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Relationship of Personality Traits and Individual Creativity in Management Performance: Evidence in Innovative Companies

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ABSTRACT

This study analyzed the relationship between personality traits, mediated by individual creativity, and work performance (task and contextual) in innovative companies. The study was carried out through a questionnaire conducted with 183 people in managerial roles, whose responses were analyzed using the Structural Equations technique. The findings show that openness to experience and neuroticism are significant traits of individual creativity, unlike agreeableness, extraversion, and conscientiousness. Only a positive and indirect relationship was found between the personality traits openness to experience and contextual performance, indicating that creativity is not a relevant mediating variable in the relationship between personality traits and work performance. The results contribute to the management accounting literature by discussing the relationship between personality traits, creativity, and work performance. However, the need for organizations to promote the creativity of their managers is highlighted with a view to stimulating their performance, both task and contextual.

KEYWORDS:

Openness to experience; extraversion; neuroticism; agreeableness; conscientiousness; task performance; contextual performance.

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Received: 24/02/2025.

Revised: 06/04/2025.

Accepted: 21/04/2025.

DOI: <https://doi.org/10.15728/bbr.2024.1842.en>



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Relação dos Traços de Personalidade e Criatividade Individual no Desempenho no Trabalho: Evidências em Empresas Inovadoras

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RESUMO

Esta pesquisa analisou a relação entre traços de personalidade e criatividade individual com o desempenho no trabalho (de tarefas e contextual) em empresas inovadoras. O estudo foi operacionalizado por meio da aplicação de um questionário a 183 gestores, cujas respostas foram analisadas por meio da técnica de Equações Estruturais. Os achados evidenciam que a abertura à experiência e o neuroticismo são traços significativos da criatividade individual, ao contrário da amabilidade, extroversão e conscienciosidade. Constatou-se apenas uma relação positiva e indireta entre os traços de personalidade, abertura à experiência e o desempenho contextual, apontando que a criatividade não é uma variável mediadora relevante na relação entre traços de personalidade e desempenho no trabalho. Os resultados contribuem com a literatura de contabilidade gerencial ao discutir a relação de traços de personalidade, criatividade e desempenho no trabalho; porém, ressalta-se a necessidade de as organizações promoverem a criatividade dos gestores com vistas a estimular seu desempenho, tanto de tarefas como contextual.

PALAVRAS-CHAVE:

Abertura à experiência; extroversão; neuroticismo; amabilidade; conscienciosidade; desempenho de tarefas; desempenho contextual.

1. INTRODUCTION

To achieve organizational objectives, it is essential to monitor employee job performance. Job performance refers to the results achieved by an employee over a specific period (Yang & Hwang, 2014) and can be evaluated from task and contextual perspectives. Task performance pertains to situations where individuals meet organizational goals by adopting predefined behaviors. Contextual performance occurs when individuals voluntarily undertake certain tasks, often beyond their assigned duties (Yang & Hwang, 2014). Various individual factors are considered drivers of job performance (Pandey, 2018), and in complex and dynamic business environments, individual creativity is one such factor.

Individual creativity is a resource that enhances both individual (Pattnaik & Sahoo, 2020; Karaboga et al., 2022) and organizational performance. It is posited that creative individuals can devise new solutions to problems and challenges, enabling them to work more effectively in task completion and, consequently, improve their performance (Ismail et al., 2019). However, the relationship between creativity and performance is not automatic but depends on individual and/or organizational factors that can support or constrain it (Amabile, 1996). For example, Myszkowski et al. (2015) indicate that cognitive ability and personality traits are antecedents of creativity, while Sarma and Borooah (2021) further consider them drivers of individual creativity.

Therefore, the explanation for why certain individuals stand out and act differently likely stems from personality traits (Sarma & Borooah, 2021). In the literature, several models investigate personality traits, with the Big Five Model being one of the most utilized (Sarma & Borooah, 2021). The 'big five' encompass five personality dimensions: agreeableness (willingness to maintain positive interpersonal relationships with others); extraversion (behavior that is assertive, energetic, sociable, talkative, and warm); conscientiousness (behavioral patterns characterized by planning, organization, diligence, determination, and efficiency); openness to experience (receptivity to

new ideas and intellectual curiosity); and neuroticism (tendency to be anxious, depressed, self-conscious, and impulsive) (Yao & Li, 2021).

Some research asserts that personality is an antecedent or even a driver of individual creativity (Saihani et al., 2009; Amin et al., 2020; Yao & Li, 2021); however, the manner in which creativity relates to personality trait dimensions remains inconclusive (Jirásek & Sudzina, 2021). Generally, the main findings reveal that only the trait of openness to experience emerges as a robust determinant of individual creativity. On the other hand, the effects of other personality traits tend to vary according to different contexts and circumstances.

Given the above, this study investigates the relationship between personality traits, individual creativity, and job performance among managers in innovative organizations. Specifically, the study aims to examine the relationship between personality traits (agreeableness, extraversion, conscientiousness, openness to experience, and neuroticism), mediated by individual creativity, on task and contextual performance of 183 managers from innovative Brazilian companies with national and international reach.

