

Leadership, creative thinking style and incentives for job performance in startups

Ricardo Suave¹ , Andson Braga de Aguiar² 

¹Universidade Estadual do Centro-Oeste, Santa-Cruz. Brazil.
²Universidade de São Paulo, São Paulo-SP. Brazil.



¹ricardosuave@outlook.com
²abraga@usp.br

Edited by:
Orleans Silva Martins
Paulo Roberto da Cunha

Abstract

Purpose: The overall goal of this paper is to, initially, examine the relationship between leadership (transformational versus transactional) and creative thinking style (divergent versus convergent), then the relationship between creative thinking style and job performance and, finally, whether this last relationship depends on the use of incentives.

Method: We conducted a survey with start-up managers, at scale-up stage, registered at ABStartups (Brazilian Startup Association). From the 96 responses obtained, we analyzed the data using structural equation modeling, with the method of partial least squares.

Results: According to hypotheses, we show that transformational (transactional) leadership is positively associated with divergent (convergent) thinking. Moreover, both styles of creative thinking are positively associated with job performance. Finally, the use of incentives influences only the relationship between convergent thinking and job performance, but not the relationship between divergent thinking and job performance.

Contributions: The main practical implications of our results are that organizations need to consider the desired creative thinking style in defining the leadership profile, so that their leaders can stimulate the desired levels of creativity. In addition, the use of incentive schemes can be more efficient to motivate convergent thinking in creative processes.

Keywords: leadership, incentive, job performance, creative thinking style, startups.

How to cite:

Suave, R., & Aguiar, A. B. de. (2021). LEADERSHIP, CREATIVE THINKING STYLE AND INCENTIVES FOR JOB PERFORMANCE IN STARTUPS. *Advances in Scientific and Applied Accounting*, 14(2), 252–264/265. <https://doi.org/10.14392/asaa.2021140210>

Received: January 23, 2021
Required revisions: November 01, 2021
Accepted: November 03, 2021

Introduction

Creativity is defined as the production of ideas that are simultaneously new and useful (Amabile, 1983), being perceived as a source of competitive advantage in organizations (Shambaugh, 2019; Amabile, 2008). The management control literature has emphasized creativity as a product (Speckbacher, 2017; Aguiar & Suave, 2020), that is, creativity as the product of a process in which independent experts define it as creative (Amabile, 1996). However, creativity also involves a process perspective on how ideas are developed and problems are solved (Basadur & Finkbeiner, 1985; Amabile, 1996). Encouraging this creative process can be particularly relevant in startups that attract creative professionals and need to motivate them (Solomon, 2010). This study emphasizes the creativity of startup managers in the Brazilian context, adopting a process perspective related to creative thinking styles.

The literature on creativity identifies two styles of creative thinking: divergent and convergent (Basadur & Finkbeiner, 1985; Berg, 2016). Whereas divergent thinking involves the generation of new ideas, convergent thinking involves evaluating the usefulness of the generated ideas (Basadur & Finkbeiner, 1985; Berg, 2016). As creative solutions tend to be generated from teams in organizations, leadership plays an important role in the creativity of individuals. In this sense, research shows which leadership styles are best associated with each creative thinking style (Speckbacher, 2017). Despite this, such evidence does not refer to startups. Like leadership, incentives also influence the motivation of individuals, but in the context of startups, research in management accounting has addressed the use of management control systems more comprehensively (Crespo, Rodrigues, Samagaio & Silva, 2019; Frare & Beuren, 2021).

As a result of the influence of leadership styles on creative thinking, it is also important to verify the performance of individuals at work, as well as whether this performance is influenced by incentives. Also, in the context of management accounting, studies that analyze the relationship between creativity and work performance consider control systems more comprehensively (Kaveski & Beuren, 2020). Given these observed gaps, the general objective of this study is to initially examine the relationship between leadership (transformational versus transactional) and creative thinking style (divergent versus convergent), then the relationship between creative thinking style and job performance and, finally, if this last relationship depends on the use of incentives.

First, the role of leadership profiles in stimulating different styles of creative thinking is examined. It is argued that managers with divergent versus convergent thinking styles demand different leadership profiles (Sosik, Kahai, & Avolio, 1998; Jung, 2001; Liu, Lepak, Takeuchi & Sims, 2003; Bono & Judge, 2004). Transformational leadership involves seeking to transform the personal value system of those being led. In turn, transactional leadership involves a process of instrumental exchange between leader and subordinate (Kuhnert & Lewis, 1987; Bass, 1985). Given the characteristics of each leadership profile, the first hypothesis of this study suggests that transformational leadership is more important to stimulate divergent thinking, while transactional leadership is more important to stimulate convergent thinking.

Additionally, it is verified whether the relationship between creative thinking and work performance depends on the use of incentives. It is initially argued that both styles of creative thinking contribute to job performance (Bharadwaj & Menon, 2000; Im, Montoya & Workman, 2013). Thus, the second hypothesis of this study predicts that both a divergent thinking style and a convergent thinking style are associated with higher job performance.

However, it is also argued that the association between creative thinking and job performance depends on incentives (Jung, 2001). Measuring performance for a divergent thinking style tends to be more difficult than for a convergent thinking style, and this is due to the greater level of complexity in the cause-and-effect relationship associated with the results of divergent thinking. For this reason, the provision of incentives tends to be less effective in motivating work performance in the case of a divergent thinking style than in a convergent thinking style. Therefore, the third hypothesis of this study predicts that the positive relationship between divergent (converged) thinking and job performance is smaller (greater) the greater the use of incentives.

To test these hypotheses, data are collected through a survey conducted with 96 startup managers. Using structural equations, the results indicate that transformational leadership has a positive association with divergent thinking, while transactional leadership has a positive association with convergent thinking. Furthermore, both styles of creative thinking are positively related to work performance. Finally, while the positive relationship between convergent thinking and work performance is greater in the presence of greater use of

incentives, greater use of incentives does not moderate the positive relationship between divergent thinking and work performance.

The results of this study offer theoretical and practical contributions. First, the management control literature has recognized that incentives affect creativity (eg, Kachelmeier, Reichert & Williamson, 2008; Grabner & Speckbacher 2016). However, little is known about how creativity and incentives interact to affect performance (Speckbacher, 2017). This study contributes to this literature by demonstrating that convergent thinking and incentives interact in relation to work performance. Nonetheless, the same does not happen with divergent thinking and incentives. Taken together, these results suggest that stimulating creativity and using incentives can be complementary, depending on the creative thinking style.

Second, although literature interested in the relationship between leadership and creativity highlights the role of leadership in stimulating creativity (eg, Muzzio & Paiva Jr., 2018; Hughes, Lee, Tian, Newman & Legood, 2018) and recognizes that different creative thinking styles may demand different leadership profiles (Jung, 2001; Speckbacher, 2017), empirical evidence confirming these expectations is still scarce. This study contributes to this literature by suggesting that encouraging divergent (convergent) thinking requires transformational (transactional) leadership. However, if opposite associations are present, the results of this study suggest that leadership is unable to stimulate creative thinking.

