</td>
</tr>
</tbody>
</table>
4.2 Partial Least Squares

The structural equation model is designated as a multiple regression method to establish relationships between variables (Marôco, 2010), with a minimum relational value of 0.7 to ensure that it is greater than the error variance (Carmines & Zeller, 1979).

Partial least-squares regression is an exploratory analysis method that allows the development of theory, which is currently little tested (Roldán et al., 2014). This method is capable of generating structural models based on small samples, less than 250 observations, as is the case in the present study (86) (Reinartz et al., 2009). And it simultaneously allows maximizing of the variance of the various dependent variables (Chin & Newsted, 1999; Reinartz, et al., 2009), as well as calculating formative and reflective calculation models (Chin, 2010).

Through the stability and internal consistency based on Cronbach’s alpha, the reliability of the variables used in the investigation is calculated, with a minimum required level of 0.7 (Nunnally, 1978; Chin, 2010). In the present study, Cronbach’s Alpha levels were reached between 0.965 (Transformational Leadership) and 0.965 (Organizational Creativity), as shown in Table 2, which is considered very good and excellent (Pestana & Gageiro, 2008).

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach Alpha</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational Leadership</td>
<td>.965</td>
<td>.000</td>
</tr>
<tr>
<td>Organizational Creativity</td>
<td>.980</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 2. Cronbach’s alpha
Source: Own elaboration.

The reliability coefficient was also used to test construction validity (Chin, 1998). As can be seen in Table 3, using the parameters of Gefen and Straub (2005) that defend a minimum level of 0.6, the variables exponentially exceed the reference value.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Composite reliability</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>975</td>
<td>.000</td>
</tr>
<tr>
<td>Organizational creativity</td>
<td>990</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 3. Composed reliability
Source: Own elaboration.
In this test, both the analysis of convergent validity is carried out, where the indicators represent only one construction (Reinartz et al., 2009), as well as the discriminant validity. The method proposed by Fornell and Lacker (1981) was used, which proposes the use of the average variance extracted (AVE) with a minimum value of 0.5 to prove convergent validity. As it is possible to observe in the next table, only the positioning did not obtain the required value (Table 4).

<table>
<thead>
<tr>
<th>Constructs</th>
<th>AVE</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>.633</td>
<td>.000</td>
</tr>
<tr>
<td>Organizational creativity</td>
<td>.726</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 4. Convergent validity
Source: Own elaboration.

The discriminating validity is determined by construction and is related to the level at which it differs and stands out from the rest of the model's constructions, making it necessary therefore the lack of correlations with other latent variables.

It can be gauged through the principle that all cross loads cannot be higher than the load of each indicator. On the other hand, the Fornell – Larcker (1981) criterion defends that it must be AVE that must be superior to the variance between the constructions of the same model.

Referring to the separation of Chin’s explanatory power (1998) between moderate and substantial, it is possible to observe in Table 5 that satisfactory results were obtained regarding the validity of discrimination and, consequently, that the constructions are significantly different.

<table>
<thead>
<tr>
<th>Fornell-Larcker Criterion</th>
<th>Transformational leadership</th>
<th>Organizational creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>.852</td>
<td></td>
</tr>
<tr>
<td>Organizational creativity</td>
<td>.523</td>
<td>.796</td>
</tr>
</tbody>
</table>

Table 5. Discriminant validity
Source: Own elaboration.

According to Table 6, only two hypotheses were not significant according to Chin (1998) who defend a minimum structural coefficient of 0.2. The bootstrapping technique was used to calculate the relative strength of each exogenous construct.
Hypothses | Original Sample (O) | Sample Mean (M) | Standard Error (STERR) | T Statistics (|O/STERR|) | p values
---|---|---|---|---|---
H1: TL -- > +OC | .523 | .539 | .087 | 6.005 | .000*

Table 6. Path coefficients

Legend:
TL – Transformational leadership; OC – Organizational creativity.
* p<0.001.
Source: Own elaboration.

In Figure 1, it is possible to observe the final structural research model, taking into account the direct effects.