The study contributes in several ways to the literature and managerial practice by expanding knowledge about factors that influence individual creativity. Firstly, it extends the research of Jirásek and Sudzina (2021) by examining how each personality trait relates to creativity, clarifying the psychological mechanisms underlying the generation of innovative ideas and the resolution of creative problems, and highlighting the effects on individual performance. Thus, it aids in identifying personality profiles that are more effective in promoting creativity, facilitating strategies for recruiting and selecting creative teams, as well as developing personalized training programs.

Secondly, by emphasizing individual performance from a bidimensional perspective, the research addresses a neglected issue in the literature: the relationship between creativity and job performance in its task and contextual dimensions (Yang & Hwang, 2014). Previous studies have indicated a connection between individual creativity and employee and manager performance (Kaveski & Beuren, 2020; Pattnaik & Sahoo, 2020; Karaboga et al., 2022); however, they have not explored how this relationship manifests in these two distinct dimensions.

Finally, it is argued that the expected results have the potential to provide insights for managers and employees, enabling them to better understand how different personality traits can influence individual creativity and, consequently, impact performance. This understanding can optimize recruitment and development practices, helping innovative organizations identify and cultivate personality profiles that best align with the specific demands of each dimension of organizational performance.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. PERSONALITY TRAITS AND INDIVIDUAL CREATIVITY

An individual's creativity is understood as the production of ideas, products, or solutions that are both originally novel and contextually appropriate. It is not limited to the generation of innovative ideas but also encompasses their practical and useful application (Amabile, 1996; Moulang, 2015). Creativity is influenced by a complex interaction among personal, environmental, and situational factors, including personality traits. Personality traits are defined as dimensions of individual differences in the tendency to exhibit consistent patterns of thoughts, feelings, and behaviors (Costa & McCrae, 1992). The Big Five personality traits model is one of the most extensively studied frameworks in personality psychology, comprising the dimensions of openness to experience, extraversion, neuroticism, agreeableness, and conscientiousness. The

Big Five is commonly used to understand the relationship between personality and creativity (Jirásek & Sudzina, 2021).

The trait of openness to experience is characterized by receptiveness to new ideas and flexibility, reflecting the degree of intellectual curiosity. Open individuals possess a high adaptive capacity, information-processing ability, and problem-solving skills (Yao & Li, 2021). They are described as open to new ideas, experiences, and perspectives, which leads them to engage in creative activities (Yao & Li, 2021; Sarma & Borooah, 2021).

Several studies have investigated the relationship between openness to experience and creativity (Scratchley & Hakstian, 2001; Saihani et al., 2009; Furnham et al., 2009; Kaufman et al., 2016; Amin et al., 2020; Yao & Li, 2021; Sarma & Borooah, 2021). Scratchley and Hakstian (2001) explored the relationships among creative management performance, cognitive ability, and personality in a sample of 221 managers. They found that openness to experience was a strong predictor of managerial creativity. Saihani et al. (2009) examined the relationship between personality traits and creativity in 482 executives across various sectors. Their findings indicated that executives with higher levels of openness were considered more creative and tended to make more creative decisions. Furnham et al. (2009) analyzed the relationship between personality traits and creativity in 2,603 midto senior level managers from various multinational communication companies. They found a positive relationship between openness to experience and creativity.

Kaufman et al. (2016), using four samples totaling 1,035 participants, investigated the relationship between personality (openness to experience and intellect) and creative achievement in the arts and sciences. Their findings indicated that openness predicted creative achievement in the arts, while intellect predicted creative achievement in science. Amin et al. (2020) studied the impact of the Big Five traits and knowledge gathering behavior on the creativity intention of 294 software developers. Results showed that openness and knowledge gathering behavior positively predicted creative intention. Yao and Li (2021) examined the effects of personality traits on the creativity of 507 employees during probation and permanent employment in mobile telecommunications companies.

Evidence indicated that openness was positively correlated with employee creativity in both work stages. Lastly, Sarma and Borooah (2021) analyzed the impact of personality traits on creativity in various science and technology fields. The results showed that innovative professionals had significantly higher average scores in openness to experience. Based on these studies, it is conjectured that managers of innovative firms, with adaptive capabilities, information-processing skills, and a high degree of intellectual curiosity, are able to consistently explore and coordinate various new ideas and concepts to generate market innovations. Therefore, the following hypothesis is proposed:

- **H_{1a}:** Openness to experience is positively related to the individual creativity of managers in innovative firms.

The personality trait of extraversion reflects assertiveness, sociability, energy, and positive emotions (Costa & McCrae, 1992). Extroverted individuals have high levels of social interaction (Kaspi-Baruch, 2017) and are described as outgoing, enthusiastic, and friendly (Yao & Li, 2021). Extraversion is associated with the generation of new ideas and is therefore considered a trait positively related to creativity (Jirásek & Sudzina, 2021).