Finally, the results of this study offer contributions to organizations, such as startups, interested in stimulating their managers' creative thinking. In general, it is suggested that these organizations need to pay attention to defining the leadership profile and using incentives so that they are aligned with the desired creative thinking style. Regarding the structure of this study, hypotheses are then developed, the methodology described and the main results presented. At the end, the results are discussed and the main limitations and research opportunities are highlighted.

2 Literature review and hypothesis development

2.1 Creative thinking

Criatividade nas organizações representa importante fonte de vantagem competitiva de longo prazo (Shambaugh, 2019; Amabile, 2008; Nonaka, 1991), sendo percebida como ponto de partida para inovação nas organizações

(Grabner & Speckbacher, 2016). Criatividade pode ser definida a partir de duas perspectivas complementares: de um lado, criatividade é um produto decorrente do alcance de consenso entre especialistas que, de maneira independente, definem aquele produto como criativo (definição consensual); de outro lado, criatividade é um processo capaz de gerar um resultado inovador e útil para um determinado grupo em um dado momento do tempo (definição conceitual) (Amabile, 1996).

A literatura sobre o tema tem dado maior ênfase à definição consensual de criatividade (Speckbacher, 2017; Aguiar & Suave, 2020). Por exemplo, estudos em controle gerencial predominantemente verificam o efeito de esquemas de incentivo sobre desempenho em tarefas criativas o qual é definido por especialistas (p. ex., Kachelmeier et al., 2008; Kachelmeier & Williamson, 2010). Entretanto, a definição conceitual de criatividade é essencial para a constituição de uma formulação teórica do processo criativo (Amabile, 1996).

Ao enfatizar uma perspectiva de processo, a literatura sobre criatividade identifica dois estilos de pensamento criativo: divergente e convergente (Basadur & Finkbeiner, 1985; Berg, 2016). Cada estilo de pensamento representa uma abordagem específica sobre como indivíduos desenvolvem ideias e solucionam problemas, envolvendo atitudes distintas (Basadur & Finkbeiner, 1985). Um estilo de pensamento divergente procura produzir múltiplas alternativas a partir da informação disponível (Cropley, 2006), envolvendo a geração de novas ideias através da busca por novas associações, combinações ou perspectivas (Basadur & Finkbeiner, 1985; Berg, 2016). Esse estilo de pensamento envolve maior experimentação, risco e flexibilidade, e produz soluções mais surpreendentes e variadas (Cropley, 2006; Revilla, 2019).

Por sua vez, um estilo de pensamento convergente procura identificar a melhor e mais correta alternativa para lidar com uma situação bem definida (Cropley, 2006), enfatizando a avaliação da utilidade e da adequabilidade das ideias geradas com a aplicação de critérios e padrões a partir de experiência e conhecimento prévio (Basadur & Finkbeiner, 1985; Berg, 2016). Esse estilo de pensamento envolve maior lógica, acurácia e segurança, resultando em soluções menos convencionais e menos variadas (Cropley, 2006; Revilla, 2019). A visão de processo da criatividade sugere que esses dois estilos de pensamento criativo estão em iteração para o desenvolvimento de ideias criativas, muito embora um dos dois estilos possa ser mais enfatizado por diferentes indivíduos (Berg, 2016).

2.2 Liderança e pensamento criativo

First, hypotheses are developed about the role of

leadership in stimulating creative thinking. The literature on transformational and transactional leadership dominates discussions of leadership research (Judge & Piccolo, 2004; Muzzio & Paiva Jr., 2018). Transformational leadership has been advocated as superior to transactional leadership, particularly in its ability to stimulate creativity (Bass, 1990; Sosik et al., 1998; Zhang, Sun, Jiang & Zhang, 2019). However, it is argued in this study that both leadership profiles are useful to stimulate creativity and that each creative thinking style may demand a different leadership profile (Liu et al., 2003; Bono & Judge, 2004). Therefore, it is expected that both leadership profiles are effective in the commitment of their followers in generating ideas (Deichmann & Stam, 2015).

The transformational and transactional leadership literature assigns different characteristics to each leadership profile (Bass, 1990) and these different characteristics are more appropriate to encourage different styles of creative thinking (Jung, 2001). Transformational leaders are seen as more charismatic, providing greater confidence and influence over those they lead. In this sense, they are more inspiring, conveying the idea that good things can be achieved with extra effort, and they are intellectual stimulators, by showing new ways to solve old problems (Bass, 1990). Transformational leadership involves a process in which the leader seeks to transform the value system of the followers towards achieving higher-level goals (Kuhnert & Lewis, 1987; Bass, 1985).

The characteristics of transformational leadership tend to promote the intrinsic motivation of the followers and, thus, tend to encourage them to exert extra effort in generating creative solutions to organizational problems (Jung, 2001). By promoting an intellectual stimulus from their subordinates, this leadership makes their followers feel more secure in employing innovative approaches and thinking “outside the box” (Amabile, 1998; Sosik et al., 1998). Therefore, it is expected that transformational leadership is more associated with divergent thinking than with convergent thinking (Pieterse, Van Knippenberg, Schippers & Stam, 2010; Rank, Nelson, Allen & Xu, 2009; Anderson, Potočnik & Zhou, 2014).

In summary, a positive relationship between transformational leadership and divergent creative thinking is expected (Speckbacher, 2017). In turn, since it is uncertain whether the relationship between transformational leadership and convergent style is negative or non-significant, we choose to present this hypothesis in the null form. Formally, the following hypotheses are formulated, predicting the relationship between transformational leadership and creative thinking:

Hypothesis 1a (H1a): Transformational leadership is positively associated with divergent thinking.

Hypothesis 1b (H1b): Transformational leadership is not

associated with convergent thinking.

Transactional leaders, on the other hand, look for deviations from standards and rules to take corrective action, intervene only if standards are not met, and abdicate responsibility, avoiding decision-making (Bass, 1990). Transactional leadership involves an exchange process between leader and subordinate so that both achieve desired personal results (Kuhnert & Lewis, 1987; Bass, 1985). The transactional leader makes his expectations clear and sets rewards for when those expectations are met (Howell & Avolio, 1993). Management by exception refers to taking corrective actions based on the results of these transactions (Judge & Piccolo, 2004), that is, remuneration is contingent only on what the leader expects.

The characteristics of transactional leadership tend to stimulate the extrinsic motivation of the subordinates and, thus, the subordinates seek to develop creativity at the lowest possible level (Amabile, 1998). These characteristics make the team members limit themselves to meeting expectations in solving problems, not feeling motivated to go further or to try creative solutions capable of changing the status quo (Jung, 2001). Due to the instrumental exchange relationship between the leader and the followers, the creative process tends to be more restrictive, with greater judgment in this process (Cropley, 2006). Therefore, transactional leadership is expected to be more associated with convergent thinking than with divergent thinking (Pieterse et al., 2010; Rank et al., 2009; Anderson et al., 2014).