Figure 1. Structural research model
Source: Own elaboration.

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Discussion

The fundamental objective of this study is to understand the contribution of transformational leadership to organisational creativity, in the environment of Portuguese startups.

The results of this study support H1 (Transformational leadership has a positive and significant effect on organizational creativity). The findings suggest that transformational leadership has important and positive effects at the organizational creativity level.

Previous findings were inconsistent and further research in real settings was needed to support the positive proposition in favour of this type of leadership (Mumford & Licuanan, 2004). In line with the findings of Shin and Zhou (2003) above mentioned, this research finds a positive relationship between transformational leadership and organizational creativity. Transformational leadership behaviours, as Elkins and Keller (2003) stated, closely match the determinants of creativity in the workplace. So, after this study, we can affirm that the resulting intrinsic motivation felt by the followers is an important source of creativity (Tierney et al., 1999).

The relationship between leadership and organisational creativity is undeniable, especially when we talk about transformational leadership. The transformational leader recognises, supports and develops the talent, skills and creativity levels of employees. He does this by adopting unique and innovative processes, as well as implementing bold measures and an attitude of competitive aggressiveness towards the market (Ekiyor, 2019). Transformational leadership helps implement new strategies, creating an environment in which employees feel trust and respect for the leader and are motivated to do more than what is expected of them (Yukl, 1989).

With the study carried out, we can see that this is in line with the study conducted by Gumusluoglu and Ilsev (2009), in which the conclusions state that transformational leadership has, in fact, a direct relationship with organisational creativity. Similarly to this study, Jung et al. (2003) have examined the direct and indirect impact of transformational leadership on organizational creativity; the results also explain that the relationship has a positive and significant effect.

According to Elkins and Keller (2003), transformational leadership increases creativity in an organization. Leaders using inspirational motivation and intellectual stimulation can develop organizational creativity. This study corroborates the scholars’ theory since the results obtained translate into the same.
The study carried out converges with the stated by Malik and Awan (2016), which states that organizations should encourage the transformational leadership style to arise creative ideas since this leadership style smokes organizational creativity.

Conclusions

This research aimed to identify the contribution of transformational leadership to organizational creativity. According to the quantitative analysis, the results gave evidence that these two concepts are directly related and that transformational leadership has a positive and significant effect on organizational creativity.

Taking into account the existing literature and the growing importance that this subject has been gaining among the scientific community, this study aimed to explore the relationship between the constructs of transformational leadership and organisational creativity, using Portuguese startups as a study. To this end, research questions were presented which this study sought to answer. The literature studied supported a positive relationship between the two constructs.

According to the results obtained, this study proved that transformational leadership has a positive influence on startups’ creativity, through triggers that the leader has with the team.

As with all research, this one also presents some limitations regarding the methodology and methods used to analyse the data and results obtained, since there are alternatives that may present other types of conclusions.

The theoretical overview provided knowledge about leadership and organizational creativity, therefore, it was possible to relate each point and understand the influence on academic achievement. However, the truthful relationship between the two topics was scarce. Given such a situation, we faced a limitation in carrying out this study. There was the need to relate the topics through common points since the existing literature did not present a direct relationship between the subjects. Furthermore, the fact that an investigation has been carried out into the relationship between transformational leadership and organisational creativity specifically in Portuguese startups, thus filling existing gaps in the literature on this object of study. In addition, it should be noted that the sample analysed was small considering the size of the business market (only 102 responses).

The literature and studies on leadership and organisational creativity are growing rapidly, but the question remains as to how leadership can influence an organisation's
innovative, proactive and risk-taking behaviours (Engelen et al., 2015; Khan et al., 2014). However, many of the studies have kept their focus on large companies, rarely focusing on the potential of small companies (Yukl, 2012). In this study, the sample was about startups, being a contribution, then, to the literature in this sense.

For future studies, we recommend applying these questions in different areas of the labour market; such as raising the study to the level of different leadership styles and relating it to organisational creativity. We would also recommend that this study be carried out in other contexts and in contrasting cultures, such as doing a study on this topic but comparing Nordic culture with Eastern culture.

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