Previous evidence (Furnham et al., 2009; Saihani et al., 2009; Chen et al., 2010; Hsieh et al., 2011; Amin et al., 2020; Yao & Li, 2021) supports a positive relationship between extraversion

and creativity. Furnham et al. (2009) and Saihani et al. (2009) confirmed that extraversion is positively related to creativity. Chen et al. (2010) analyzed the influence of personality traits on the innovative behavior of 215 employees in the tourism industry and found that extraversion was significantly related to idea generation in innovative behavior.

Hsieh et al. (2011) examined the relationship among the Big Five traits, innovation, and the mediating role of knowledge management in 550 biotechnology employees. They found that extraversion was positively associated with creative behavior and technological innovation. Finally, Amin et al. (2020) and Yao and Li (2021) confirmed a positive relationship between extraversion and creativity in employees of technology organizations. Based on these findings, it is believed that extraversion positively influences the individual creativity of managers in innovative firms, as they can leverage their social skills, frequently interacting with colleagues to trigger new product development or solve organizational problems. Therefore, the following hypothesis is proposed:

- **H_{1b}**: Extraversion is positively related to the individual creativity of managers in innovative firms.

The trait of neuroticism refers to individuals who are insecure, anxious, and more susceptible to stress (Costa & McCrae, 1992). Studies have shown a negative relationship between neuroticism and creativity (Myszkowski et al., 2015; Amin et al., 2020; Yao & Li, 2021). Myszkowski et al. (2015) examined personality as a predictor of creative problem-solving in management and found that neuroticism was not positively related to managerial creativity. Amin et al. (2020) observed that programmers with high levels of neuroticism lacked creative intentions. Yao and Li (2021) concluded that employees with high neuroticism were not engaged in creative activities, regardless of whether they were in a probationary or permanent employment stage.

However, other studies (Gotz & Gotz, 1979; Gelade, 1997; Saihani et al., 2009; Gao et al., 2020) have identified a positive relationship between neuroticism and individual creativity. Gotz and Gotz (1979) investigated personality characteristics in 257 well known versus lesser known professionals in the arts and found that those renowned for their creative work exhibited higher levels of neuroticism. Gelade (1997) conducted an experiment with two groups of advertising and design professionals (one working in creative roles and the other composed of managers in non-creative occupations) and concluded that professionals in creative roles showed higher trait neuroticism. Saihani et al. (2009) analyzed the influence of personality traits in 482 executives on decision making and concluded that managers with higher trait neuroticism tended to make more creative decisions. Finally, Gao et al. (2020), based on a sample of 202 industrial managers, examined the antecedents and consequences of individual creativity and concluded that a certain degree of neuroticism was optimal for stimulating managerial creativity in innovative firms. Based on this evidence, it is assumed that neuroticism positively influences individual creativity. Managers in innovative firms may rely on their feelings and intuitive senses as resources to guide and define creative processes, particularly in the early stages. Therefore, the following hypothesis is formulated:

- **H_{1c}**: Neuroticism is positively related to the individual creativity of managers in innovative firms.

The trait of agreeableness refers to an individual's tendency to seek acceptance and maintain social affiliations (Costa & McCrae, 1992). It is associated with conformity, meaning a reduced tendency to engage in conflict. From this perspective, agreeableness does not align with creativity, which often requires the rejection of conventional ideas (Feist, 1998). Accordingly, Furnham et al. (2009) found that agreeableness was not a significant trait for creative idea generation among mid- to senior-level managers. Hsieh et al. (2011) indicated that all personality traits except agreeableness had a positive impact on innovation capacity. Similarly, Amin et al. (2020) did not find a significant positive relationship between agreeableness and creativity.

Nonetheless, other studies have found a positive relationship between agreeableness and individual creativity (Saihani et al., 2009; Chen et al., 2010; Myszkowski et al., 2015; Yao & Li, 2021). Saihani et al. (2009) emphasized that managers with high levels of agreeableness make more creative decisions. Chen et al. (2010) suggested that agreeableness facilitates idea generation and promotes innovative behaviors. Myszkowski et al. (2015), in examining personality as a predictor of creative problem-solving in management, found agreeableness to be the most significant trait. Yao and Li (2021) concluded that employees with high agreeableness exhibited creative behavior only during their probationary period. In light of the above, it is assumed that agreeableness positively influences individual creativity. Managers in innovative firms need to demonstrate empathy, maintain respectful relationships with colleagues and subordinates, and present new ideas while involving others in tasks, enabling suggestions that enhance individual creativity. Thus, the following hypothesis is proposed:

- **H_{1d}**: Agreeableness is positively related to the individual creativity of managers in innovative firms.

The trait of conscientiousness reflects an individual's tendency to be organized, responsible, task-oriented, self-disciplined, and compliant with rules and conventional procedures (King et al., 1996). The literature on conscientiousness and creativity presents contradictory findings.

From a negative standpoint, results show that individuals with high conscientiousness, due to their conventional nature, may have limited ability to generate new ideas or think innovatively (Saihani et al., 2009; Yesil & Sozbilir, 2013). Saihani et al. (2009) indicated that managers with high conscientiousness traits did not make creative decisions. Yesil and Sozbilir (2013), analyzing the influence of personality traits on the innovative behavior of 215 employees in small and medium-sized hospitality organizations, concluded that individuals high in conscientiousness were passive regarding innovative behavior. Myszkowski et al. (2015) found that individuals with high conscientiousness had greater difficulty generating ideas to solve managerial problems.