In summary, a positive association between transactional leadership and convergent creative thinking is expected (Speckbacher, 2017). Again, since it is uncertain whether the relationship between transactional leadership and divergent style is negative or non-significant, we choose to present this hypothesis in the null form. Formally, hypotheses predicting the relationship between transactional leadership and creative thinking are formulated below:

Hypothesis 1c (H1c): Transactional leadership is positively associated with convergent thinking.

Hypothesis 1d (H1d): Transactional leadership is not associated with divergent thinking.

2.3 Creative thinking, incentives and job performance

Additionally, this study develops hypotheses about the relationship between creative thinking and job performance and whether this relationship depends on incentives. It is initially argued that both styles of creative thinking contribute positively to job performance. Both styles of creative thinking are recognized as critical for identifying creative solutions (e.g., Lu, Akinola, Mason, 2017). Previous empirical evidence indicates a positive

effect of creativity on performance (Bharadwaj & Menon, 2000; Im et al., 2013). In particular, previous studies indicate a positive influence of creativity on work performance (Zhang & Bartol, 2010; Gong, Huang & Farh, 2009). In summary, it is expected that both divergent thinking and convergent thinking contribute to increasing work performance. Formally, the second hypothesis of this study is presented as follows:

Hypothesis 2a (H2a): Divergent thinking is positively associated with job performance.

Hypothesis 2b (H2b): Convergent thinking is positively associated with job performance.

However, despite the expectation that creativity, regardless of creative thinking style, favors work performance, this relationship is expected to depend on structural organizational choices (Basadur, 1993; 1997). In particular, it is argued that the relationship between creative thinking and job performance depends on incentives (Jung, 2001). Incentives serve to influence behavior and encourage appropriate decision-making (Baker, Jensen & Murphy, 1988; Prendergast, 1999), being a managerial control that favors the extrinsic motivation of managers (Speckbacher, 2017).

Incentives include objective and subjective components (Prendergast, 1999; Lazear & Gibbs, 2008). Objective components involve quantifying the contribution of managers to achieving goals and offer the advantage of allowing easier linkage of performance to remuneration (Lazear & Gibbs, 2008). An example of an objective incentive is compensation based on individual performance (Prendergast, 1999). In turn, subjective components involve discretion and judgment of the person(s) responsible for the evaluation (Bol, 2008). An example of subjectivity is the use of standardized scales that capture desirable attributes of managerial behavior, such as learning ability, loyalty, and long-term focus (Brickley, Smith & Zimmerman, 2009; Grabner, 2014).

It is argued in this study that the use of incentives is less important to promote work performance for divergent than convergent creative thinking. In general, the literature on creativity suggests that the use of incentives reduces managers' creativity for two reasons (Grabner & Speckbacher, 2016). The first is the complexity of measuring performance on creative tasks due to the lack of knowledge about the cause-and-effect relationship, in terms of the necessary resources and/or the results from creative solutions (Amabile, 1996; 1997). The second reason is that individuals tend to be more creative, the greater the intrinsic motivation to perform tasks (Amabile, 1988; 1996). However, the role of work performance incentives can differ depending on whether creative thinking is divergent or convergent.

Divergent thinking involves unconventional processes, greater quantity and variation in the production of responses from available information (Cropley, 2006; Tieppo, Reis & Picchiali, 2016; Revilla, 2019). These characteristics increase the difficulty in measuring the performance of processes and/or results associated with divergent thinking, since the level of complexity in the cause-and-effect relationship is high. Additionally, managers with divergent thinking tend to be intrinsically motivated (Jung, 2001), which means that extrinsic stimuli are not required to reach high levels of performance.

Convergent thinking, in turn, involves logical and conventional processes, and the search for the best or correct answer to a well-defined problem (Cropley, 2006; Tieppo et al., 2016; Revilla, 2019). These characteristics make measuring the performance of processes and/or results associated with convergent thinking simpler, given the lower level of uncertainty and complexity in the cause-and-effect relationship. Furthermore, convergent-thinking managers tend to be extrinsically motivated (Jung, 2001), which makes extrinsic remuneration required to reach high levels of performance.

In summary, measuring processes and/or results are more complex and intrinsic motivation is more important for divergent thinking than for convergent thinking. Hence, incentives are expected to be less important in stimulating work performance for divergent thinking than for convergent thinking. Formally, the hypotheses are formulated predicting the moderation of the use of incentives in the relationship between creative thinking and work performance as follows:

Hypothesis 3a (H3a): The positive association between divergent thinking and job performance is smaller the greater the use of incentives.

Hypothesis 3b (H3b): The positive association between convergent thinking and job performance is greater, the greater the use of incentives.

Figure 1 presents the theoretical model and the study hypotheses.

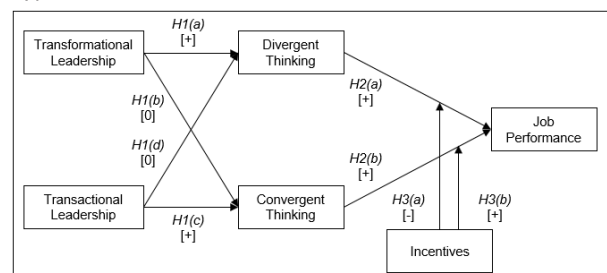


Figure 1. Theoretical model and hypotheses

3 Methodology

To test the hypotheses of this study, data were collected through a survey conducted with startup managers. To delimit the sample, we selected startups registered in the base of the Brazilian Association of Startups (ABStartups), the STARTUPBASE. Registered startups are classified according to their development phase. The phases, from the most initial to the most advanced, are ideation, operation, traction and scale-up. The focus of this research is on companies in a more advanced stage, scale-up, which is characterized as post-growth, focus on investments and even on internationalization (Abstartups, 2020). In August 2019, there were 496 companies registered in this phase. From then on, until February 2020, companies were contacted by email or telephone and invited to participate in the survey. 99 responses were returned (19.9%), 96 of which were useful and used.

3.1 Measurement scales

The questionnaire was developed using seven-point Likert-type scales. While some of the original constructs are composed of five-point scales and others of seven points, we chose to standardize on seven points. The questions were translated from the original instruments and underwent slight adaptations regarding the understanding after the translation and pre-testing.

For job performance, respondents performed a self-assessment, in relation to the company average (with an interval between 1 and 7, representing performance below and above average), for eight activities, such as planning and negotiation, and one for general performance in such activities (Venkatesh & Blaskovich, 2012). The instrument used by Venkatesh and Blaskovich (2012) is an adaptation of other studies that started to adopt the measure for general performance together with the other measures.