Conversely, Hsieh et al. (2011) suggested that conscientiousness positively impacts innovation capacity, indicating that employees with this trait are more creative. Amin et al. (2020) noted that programmers high in conscientiousness exhibited creative intentions that led to creative behaviors. Yao and Li (2021) likewise observed that conscientious employees were creative at work. Therefore, it can be inferred that conscientiousness positively influences individual creativity. Creative thinking requires time and effort, and thus, well-prepared, persistent, and dedicated managers are better able to improve product quality and service effectiveness. Hence, the following hypothesis is proposed:

- **H_{1e}**: Conscientiousness is positively related to the individual creativity of managers in innovative firms.

Job performance assesses an individual based on their objectives, focusing on whether the results achieved align with established expectations. It can be observed from two perspectives: task performance (the execution of duties as defined by the job description) and contextual performance (courtesy behaviors that do not directly contribute to overall performance but improve the psychological and social aspects of the organization) (Yang & Hwang, 2014).

Job performance can be enhanced by creativity, as this ability allows individuals to approach challenges from new perspectives and develop innovative solutions. Creative individuals are capable of devising new ways to solve problems, enabling them to perform tasks more effectively and, consequently, improve their overall performance (Ribeiro et al., 2018; Ismail et al., 2019).

Studies have shown a positive relationship between creativity and job performance (Ribeiro et al., 2018; Ismail et al., 2019; Kaveski & Beuren, 2020). Ribeiro et al. (2018) provide a comprehensive understanding of how authentic leadership influences individual performance through creativity, using data from 177 leader-follower dyads across 26 organizations. Their results indicate that the creativity of both leaders and subordinates contributes to job performance. Ismail et al. (2019) explored the impact of commitment and creativity on the performance of 186 employees, finding that individuals with creative ideas are more likely to achieve higher levels of job performance. Kaveski and Beuren (2020) analyzed the influence of management control systems on job performance, mediated by individual creativity, and found a positive relationship between creativity and managers' performance.

From the perspective of task performance, Pattnaik and Sahoo (2020) examined the mediating effect of creativity on the relationship between employee engagement and task performance, using data from 396 employees in an information technology organization. Their results indicate that employee creativity mediates the relationship between engagement and task performance. Similarly, Karaboga et al. (2022) found, in a sample of 322 individuals from different economic sectors, that individual creativity plays a mediating role in the relationship between personal accomplishment and task performance.

Regarding contextual performance, Yıldız and Dirik (2017) found that managerial innovation and job satisfaction positively contribute to the contextual performance of 166 employees. González (2021), based on a sample of 95 employees in a higher education institution, analyzed the influence of human capital (measured through creativity, competencies, and collaboration) on contextual performance. The findings show that the greater the employees' ability to innovate and be creative, the better their contextual performance. Considering this evidence, the following hypotheses are proposed:

- **H₂:** The individual creativity of managers in innovative firms is positively related to (a) task performance and (b) contextual performance.

2.3. PERSONALITY TRAITS, CREATIVITY, AND JOB PERFORMANCE

Individuals perform assigned tasks based on personal behaviors, meaning that different personalities may lead to different levels of performance (Yang & Hang, 2014). Therefore, the relationship between personality traits and job performance is not linear (Sartori et al., 2017; Bhatia & Rawat, 2019; Dai et al., 2019; Gupta & Gupta, 2020; Gridwichei et al., 2020; Sarwoko & Nurfarida, 2021).

Sartori et al. (2017) investigated the relationship between personality traits and job performance among employees and found that conscientiousness and extraversion had the strongest impact on performance, compared to agreeableness and openness to experience. Bhatia and Rawat (2019) found that traits such as extraversion, neuroticism, and openness to experience had a positive and significant effect on job performance, whereas agreeableness and conscientiousness had a negative impact. Dai et al. (2019) highlighted that, among upper management, extraversion, agreeableness, conscientiousness, and openness to experience had a positive impact on job performance, while the effect of neuroticism was found to be inconsistent. Gupta and Gupta (2020) identified a positive relationship between agreeableness and conscientiousness and employee performance. Gridwichei et al. (2020), when studying employees in the pharmaceutical industry, found that those with traits such as conscientiousness, openness to experience, and agreeableness tended to perform better, whereas extraversion and neuroticism had no effect. Finally, Sarwoko and Nurfarida (2021) indicated that only managers of small and medium-sized enterprises (SMEs) who exhibited high levels of extraversion, conscientiousness, and openness to experience achieved higher performance levels.

Given the lack of consensus, creativity may serve as a mediating factor, as employees who become more creative tend to develop innovative behaviors to solve daily problems (Amabile, 1996), which in turn positively affects their job performance. Furthermore, tasks perceived as uninteresting may reduce individuals' motivation to think creatively when solving problems, potentially leading to performance issues (Ismail et al., 2019). Therefore, it is conjectured that personality traits influence individual performance both directly and indirectly. Based on this, the following hypothesis is proposed:

- **H₃:** The individual creativity of managers in innovative firms mediates the relationship between personality traits and their job performance.