The leadership scale is composed of 20 items related to transformational leadership and 12 related to transactional leadership. Respondents rated the frequency of behaviors from 1 for never demonstrates to 7 for always demonstrates. Items referring to behaviors include statements such as 'Consider the moral and ethical consequences of decisions' for transformational leadership and 'Things have to go wrong for my leader to act' for transactional leadership (Afsar et al., 2017; Avolio, Bass & Jung, 1999).

The measurement scale of creative thinking was assessed for respondents' agreement, from 1 for strongly disagree to 7 for strongly agree. It includes six statements for divergent thinking (eg, I like to hear people's surreal ideas, as even the strangest idea often leads to the best solution), and eight for convergent thinking (e.g., You need to be able to recognize and eliminate surreal ideas during idea generation) (Basadur & Finkbeiner, 1985).

For the variable incentives, the agreement of respondents regarding the use of performance-based pay (PBP) and subjective performance evaluation (SPE) was measured (Grabner, 2014). Three assertions measure the use of PBP (e.g., 'Individual performance is critical to pay') and four the use of SPE (e.g., employees are evaluated based on their ability to learn new skills).

3.2 Tools for analysis

For data analysis, we used structural equation modeling by the partial least squares method with SmartPLS software. This method allows for a better understanding of the growing complexity in exploring theoretical connections to established theories (Hair, Risher, Sarstedt & Ringle, 2019). Before the analysis, several tests were carried out. The first refers to the common bias method, which aims to analyze whether the variances are due to the way in which the constructs are measured instead of what they represent (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). To this end, the single factor test by Harman (1976) was applied, which assesses how many of the variables observed can be explained by a single factor. Since it is not indicated that the majority of the variance is explained by a single factor, the result of the analysis should give a value of less than 50%. For this study, the main factor extracted in the exploratory analysis explains 24.09% of the variances, which meets the indication.

In addition, the non-response bias was tested in order to verify differences in the constructs between first and last respondents. The results indicate that there are no significant differences when comparing the 10 initial and final respondents (p values between 0.907 and 0.191), the 20 initial and final (p values between 0.425 and 0.857) and the initial and final half (p values between 0.131 and 0.674). Finally, the minimum sample size was calculated using the G*Power software, following recommendations of 80% statistical power and median effect size, with $f^2 = 0.15$ (Ringle, Silva & Bido, 2014; Hair, Hult, Ringle & Sarstedt, 2017). Considering that the latent variables of the model receive two predictors, the minimum result is 68 observations, lower than the number of respondents obtained for this study.

4 Results

4.1 Sample characterization

It is observed that 37.5% of respondents are female. 42.7% of respondents work as part of the board or are partners, 17.7% hold management positions, and the remaining work in other areas, such as administrative, finance and sales. 74% of respondents have been working at the startup for more than 2 years. As for the characteristics of startups, most (69.8%) were founded before 2017. The most prominent sector in which they operate is digital technology,

systems and services, which corresponds to 41.7% of startups. Regarding revenues, in Brazilian currency, 29.2% of the companies have sales of less than or equal to \$ 360 thousand, 44.8% greater than \$ 360 thousand and less than or equal to \$ 3.6 million, 12.5% greater than \$ 3.6 million and less than or equal to \$ 300 million, and the others did not respond. Finally, 40.6% of startups have up to 10 employees, 51% between 11 and 50, and 8.4% over 50 employees.

4.2 Measurement model

The evaluation of the measurement model is carried out based on the criteria of reflective models. To this end, the validity and reliability criteria were evaluated. Regarding the convergent validity, we observe the Average Variance Extracted (AVEs), which must be greater than 0.50 (Fornell & Larcker, 1981). To meet this initial criterion, adjustments are made to the model, consisting of excluding indicators from the constructs related to transformational (6) and transactional (5) leadership, which has been observed in previous research for this construct (Altoé, Pacheco & Espejo, 2018; Cruz, Frezatti & Bido, 2015). Indicators of the constructs referring to divergent (3) and convergent (4) thinking are also excluded. After such adjustments, all constructs meet the AVE criterion > 0.5 (Table 1).

Table 1. Correlation matrix between latent variables (n = 96)

Panel A: First order variables							
	1	2	3	4	5	6	7
1 - Job performance	0,764						
2 - Transformational leadership	0,692***	0,708					
3 - Transactional leadership	-0,058	-0,105	0,765				
4 - Divergent thinking	0,319***	0,361***	-0,137	0,747			
5 - Convergent thinking	0,225*	0,090	0,271*	-0,025	0,742		
6 - PBP	0,294***	0,353***	0,061	0,213**	0,084	0,785	
7 - SPE	0,331***	0,374***	-0,028	0,400***	0,194*	0,542***	0,820
Cronbach alfa	0,909	0,923	0,886	0,630	0,728	0,689	0,835
Composite reliability	0,926	0,933	0,907	0,787	0,829	0,828	0,891
Average Variance Extracted (AVE)	0,584	0,502	0,584	0,559	0,550	0,616	0,672
Panel B: Second order variables							
	Correlations		Cronbach alfa	Composite reliability	Average Variance Extracted (AVE)		
	1	2					
1 - Job performance	0,875		0,909	0,926	0,584		
2 - Incentives	0,360***	0,711	0,834	0,866	0,765		

Notes: (i) Diagonal values are the square root of the AVE. (ii) PBP - Performance Based Pay; SPE - Subjective Performance Evaluation. (iii) The moderating variables (PBP and SPE) must meet the evaluation criteria of the measurement model. However, their interaction terms (Moderation of PBP and SPE) do not need to meet such criteria (Hair et al., 2017). (iv) Correlations indicated with *, **, *** are significant at 10%, 5% and 1%, respectively.

Then, internal consistency is analyzed using Cronbach's

Alpha and Composite Reliability (Ringle et al., 2014). If such indicators present values, respectively, above 0.6 and 0.7, they are considered adequate and, for values of 0.7 and 0.9, they are satisfactory. Finally, the discriminant validity at the level of latent variables must have a square root of the AVEs (diagonal in Table 1, Panels A and B) greater than the correlations with the other latent variables (Fornell & Larcker, 1981). Furthermore, the discriminant validity at the level of the indicators (Table 2) requires that their factor loadings be greater in the respective constructs than in the others (Chin, 1998). It is verified that the criteria of internal consistency and discriminant validity are met.