3. METHODOLOGICAL PROCEDURES

3.1. RESEARCH SAMPLE

The sample consisted of managers, coordinators, and directors holding leadership and management positions in 183 organizations affiliated with ANPEI (National Association for Research and Development of Innovative Companies). The minimum required sample size was calculated using G*Power 3.1.9.7 software, applying a test power of 0.95 and a medium effect size of 0.15, resulting in a required minimum of 138 responses. Connections with respondents were established through LinkedIn. Thus, the criteria for composing the sample were: (1) verifying whether the organizations were registered with ANPEI; (2) identifying registered managers in these organizations using keywords such as “managers,” “directors,” “supervisors,” and “coordinators”; and (3) inviting them to participate in the study.

A total of 906 managers were invited. Of these, 752 accepted a LinkedIn connection request from one of the study's authors. Subsequently, a research presentation letter was sent, and 243 managers agreed to complete the questionnaire. The instrument was then sent to them between December 16, 2022, and February 25, 2023. A total of 188 responses were collected, but five were excluded due to being incomplete, resulting in a final sample of 183 valid responses.

The data collection instrument consisted of two parts. The first included three blocks (personality traits, individual creativity, and job performance); the second comprised questions aimed at characterizing the respondents.

The 20 statements used to measure personality traits were adapted from Costa and McCrae (1992), with four items representing each factor. For example: agreeableness – “I always do my best to help others”; conscientiousness – “I try to give my best in everything I do”; neuroticism – “I usually feel anxious”; openness to experience – “I enjoy trying new things”; and extraversion – “I am communicative.” These statements were measured on a 5 point Likert scale (1: strongly disagree to 5: strongly agree). Higher scores indicate a stronger tendency toward a specific personality trait.

To measure individual creativity, eight items based on Moulang (2015) were used. These items assessed the extent to which they reflect the manager’s creativity. An example is: “I frequently have creative ideas,” measured on a 5 point Likert scale (1: almost never to 5: almost always). Higher scores reflect greater individual creativity.

Job performance included task performance and contextual performance items adapted from Yang and Hwang (2014). The task performance scale contained five items, such as: “I achieve the goals assigned to me.” The contextual performance scale consisted of eight items, for example: “I actively help my colleagues with their work.” These items assessed how well managers’ performance aligned with the described situations, measured on a 5 point Likert scale (1: strongly disagree to 5: strongly agree). Higher scores indicate better job performance.

The instrument also included statements designed to identify characteristics of the respondent and the organization. Regarding the respondents, questions addressed gender, age, education level, field of study, length of time working at the organization, and duration in the current position. For the organization, questions addressed location, number of employees, industry sector, and service scope.

It is worth noting that all items in the instrument were self-reported by the same participants, which may lead to common method bias. According to Hair Jr. et al. (2019), one way to enhance response accuracy is to provide objective instructions and an informative summary. To mitigate this bias, the questionnaire was preceded by guidance indicating that there were no right or wrong answers. Additionally, as recommended by Podsakoff et al. (2012), the items were written clearly, avoiding ambiguous terms, and scales with different anchors were used to prevent respondents from adopting a uniform response pattern. However, these procedures only reduce, but do not eliminate, common method bias. As such, this represents a limitation of the study, and is acknowledged as a limitation of the research.

To analyze the data, Partial Least Squares Structural Equation Modeling (PLS-SEM) was used. This technique explains relationships among multiple variables by examining a structure of interrelated paths, similar to a series of multiple regression equations (Hair Jr. et al., 2019).

4. RESULTS

4.1. SAMPLE CHARACTERISTICS

Table 1 presents the characteristics of the respondents and their organizations.

Table 1.

Characteristics of Respondents and Organizations (n: 183)

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PANEL A – RESPONDENTS					
Gender	n	%	Field of Study	n	%
Male	103	56.28%	Business Administration	40	21.86%
Female	80	43.72%	Accounting	43	23.50%
			Economics	18	9.83%
			Other	82	44.81%
Age Range	n	%	Management Level	n	%
Up to 30 years	75	40.77%	Junior	34	18.58%
31 to 40 years	67	36.61%	Mid-Level	52	28.42%
41 to 60 years	30	16.61%	Senior	97	53.00%
Over 60 years	11	6.01%			
Position	n	%	Years with the Company	n	%
Manager	75	40.98%	Up to 2 years	29	15.85%
Director	27	14.76%	2 to 8 years	47	25.68%
Supervisor	51	27.87%	8 to 16 years	62	33.88%
Coordinator	30	16.39%	Over 16 years	45	24.59%
Education	n	%	Time in Position	n	%
Bachelor's Degree	48	25.02%	Up to 2 years	71	38.80%
Bachelor's in Progress	16	8.74%	2 to 8 years	35	19.12%
Completed Specialization	40	21.86%	8 to 16 years	56	30.60%
Specialization in Progress	9	4.92%	Over 16 years	21	11.48%
Master's Degree	35	19.12%			
Master's in Progress	7	5.07%			
PhD	19	10.35%			
PhD in Progress	9	4.92%			
PANEL B – ORGANIZATIONS					
Size	n	%	Years in Business	n	%
Small	9	4.92%	Up to 20 years	4	2.19%
Medium	69	37.70%	20 to 60 years	16	8.74%
Large	105	57.38%	60 to 100 years	53	28.96%
			Over 100 years	110	60.11%
Industry Sector	n	%	Location	n	%
Industry	90	49.18%	Central-West	11	6.01%
Commerce and Services	56	30.60%	Northeast	12	6.56%
Commerce, Services, and Industry	37	20.22%	North	16	8.74%
			Southeast	72	39.34%
			South	27	14.75%
			More than 1 location	45	24.60%

Table 1.
Cont.

PANEL B – ORGANIZATIONS					
Competitive Strategy	n	%	Scope	n	%
Differentiation	38	20.77%	Local	3	1.63%
Focus	44	24.04%	Regional	29	15.85%
Cost Leadership	27	14.75%	National	35	19.10%
More than 1 strategy	74	40.44%	International	23	12.57%
			More than 1 region	93	50.85%

Source: Research Data.

It is emphasized that men were the majority of the; that the respondents' age is most concentrated in the first and second age ranges; that all managers have a high level of education; and that there is a high representation of senior managers. As for the organizations, most are large-sized; a large portion of them have long market longevity; most are in the industrial sector; and more than half are based in the South and Southeast regions of Brazil.

4.2. STRUCTURAL EQUATIONS

The assessment of the measurement model involves measuring the individual loadings of the items, composite reliability, average variance extracted (AVE), and discriminant validity. Satisfactory coefficients for external factor loadings should be greater than 0.7; for composite reliability, values may range between 0.70 and 0.90; for the AVE of each construct, it should be above 0.50 (Hair Jr. et al., 2019). It is important to note that, in the initial evaluations, it was necessary to exclude some items that presented low cross-loadings, resulting in statistically insufficient values for composite reliability and AVE. Fifteen items were excluded, considering the alignment of loadings below 0.70 and the content of each one. These were 2 items from each dimension of openness to experience, extraversion, agreeableness, conscientiousness, and individual creativity, 3 items from task performance, and 3 from contextual performance. The final measurement model is presented in Table 2.

Table 2.
Validities of the Measurement Model

Variable	Indicators	Convergent Validity		Internal Consistency	Discriminant Validity
		External Loadings	AVE	Composite Reliability	HTMT does not include value 1
Agreeableness	AGR1	0.865			
	AGR2	0.736	0.526	0.763	Yes
	AGR5	0.537			
	NEUR1	0.860			
Neuroticism	NEUR2	0.902			
	NEUR3	0.790	0.632	0.895	Yes
	NEUR4	0.752			
	NEUR5	0.647			

Table 2.
Cont.

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Variable	Indicators	Convergent Validity		Internal Consistency		Discriminant Validity
		External Loadings	AVE	Composite Reliability		HTMT does not include value 1
Conscientiousness	CONS1	0.718				
	CONS2	0.848	0.559	0.790		Yes
	CONS3	0.665				
Openness	OPEN1	0.786				
	OPEN2	0.688	0.549	0.785		Yes
	OPEN3	0.747				
Extraversion	EXTR1	0.686				
	EXTR2	0.796	0.515	0.760		Yes
	EXTR5	0.665				
Individual Creativity	CREAT2	0.480				
	CREAT4	0.640				
	CREAT5	0.879	0.541	0.872		Yes
	CREAT6	0.847				
	CREAT7	0.683				
Task Performance	CREAT8	0.806				
	TP1	0.759				
	TP2	0.732	0.519	0.763		Yes
	TP4	0.667				
Contextual Performance	CP1	0.755				
	CP3	0.668				
	CP4	0.857	0.531	0.849		Yes
	CP5	0.689				
	CP7	0.657				

Source: Research Data.

After the removal of items, it was observed that the values for composite reliability and AVE were above 0.7 and 0.5, respectively, and thus satisfactory (Hair Jr. et al., 2019). It is also noted that Cronbach's Alpha was met, with all variables exceeding 0.7. Regarding discriminant validity, Hair Jr. et al. (2019) suggest checking the correlation between constructs through the Heterotrait-Monotrait (HTMT) ratio. The results indicate that all constructs are distinct, as in all latent variables, the HTMT confidence interval does not include the value 1.

For the evaluation of the measurement model, structural relationships, Pearson's determination coefficients (R^2), predictive relevance (Q^2), effect sizes (f^2), and the variance inflation factor (VIF) were analyzed (Hair Jr. et al., 2019).