Table 2. Factor loading matrix (crossloadings)

	1	2	3	4	5	6	7
1 - Job performance	0,735	0,401	-0,195	0,284	0,124	0,236	0,264
	0,683	0,450	-0,038	0,264	0,117	0,229	0,256
	0,805	0,516	-0,034	0,159	0,119	0,219	0,235
	0,838	0,530	-0,028	0,300	0,176	0,221	0,265
	0,816	0,610	-0,078	0,268	0,199	0,297	0,296
	0,705	0,484	-0,069	0,145	0,252	0,087	0,180
	0,632	0,427	0,110	0,127	0,146	0,145	0,103
	0,759	0,675	0,046	0,320	0,189	0,271	0,341
	0,873	0,591	-0,113	0,268	0,214	0,276	0,280
2 - Transformational leadership	0,516	0,802	-0,088	0,399	0,073	0,283	0,409
	0,492	0,573	-0,154	0,174	-0,093	0,374	0,299
	0,584	0,793	-0,069	0,299	0,047	0,190	0,191
	0,460	0,748	0,066	0,284	0,054	0,271	0,131
	0,502	0,695	-0,026	0,222	0,102	0,167	0,162
	0,393	0,674	-0,073	0,168	0,112	0,159	0,059
	0,498	0,737	-0,154	0,214	0,217	0,366	0,348
	0,443	0,731	-0,025	0,328	0,068	0,336	0,307
	0,462	0,718	-0,066	0,223	-0,024	0,348	0,248
	0,451	0,739	-0,216	0,257	0,015	0,292	0,328
	0,665	0,714	-0,044	0,275	0,092	0,285	0,341
	0,479	0,702	-0,076	0,202	0,087	0,225	0,354
0,400	0,643	-0,127	0,181	-0,024	0,086	0,178	
0,545	0,613	-0,089	0,170	0,079	0,069	0,273	
3 - Transactional leadership	0,061	0,129	0,609	0,098	0,091	0,342	0,153
	-0,006	-0,055	0,845	-0,158	0,236	0,074	-0,045
	-0,086	-0,139	0,842	-0,103	0,214	-0,027	-0,040
	0,126	0,119	0,656	-0,049	0,169	0,077	0,071
	-0,024	-0,027	0,871	-0,163	0,179	0,083	-0,025
	-0,089	-0,071	0,719	0,005	0,063	0,175	0,090
	-0,170	-0,252	0,770	-0,105	0,293	-0,016	-0,077
	0,320	0,341	-0,153	0,777	-0,025	0,141	0,293
4 - Divergent thinking	0,155	0,106	-0,012	0,856	-0,094	0,200	0,342
	0,198	0,289	-0,091	0,582	-0,138	0,184	0,322
	0,123	0,070	0,159	0,064	0,706	0,037	0,108
5 - Convergent thinking	0,151	0,068	0,181	0,032	0,652	-0,045	0,078
	0,102	0,045	0,298	-0,136	0,817	0,117	0,152
	0,275	0,085	0,151	-0,003	0,782	0,114	0,215

6 - PBP	0,307	0,298	-0,044	0,261	0,051	0,760	0,350
	0,174	0,284	0,226	0,223	0,134	0,811	0,462
	0,223	0,254	-0,053	0,028	0,009	0,783	0,456
7 - SPE	0,193	0,290	0,016	0,282	0,183	0,486	0,851
	0,325	0,411	-0,050	0,395	0,137	0,335	0,808
	0,280	0,260	-0,003	0,405	0,203	0,510	0,885
		0,280	-0,062	0,223	0,104	0,433	0,728

Notes: (i) All factor loadings are significant at 1%. (ii) Only the factor loadings of the first-order variables are presented (Bido & Silva, 2019).

Transformational -> Convergent Transactional -> Convergent	1b (0)	0,015	0,120	0,114	1,047	0,295	0,068
	1c (+)	0,087	0,283	0,140	2,030	0,042	
Divergent -> Performance Convergent -> Performance Incentives -> Performance Moderation 1(a) Moderation 2(b)	2a (+)	0,063	0,220	0,088	2,495	0,013	0,304
	2b (+)	0,059	0,201	0,094	2,132	0,033	
	-	0,075	0,245	0,116	2,100	0,036	
	3a (-)	0,047	-0,194	0,167	1,164	0,244	
	3b (+)	0,131	0,312	0,175	1,782	0,075	

Note: VIF values are between 1.01 and 1.203.

(a) Moderation of incentives in the relationship between divergent thinking and job performance.

(b) Moderation of incentives in the relationship between convergent thinking and job performance.

Initially, there is a negative correlation between opposite constructs, that is, between transformational leadership and transactional leadership and between divergent thinking and convergent thinking. There are also positive and significant correlations between divergent thinking with transformational leadership and convergent thinking with transactional leadership (Panel A - Table 1). Due to the positive and significant correlation between the incentives (PBP and SPE), it was decided to consider them as a second-order variable, which is consistent with the understanding that these two incentive mechanisms are complementary in companies dependent on creativity (Grabner, 2014). The evaluation of the measurement model for the second-order variable, as shown in Panel B of Table 1, is segregated from the first-order variables, with manual calculation of the AVE and composite reliability (Bido & Silva, 2019).

4.3 Structural model

To estimate the structural model, the complete bootstrapping with 5,000 samples is calculated to assess whether the paths are significant (Bido & Silva, 2019; Hair et al., 2017). In this first subsection, the results of direct effects (H1 and H2) are analyzed, then the results of the moderating variables (H3) are discussed.

4.3.1 Direct effects

One of the first aspects that can be observed in the model are the VIF (Variance Inflation Factor) values that serve as an indication of the existence of collinearity between the variables. The present model meets this parameter, as the values are less than 5 (Hair et al., 2017) (see Note in Table 3). Then, the f^2 values that indicate the size of the effect are analyzed. Values that reach 0.02 are considered small, 0.15 medium and 0.35 large (Cohen, 1988). Regarding the explained variance of the endogenous variables, the adjusted R^2 is used as a parameter. Values that reach 2% are considered small, 13% medium and 26% large (Cohen, 1988).

Table 3. Structural model results (n = 96)

	Hypotheses	f^2	Structural coefficient	Standard error	Value-t	Value-p	R^2 adjusted
Transformational -> Divergent Transactional -> Divergent	1a (+)	0,141	0,350	0,088	3,979	0,000	0,122
	1d (0)	0,011	-0,100	0,129	0,773	0,440	

When analyzing H1a, the effect size is small, close to medium ($f^2 = 0.141$). It is also verified that the structural coefficient (0.350) indicates a positive relationship between the variables. Since this relationship is significant (p value = 0.000), support for H1a is obtained, confirming a positive relationship between transformational leadership and divergent thinking. However, although negative, there is no significant relationship between transactional leadership and divergent thinking, consistent with H1d. The explained variance of the endogenous divergent thinking variable is 12.2%, approaching an average value.

In the relationship proposed in H1c, the coefficient value is 0.283 and the effect size is small, with f^2 of 0.087. In this case, support is also obtained for H1c, as the relationship is significant at the 95% level (p value = 0.043), indicating a positive relationship between transactional leadership and convergent thinking. It is also noticed that the association between transformational leadership and convergent thinking is not significant, consistent with H1b. The explained variance of the convergent thinking endogenous variable is small in size, with an adjusted R^2 of 6.8%. In summary, these results are consistent with the argument of this study that managers with divergent versus convergent thinking demand different leadership profiles (Liu et al., 2003; Bono & Judge, 2004).