Table 3.
Direct Relationships

Relationships	β	t-value	p-value	Q^2	R^2	f^2	VIF
Openness → Creativity	0.339	4.290	0.000	0.188	0.252	0.101	1.525
Extraversion → Creativity	0.109	1.183	0.237			0.100	1.681

Table 3.*Cont.*

Relationships	β	t-value	p-value	Q^2	R^2	f^2	VIF
Neuroticism → Creativity	0.166	2.872	0.004			0.035	1.060
Agreeableness → Creativity	0.100	0.999	0.318			0.090	1.409
Conscientiousness → Creativity	-0.041	0.487	0.626			0.020	1.399
Creativity → Contextual Performance	0.436	6.741	0.000	0.157	0.190	0.235	1.00
Creativity → Task Performance	0.270	4.053	0.000	0.089	0.073	0.079	1.00

Note: Effect size f^2 : ≥ 0.02 small, ≥ 0.15 medium, and ≥ 0.35 large; Recommended value for VIF < 5 ; Explained variance R^2 : 0.02 representing a small effect, 0.13 a medium effect, and 0.26 a large effect; $Q^2 > 0$ (Hair Jr. et al., 2019).

Source: Research Data.

The determination coefficients of the endogenous variables (individual creativity, contextual performance, and task performance) do not exceed 0.26, which allows us to state that the model has a moderate explanatory power for individual creativity (25.2%) and contextual performance (19%), and a small explanatory power for task performance (7.3%). However, the model shows predictive relevance, with Q^2 values related to the constructs above 0. Similarly, all f^2 values are below 0.35, indicating medium effects, except for conscientiousness, which shows a small effect. Finally, the VIF values demonstrate that there is no collinearity among the variables.

Table 4.*Hypothesis*

Structural Relationship	Effect Type	β	t-test	p-value	Mediation Type
OPEN→CREAT→TP	Direct	0.014	0.136	0.892	No mediation
	Indirect	0.018	0.887	0.375	
OPEN→CREAT→CP	Direct	-0.149	1.739	0.082	Partial mediation
	Indirect	0.062	2.064	0.039	
NEUR→CREAT→TP	Direct	0.249	3.362	0.001	
	Indirect	0.010	0.648	0.517	
NEUR→CREAT→CP	Direct	0.291	4.283	0.000	
	Indirect	0.033	1.548	0.122	
AGR→CREAT→TP	Direct	0.093	1.054	0.292	
	Indirect	0.006	0.422	0.673	
AGR→CREAT→CP	Direct	0.320	3.746	0.000	
	Indirect	0.021	0.661	0.508	
EXTR→CREAT→TP	Direct	0.326	3.142	0.002	No mediation
	Indirect	0.011	0.648	0.517	
EXTR→CREAT→CP	Direct	0.322	3.582	0.000	
	Indirect	0.039	1.321	0.187	
CONS→CREAT→TP	Direct	-0.068	0.755	0.450	
	Indirect	0.005	0.493	0.622	
CONS→CREAT→CP	Direct	-0.167	1.832	0.067	
	Indirect	-0.018	0.723	0.470	

Source: Research Data.

Next, the discussion of the results is presented.

Hypothesis H_{1a} proposed a positive relationship between openness to experience and individual creativity, which was confirmed by the results. This finding is aligned with previous studies (Saihani et al., 2009; Amin et al., 2020; Yao & Li., 2021; Sarma & Borooah, 2021), which confirmed openness to experience as the most significant predictor of creativity. Furthermore, it was found that this trait is beneficial for creative performance, especially when there are multiple ways to solve a problem.

Openness to experience refers to the tendency towards intellectual curiosity (Amin et al., 2020). Therefore, individuals with a high score in this trait are curious about trying new things, think unconventionally, and easily work with abstract concepts, while those with a low score are uninterested in variety and unreceptive to new ideas. Thus, it can be inferred that creative managers are open to experiences, which may be due to the nature of their work, which often involves testing and regularly coordinating different ideas and concepts to generate innovations in a highly competitive market.

Another confirmed hypothesis was H_{1c} , which proposed a positive relationship between neuroticism and individual creativity. Neuroticism refers to the situation where the individual is insecure, anxious, and more susceptible to stress (Costa & McCrae, 1992). This evidence confirms the findings of Saihani et al. (2009) and Gao et al. (2020), who state that creative managers trust their feelings and intuitive sense, and generally use these as resources to guide and define creative processes and decision-making. Thus, it can be inferred that respondents have levels of neuroticism that are beneficial for openness to new ideas and creativity at work.

Regarding the hypotheses for the other traits (H_{1b} : extraversion, H_{1d} : agreeableness, and H_{1e} : conscientiousness), the statistical results show no significant relationships with individual creativity. The rejection of H_{1b} contradicts Hsieh et al. (2011), who identify extraversion as the second most significant predictor of creativity after openness to experience. If the fact that managers are more ambitious and focus their energy on interacting with their external environments or other people facilitates their creativity, this reasoning may not be valid in innovative companies.

The rejection of H_{1d} is consistent with the research of Hsieh et al. (2011) and Amin et al. (2020), who suggest a negative relationship between agreeableness and individual creativity. Thus, it is argued that although agreeableness was not proven to be a significant factor which directly promotes the respondent's creativity, its influence can certainly be observed indirectly through how one might interact with others in the organization, collaborate in teams, and face interpersonal and creative challenges in the organizational environment.