The proposed relationship in H2a has a small effect size ($f^2 = 0.063$). Considering the structural coefficient of 0.220 and that the relationship is significant (p value = 0.013), support for H2a is obtained, confirming a positive relationship between divergent thinking and job performance. Analyzing H2b, the effect size is also small, with an f^2 of 0.059 and a structural coefficient of 0.201. Due to the significant relationship (p value = 0.033), support is obtained for H2b, indicating a positive relationship between convergent thinking and job performance. Together with the moderating variables, the explained variance of the endogenous job performance variable is 30.4%, which is considered a large size value.

Regarding the effects observed between the association of leadership styles and creative thinking styles, it is

noted that in the case of startups, the pattern pointed out in the literature is also verified, in which transformational leadership is more associated with divergent thinking and transactional leadership to convergent thinking (Speckbacher, 2017; Anderson et al., 2014). Furthermore, these results are consistent with this study's argument that both styles of creative thinking contribute to job performance (e.g., Lu et al., 2017) and corroborate studies in startups that indicate that creativity positively influences the performance at work (Kaveski & Beuren, 2020).

4.3.2 Moderating Effects

The first analysis emphasizes the moderating effect of the use of incentives on the relationship between divergent thinking and job performance (H3a). The VIF values meet the parameters indicated in the literature. The values referring to effect sizes in moderation differ from direct effects, considering an f^2 value that reaches 0.005 as small, 0.010 as medium and 0.025 as large (Kenny, 2018). Regarding H3a, it appears that the effect size can be considered large ($f^2 = 0.047$) and that the value of the structural coefficient is -0.194. Observing that the relationship is not significant (p value = 0.244), there is no support for H3a, that is, the association between divergent thinking and job performance is not influenced by the use of incentives.

As for the moderating effect of the use of incentives on the relationship between convergent thinking and job performance (H3b), there is also an effect size considered large ($f^2 = 0.121$). The structural coefficient is 0.302 and, as it is significant (p value = 0.075), support is obtained for H3b, that is, the positive association between convergent thinking and job performance is greater, the greater the use of incentives. Figure 2 allows the visualization of the studied moderating effect. It is noticed that greater use of incentives strengthens the positive relationship between convergent thinking and job performance.

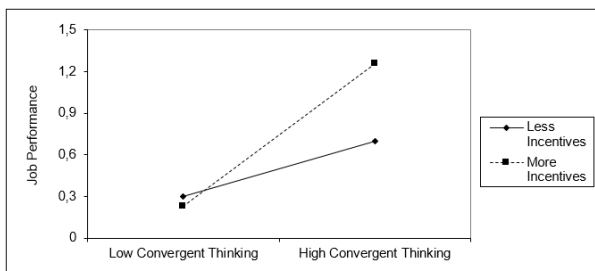


Figure 2. Moderating effect of incentives

In summary, these results are consistent with the arguments in this study that the association between creative thinking and job performance depends on incentives (Jung, 2001). Consistent with the greater complexity in measuring processes and/or results and the greater importance of intrinsic motivation for divergent over convergent thinking (Amabile, 1988; 1996), the use of incentives tends to be less effective in improving work performance

for divergent thinking than for convergent thinking.

More recent research has considered the use of management controls in startups more comprehensively, for example, internal and contextual factors as antecedents to the adoption of control systems (Crespo et al., 2019) and the comprehensibility of performance evaluation systems as predictor of individual creativity (Frare & Beuren, 2021). In this sense, the present study advances by indicating which effects that specific incentives, such as the joint adoption of pay for performance and subjective performance evaluation, have on the general performance at work. Due to the fact that both divergent and convergent thinking styles produce positive effects on the job performance of the analyzed startups, it is evident that the use of incentives is more efficient in tasks involving convergent thinking.

5 Conclusion

This study examines the role of leadership and the use of incentives in the creative thinking of startup managers. By collecting data through survey and analyzing it using structural equations, the results indicate that different styles of creative thinking demand different leadership profiles. The results further demonstrate that both styles of creative thinking are positively related to job performance. Finally, the use of incentives affects the relationship between creative thinking and job performance differently depending on the style of creative thinking.

These results have relevant implications for organizations dependent on creativity, such as startups (Solomon, 2010). On the one hand, this study provides empirical evidence supporting the role of leadership in stimulating creative processes (Liu et al., 2003; Bono & Judge, 2004). However, consistent with previous expectations (Jung, 2001; Speckbacher, 2017), the results suggest that certain leadership profiles may be more appropriate for different styles of creative thinking. Specifically, transformational leadership is positively associated with divergent thinking and not associated with convergent thinking; while transactional leadership is positively associated with convergent thinking and not related to divergent thinking. Therefore, organizations interested in stimulating divergent (converged) creative processes can benefit from the adoption of transformational (transactional) leadership. In summary, achieving a fit between leadership profile and creative thinking style can be fundamental for organizations to stimulate desired levels of creativity.

On the other hand, this study offers empirical evidence that the effect of creativity on work performance depends on the use of incentives. Particularly, increased use of incentives enhances the positive association between convergent thinking and job performance, but does not affect the relationship between divergent thinking and job performance. These results are consistent with the

greater measurement complexity and greater importance of intrinsic motivation for divergent thinking compared to convergent thinking (Amabile, 1988; 1996). Thus, in organizations that value divergent thinking, although not detrimental to work performance, the use of incentives can be inefficient, as the organization may be spending resources on structuring and paying incentives without obtaining additional benefits associated with these incentives. In summary, the results of this study suggest that organizations need to consider the desired creative thinking style when using incentives to motivate managers.

Some characteristics are often attributed to startups, such as innovative and fast-growing. In startups in the scale-up phase, this process is even more evident, as they seek greater coverage in their operations. In this sense, achieving the objectives of such companies can start from the association between the type of leadership and the level of creativity that the activities require. For example, in the case of tasks that demand greater creativity, such as identifying potential new markets, a transformational leadership style can produce better results. On the other hand, in tasks that demand a lower level of creativity, such as choosing one among several financing alternatives or accelerators, the help of transactional leadership style, combined with the use of incentives, can be more productive.

As with any study, this research has limitations that provide opportunities for further research. First, the definition of creativity involves two complementary perspectives: product and process (Amabile, 1996). While it is important to go beyond the prevailing view of creativity as a product (Speckbacher, 2017; Aguiar & Suave, 2020) and emphasize the definition of process, as developed in this study, it may be equally relevant to consider both perspectives simultaneously. One way to combine these perspectives is to define performance in terms of the level of creativity of the products resulting from the creative process, which did not occur in this research that uses a measure of performance at work. Future studies could examine both the creative process and the creative performance associated with that process.