The non-confirmation of H_{1e} allows us to infer that, since the respondents are managers in innovative organizations, they likely perceive that the environment they are in values characteristics such as openness to experience (as confirmed by H_{1a}), creative thinking ability, and leadership skills that promote an environment of experimentation and innovation. In such organizations, managers need to face unpredictable changes, and flexibility and adaptability may be more important than the rigidity associated with high conscientiousness.

H_2 proposed a positive relationship between individual creativity and the dimensions of work performance (a: tasks and b: contextual), which was statistically confirmed. Previous studies (Ismail et al., 2019; Kaveski & Beuren, 2020) indicate that employees who adopt creative ideas and skills are more likely to achieve high levels of job performance. Specifically, creativity induces a flexible work atmosphere that encourages individuals to engage in extra roles and discretionary behaviors, known as contextual performance (Yıldız & Dirik, 2017). It can thus be inferred that the creativity of managers in innovative companies not only improves their individual performance

in terms of task achievement but also strengthens their ability to contribute beyond their job responsibilities for the overall success of the organization, positively influencing organizational culture, adaptation to changes, and the capacity for continuous innovation.

The third hypothesis postulated that individual creativity mediates the relationship between personality traits and job performance. When analyzing the direct impact of personality traits on job performance (tasks and contextual), it was observed that extraversion and neuroticism directly affect both dimensions, while the others only directly influence contextual performance. These findings reinforce the complexity of the relationship between personality traits and job performance (Yang & Hwang, 2014; Kaveski & Beuren, 2020). However, through individual creativity, it was expected that this complexity would be overcome, as several studies have validated the mediating role of creativity (Ribeiro et al., 2018; Kaveski & Beuren, 2020; Pattnaik & Sahoo, 2020). Nonetheless, the results did not confirm consistent mediating effects of individual creativity in the relationship between personality traits and the dimensions of performance. It was only found that creativity partially mediates the relationship between the impact of openness to experience and contextual performance. This means that, in order for managers with high levels of agreeableness, extraversion, conscientiousness, and neuroticism to have a high level of job performance, they would not necessarily need to generate creative ideas.

5. CONCLUSIONS

This study analyzed the relationship between personality traits, individual creativity, and job performance of 183 people in managerial roles from innovative companies. The results highlight that openness to experience and neuroticism are significant traits for individual creativity, unlike agreeableness, extraversion, and conscientiousness. A positive and indirect relationship was found only between the trait of openness to experience and contextual performance, indicating that creativity is not a relevant mediating variable in the relationship between personality traits and job performance.

These results contribute to the literature by showing that characteristics such as intellectual curiosity and the ability to think unconventionally (related to openness to experience) are fundamental for creative performance in corporate environments. Moreover, the findings regarding neuroticism in creativity suggest that, at moderate levels, anxiety and insecurity may facilitate creative processes by stimulating greater intuitive and emotional exploration, a finding that broadens the understanding of the literature on the interaction between personality traits and creative performance.

For organizational practice, the confirmation that openness to experience is a key factor for creativity suggests that organizations should cultivate environments that encourage intellectual curiosity and the willingness to explore new ideas and approaches. Recruitment and selection practices can be adapted to identify employees with high levels of this trait, as well as training programs aimed at developing creative and innovative skills. Regarding neuroticism, organizations may consider that, at moderate levels, this trait can be beneficial, provided it is properly managed, encouraging confidence in intuitive processes without compromising the psychological well-being of managers. Furthermore, since the results show that creativity does not solely depend on traits such as extraversion and conscientiousness, organizations can rethink their traditional approaches to leadership development and the relative importance of certain personal characteristics in the context of innovation.

Finally, this study provides relevant guidance for managers themselves on how to develop and enhance their creative skills in the workplace. This is because the results suggest that by cultivating characteristics of openness to experience, individuals can improve their creative performance, which can translate into greater job satisfaction and professional fulfillment. Moreover, by indicating that creativity does not solely depend on traits such as extraversion or conscientiousness, but can also be linked to subtler characteristics such as neuroticism, the research provides a reflection on self-perception, encouraging managers to recognize and use their emotional vulnerabilities as creative resources. This understanding may lead to a better balance between personal and professional development, promoting well-being and, consequently, more effective performance at work.

This study has some limitations. Firstly, it uses the Big Five model as the basis for personality traits. Therefore, it is recommended to use other models, such as HEXACO, to expand the literature on the antecedents and consequences of individual creativity. Another aspect is that the literature suggests that contextual performance is related to personality and motivation, while task performance is related to cognitive ability and experience. Thus, it is recommended that future studies investigate creativity and both task and contextual performance, considering the Big Five as an antecedent of contextual performance and demographic characteristics (e.g., job experience, managerial level) as antecedents of task performance.

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AUTHOR'S CONTRIBUTION

MKA: Conceptualization & Methodology; **LK:** Conceptualization & Methodology; **EAS:** Writing – original draft & Writing – review & editing; **IDSK:** Writing – review and editing.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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DATA AVAILABILITY STATEMENT

The datasets related to this article will be available upon request to the author.