Second, the two styles of creative thinking can be seen as iterating to develop creative ideas (Berg, 2016), being complementary. Consistent with previous studies (e.g., Jung, 2001) and with the arguments of this study, one of the two styles of creative thinking is assumed to predominate among managers and, therefore, does not examine an eventual interaction between them. Future research can be dedicated to the investigation of this interaction and its effects on the generation of creative ideas, potentially using qualitative approaches.

Third, this study emphasizes a type of organization (startups) for whom creativity tends to be relevant and seeks to examine factors that can stimulate (leadership) creative processes and enhance (incentives) their effects

on performance. However, there may be organizations for which creativity needs to be restricted (Speckbacher, 2017) and, thus, understanding the role of leadership and the use of incentives in these organizations may be equally relevant. Finally, the limitations inherent in the use of the survey method are mentioned, highlighting, among others, the possibility of bias in the answers due to the lack of understanding of the questions.

References

- Abstartups. (2020). Por dentro do StartupBase. Disponível em: <https://abstartups.com.br/por-dentro-do-startupbase/>. Acesso em: 22/04/2020.
- Afsar, B., Badir, Y. F., Saeed, B. B., & Hafeez, S. (2017). Transformational and transactional leadership and employee's entrepreneurial behavior in knowledge-intensive industries. *The International Journal of Human Resource Management*, 28(2), 307-332. <https://doi.org/10.1080/09585192.2016.1244893>
- Aguiar, A. B., & Suave, R. (2020). Pesquisa sobre Criatividade em Contabilidade Gerencial: Visão Geral e Oportunidades de Pesquisa no Contexto Brasileiro. *Revista de Educação e Pesquisa em Contabilidade (REPEC)*, 14(1), 5-13. <https://doi.org/10.17524/repec.v14i1.2565>
- Altoé, S. M. L., Pacheco, V., & Espejo, M. M. dos S. B. (2018). Estilos de liderança e o uso do sistema de controle gerencial: evidências do nível de formação de gestores de topo. *Advances in Scientific & Applied Accounting*, 11(2), 224-245. <https://asaa.anpcont.org.br/index.php/asaa/article/view/420/pdf>
- Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45(2), 357-376. <https://doi.org/10.1037/0022-3514.45.2.357>
- Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, 10(1), 123-167.
- Amabile, T. M. (1996). *Creativity in context: Update to the social psychology of creativity*. Westview press.
- Amabile, T. M. (1997). Motivating creativity in organizations: on doing what you love and loving what you do. *California Management Review*, 40(1), 39-58. <https://doi.org/10.2307/41165921>
- Amabile, T. M. (1998). *How to kill creativity*. Boston, MA: Harvard Business School Publishing.
- Amabile, T. M., & Khaire, M. (2008). Creativity and the role of the leader. *Harvard Business Review*. <https://hbr.org/2008/10/creativity-and-the-role-of-the-leader>
- Anderson, N., Potočník, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science

- review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297-1333. <https://doi.org/10.1177/0149206314527128>
- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership. *Journal of Occupational and Organizational Psychology*, 72(4), 441-462. <https://doi.org/10.1348/096317999166789>
- Baker, G. P., Jensen, M. C., & Murphy, K. J. (1988). Compensation and incentives: Practice vs. theory. *The Journal of Finance*, 43(3), 593-616. <https://doi.org/10.1111/j.1540-6261.1988.tb04593.x>
- Basadur, M. (1997). Organizational development interventions for enhancing creativity in the workplace. *The Journal of Creative Behavior*, 31(1), 59-72. <https://doi.org/10.1002/j.2162-6057.1997.tb00781.x>
- Basadur, M. S. (1993). Impacts and outcomes of creativity in organizational settings. In S. G. Isaksen, M. C. Murdock, R. L. Firestein, and D. J. Treffinger (Eds.), *Nurturing and developing creativity: The emergence of a discipline* (pp. 278-313). Norwood, NJ: Ablex.
- Basadur, M., & Finkbeiner, C. T. (1985). Measuring preference for ideation in creative problem-solving training. *The Journal of applied behavioral science*, 21(1), 37-49. <https://doi.org/10.1177/002188638502100104>
- Bass, B. M. (1985). Leadership: Good, better, best. *Organizational dynamics*, 13(3), 26-40. [https://doi.org/10.1016/0090-2616\(85\)90028-2](https://doi.org/10.1016/0090-2616(85)90028-2)
- Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3), 19-31. [https://doi.org/10.1016/0090-2616\(90\)90061-5](https://doi.org/10.1016/0090-2616(90)90061-5)
- Berg, J. M. (2016). Balancing on the creative highwire: Forecasting the success of novel ideas in organizations. *Administrative Science Quarterly*, 61(3), 433-468. <https://doi.org/10.1177/0001839216642211>
- Bharadwaj, S., & Menon, A. (2000). Making innovation happen in organizations: individual creativity mechanisms, organizational creativity mechanisms or both? *Journal of Product Innovation Management: An International Publication of the Product Development & Management Association*, 17(6), 424-434. <https://doi.org/10.1111/1540-5885.1760424>
- Bido, D. de S., & da Silva, D. (2019). SmartPLS 3: especificação, estimação, avaliação e relato. *Administração: Ensino e Pesquisa*, 20(2), 1-31. <https://doi.org/10.13058/raep.2019.v20n2.1545>
- Bol, J. C. (2008). Subjectivity in Compensation Contracting. *Journal of Accounting Literature*, 27, 1-24.
- Bono, J. E., & Judge, T. A. (2004). Personality and transformational and transactional leadership: a meta-analysis. *Journal of applied psychology*, 89(5), 901-910. <http://dx.doi.org/10.1037/0021-9010.89.5.901>
- Brickley, J., Smith, C., & Zimmerman, J. (2009). *Managerial economics and organizational architecture*. McGraw-Hill Education.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295-336). Lawrence Erlbaum Associates.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. 2. ed. New York: Psychology Press.
- Crespo, N.F., Rodrigues, R., Samagaio, A., & Silva, G.M. (2019). The adoption of management control systems by start-ups: internal factors and context as determinants. *Journal of Business Research*, 101, 875-884. <https://doi.org/10.1016/j.jbusres.2018.11.020>
- Cropley, A. (2006). In praise of convergent thinking. *Creativity Research Journal*, 18(3), 391-404. https://doi.org/10.1207/s15326934crj1803_13
- Cruz, A. P. C. D., Frezatti, F., & Bido, D. D. S. (2015). Estilo de liderança, controle gerencial e inovação: Papel das alavancas de controle. *Revista de Administração Contemporânea*, 19(6), 772-794. <https://doi.org/10.1590/1982-7849rac2015150099>
- Deichmann, D., & Stam, D. (2015). Leveraging transformational and transactional leadership to cultivate the generation of organization-focused ideas. *The Leadership Quarterly*, 26(2), 204-219. <https://doi.org/10.1016/j.leaqua.2014.10.004>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Frare, A.B., & Beuren, I.M. (2021). Fostering individual creativity in startups: comprehensive performance measurement systems, role clarity and strategic flexibility. *European Business Review*, Ahead of print. <https://doi.org/10.1108/EBR-11-2020-0262>
- Gong, Y., Huang, J. C., & Farh, J. L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. *Academy of Management Journal*, 52(4), 765-778. <https://doi.org/10.5465/amj.2009.43670890>
- Grabner, I. (2014). Incentive system design in creativity-dependent firms. *The Accounting Review*, 89(5), 1729-1750. <https://doi.org/10.2308/accr-50756>
- Grabner, I., & Speckbacher, G. (2016). The cost of creativity: A control perspective. *Accounting, Organizations and Society*, 48, 31-42. <https://doi.org/10.1016/j.aos.2016.03.001>

aos.2015.11.001

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling*. 2. ed. Thousand Oaks: Sage.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>

Harman, H. H. (1976). *Modern factor analysis*. University of Chicago press.

Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology*, 78(6), 891-902. <http://dx.doi.org/10.1037/0021-9010.78.6.891>

Hughes, D. J., Lee, A., Tian, A. W., Newman, A., & Legood, A. (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *The Leadership Quarterly*, 29(5), 549-569. <https://doi.org/10.1016/j.leaqua.2018.03.001>

Im, S., Montoya, M. M., & Workman Jr, J. P. (2013). Antecedents and consequences of creativity in product innovation teams. *Journal of Product Innovation Management*, 30(1), 170-185. <https://doi.org/10.1111/j.1540-5885.2012.00887.x>

Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: a meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755-768. <http://dx.doi.org/10.1037/0021-9010.89.5.755>

Jung, D. I. (2001). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal*, 13(2), 185-195. https://doi.org/10.1207/S15326934CRJ1302_6

Kachelmeier, S. J., & Williamson, M. G. (2010). Attracting creativity: The initial and aggregate effects of contract selection on creativity-weighted productivity. *The Accounting Review*, 85(5), 1669-1691. <https://doi.org/10.2308/accr.2010.85.5.1669>

Kachelmeier, S. J., Reichert, B. E., & Williamson, M. G. (2008). Measuring and motivating quantity, creativity, or both. *Journal of Accounting Research*, 46(2), 341-373. <https://doi.org/10.1111/j.1475-679X.2008.00277.x>

Kaveski, I.D.S. & Beuren, I.M. (2020). Influence of management control systems and creativity on job performance. *Journal of Business Ethics*, 18(3), 543-556, <https://doi.org/10.1590/1679-395120190024x>

Kenny, D. A. (2018). Moderation. Disponivel em: <http://davidakenny.net/cm/moderation.htm>

Kuhnert, K. W., & Lewis, P. (1987). Transactional and transformational leadership: A constructive/developmental analysis. *Academy of Management Review*, 12(4), 648-657. <https://doi.org/10.5465/amr.1987.4306717>

Lazear, E. P., & Gibbs, M. (2008). *Personnel Economics in Practice*. John Wiley & Sons.

Liu, W., Lepak, D. P., Takeuchi, R., & Sims Jr, H. P. (2003). Matching leadership styles with employment modes: Strategic human resource management perspective. *Human Resource Management Review*, 13(1), 127-152. [https://doi.org/10.1016/S1053-4822\(02\)00102-X](https://doi.org/10.1016/S1053-4822(02)00102-X)

Lu, J. G., Akinola, M., & Mason, M. F. (2017). "Switching On" creativity: Task switching can increase creativity by reducing cognitive fixation. *Organizational Behavior and Human Decision Processes*, 139, 63-75. <https://doi.org/10.1016/j.obhdp.2017.01.005>

Muzzio, H., & Paiva Júnior, F. G. (2018). Organizational Creativity Management: Discussion Elements. *Revista de Administração Contemporânea*, 22(6), 922-939. <https://doi.org/10.1590/1982-7849rac2018170409>

Nonaka, I. (1991). The knowledge-creating company. *Harvard Business Review*, 69(6), 96-104.

Pieterse, A. N., Van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior*, 31(4), 609-623. <https://doi.org/10.1002/job.650>

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>

Prendergast, C. (1999). The provision of incentives in firms. *Journal of economic literature*, 37(1), 7-63. <https://doi.org/10.1257/jel.37.1.7>

Rank, J., Nelson, N. E., Allen, T. D., & Xu, X. (2009). Leadership predictors of innovation and task performance: Subordinates' self-esteem and self-presentation as moderators. *Journal of Occupational and*

Organizational Psychology, 82(3), 465-489. <https://doi.org/10.1348/096317908X371547>

Revilla, E. (2019). O dilema da criatividade. *RAE-Revista de Administração de Empresas*, 59(2), 149-153. <https://doi.org/10.1590/S0034-759020190207>

Ringle, C. M., Silva, D. da, & Bido, D. D. S. (2014). Modelagem de equações estruturais com utilização do SmartPLS. *Revista Brasileira de Marketing*, 13(2), 56-73. <https://doi.org/10.5585/remark.v13i2.2717>

Shambaugh, R. (2019). How to unlock your team's creativity. *Harvard Business Review*. <https://hbr.org/2019/01/how-to-unlock-your-teams-creativity>

Solomon, Y. (2010). *From startup to maturity: A case study of employee creativity antecedents in high tech companies*. Capella University.

Sosik, J. J., Kahai, S. S., & Avolio, B. J. (1998). Transformational leadership and dimensions of creativity: Motivating idea generation in computer-mediated groups. *Creativity Research Journal*, 11(2), 111-121. https://doi.org/10.1207/s15326934crj1102_3

Speckbacher, G. (2017). Creativity research in management accounting: A commentary. *Journal of Management Accounting Research*, 29(3), 49-54. <https://doi.org/10.2308/jmar-51754>

Tieppo, G. M. de S., Reis, G. G., & Picchiali, D. (2016). Mozart, Rock e a Ativação da Criatividade. *Revista de Administração Contemporânea*, 20(3), 261-282. <https://doi.org/10.1590/1982-7849rac2016140048>

Venkatesh, R., & Blaskovich, J. (2012). The mediating effect of psychological capital on the budget participation-job performance relationship. *Journal of Management Accounting Research*, 24(1), 159-175. <https://doi.org/10.2308/jmar-50202>

Zhang, W., Sun, S. L., Jiang, Y., & Zhang, W. (2019). Openness to experience and team creativity: Effects of knowledge sharing and transformational leadership. *Creativity Research Journal*, 31(1), 62-73. <https://doi.org/10.1080/10400419.2019.1577649>

Zhang, X., & Bartol, K. M. (2010). The influence of creative process engagement on employee creative performance and overall job performance: A curvilinear assessment. *Journal of Applied Psychology*, 95(5), 862-873. <https://doi.org/10.1037/a0020173>