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**The moderating role of the Leader in the Relationship between
Telework and Proactive Performance**

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Master in Management

Supervisor:

PhD, Ana Luísa Junça da Silva, Assistant Professor

Iscte – Instituto Universitário de Lisboa

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BUSINESS
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Department of Marketing, Operation and Management

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Resumo

Desde 2020, o mundo tem sofrido mudanças significativas, especialmente no ambiente de trabalho. A mudança para o teletrabalho exigiu que as organizações, os líderes e os colaboradores se adaptassem rapidamente a este novo regime de trabalho. No entanto, apesar da crescente utilização de regimes de trabalho flexíveis, como o teletrabalho e o trabalho híbrido, são escassos os estudos que exploraram o papel do líder na relação entre o teletrabalho e o desempenho proativo. Assim, pretendendo colmatar esta lacuna, esta investigação pretendeu analisar o papel moderador da liderança transformacional e transacional na relação entre teletrabalho e desempenho proativo. Esta investigação é relevante para compreender como estes estilos de liderança podem influenciar a tendência dos colaboradores para serem proactivos e performativos num ambiente de teletrabalho. Para tal, foi realizado um inquérito online, recolhendo dados de 201 colaboradores que se encontravam em teletrabalho. Os resultados mostraram que o teletrabalho influenciou positivamente o desempenho proativo. Além disso, tanto a liderança transformacional como a transacional desempenharam um papel importante nesta relação. Especificamente, verificou-se que os teletrabalhadores que tinham líderes transformacionais e transacionais mais elevados tendiam a ser mais proativos. Do ponto de vista teórico, os resultados destacam que a combinação de ambos estilos de liderança aumenta os níveis de desempenho proativo de quem trabalha em teletrabalho. Além disso, as conclusões têm implicações práticas relevantes porque a interação entre estilos de liderança sugere que uma abordagem de liderança integrada pode melhorar o desempenho proativo em ambientes de teletrabalho.

Palavras-chave: Teletrabalho, Performance Proativa, Liderança Transformacional, Liderança Transacional

Códigos de Classificação JEL: O15 – Recursos Humanos, D23 – Comportamento Organizacional

Abstract

Since 2020, the world has been through significant changes, especially in the workplace. The shift to telework required organizations, leaders and employees to quickly adapt to this new work arrangement. However, despite the increasing use of flexible work arrangements, such as telework and hybrid work, scarce studies have explored the role of the leader in the relationship between telework and proactive performance. As such, intending to fill this gap, this research intended to analyse the moderating role of transformational and transactional leadership on the relationship between telework and proactive performance. This research is relevant for understanding how these leadership styles can influence employees' tendency to be proactive and perform in a teleworking environment. To achieve this, an online survey was conducted, gathering data from 201 employees who were teleworking. The results showed that telework positively influenced proactive performance. Moreover, both transformational and transactional leadership played an important role in this relationship. Specifically, it was found that teleworkers who had higher transformational and transactional leaders tended to be more proactive. From a theoretical point of view, the results highlight that the combination of both leadership styles increases proactive performance levels for those who telework. In addition, the findings have relevant practical implications because the interaction between leadership styles suggests that an integrated leadership approach can enhance proactive performance in teleworking environments.

Keywords: Telework, Proactive Performance, Transformational Leadership, Transactional Leadership

JEL Classification System: O15 – Human Resources, D23 – Organizational Behavior

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1. Introduction

In the last few years, the world has experienced several transformative events that have changed the global panorama and, as a result, the way people work. The breakout of the COVID-19 pandemic in 2020 has not only thrown the world order into chaos but also brought challenges to traditional work systems and leadership paradigms. This pandemic imposed lockdowns and distancing measures forcing businesses of all sizes and industries to quickly shift to telework (Howe et al. 2020).

Telework allows employees to perform their jobs outside of traditional office environments, offering flexibility and autonomy (Figueiredo et al., 2021). Despite its growing popularity, teleworks' influence on different dimensions of employee performance remains a topic of considerable debate and scholarly study (Junça-Silva et al., 2024). While some studies have demonstrated the positive impact of telework on adaptive (e.g., Taskan et al., 2024) and task performance (Park & Cho, 2022), scarce attention has been devoted to proactive performance. Proactive performance is the extent to which individuals engage in self-starting, future-oriented behavior to change their work situations, roles, or themselves (e.g. when someone initiates better job performance; Griffin et al., 2007). This dimension of performance has become increasingly critical for organizations as they navigate through rapid technological changes, globalization, and unpredictable crises. Similar to adaptive performance, proactive performance is a change-oriented behavior (Griffin et al., 2010) and, as such, is crucial for new work arrangements, as telework is (Hackney et al., 2022).

This crisis also highlighted the importance of leadership to efficiently manage employees through these situations while also encouraging them to be adaptable and proactive (Dirani et al., 2020). It is clear that the traditional leadership paradigm, characterized by hierarchical control and in-person supervision is not effective to meet the changes that have taken place in the work environment (Samad et al., 2022). Inspiring and motivating teleworkers has not been as important as now, and with it, the need to empower them to be proactive in managing digital tools is relevant for organizations and employees.

The full-range leadership model (FRLM; Bass, 1985) identifies two positive leadership styles (transformational and transactional leadership) and one negative (laissez-faire). Accordingly, transactional leadership focuses on rewards and

performance monitoring and provides the discipline and guidance necessary (Bass and Avolio, 1994). Transactional leaders lead through social exchange; for example, they lead by exchanging rewards and recognition for creative ideas and productivity (Bass & Avolio, 1994). In contrast, transformational leadership is the ability to inspire, motivate, and foster innovation, which has been shown to improve employee performance, commitment and satisfaction (Bass, 1985). Transformational leaders are people who show individual consideration to followers and inspire them to be at their best and develop their own leadership skills (Bass & Riggio, 2006). Both transformational and transactional leadership styles appear to be relevant for a wide range of outcomes, including performance (Gunawan et al., 2024). However, their role under telework settings is, to the best of our knowledge, unknown. Plus, their interactive effect, particularly in a telework setting, is less understood.

Therefore, aiming to fill this gap in the literature, this study utilized the FRLT to explore the interactive effects of transformational and transactional leadership on the relationship between telework and proactive performance. It is proposed that teleworkers who have transformational leaders and, at the same time, experience transactional behaviors from them, will tend to be more proactive at work. Thus, this study aimed to test a moderated moderation model hypothesizing that transactional leadership would moderate the moderation effect of transformational leadership in the relationship between telework and proactive performance. By investigating these interactions, the study seeks to provide a comprehensive understanding of how different leadership styles can either mitigate or exacerbate the effects of telework regarding proactive performance.

Since the world is undergoing significant transformations as a result of this global challenge, the choice of this theme is timely and relevant. Investigating how leadership fits these challenges not only contributes to the understanding of contemporary leadership dynamics but also provides practical insights for organizations and leaders seeking to overcome these obstacles. The findings of this study will contribute to the existing body of knowledge on telework, leadership, and proactive performance.

First, we extend leadership theory by examining the role of both transformational and transactional leadership styles have under telework settings. We contend that the interaction between transformational leadership - characterized by idealized influence, inspirational motivation, intellectual stimulation, and individual consideration – and transactional leadership – characterized by contingent reward and management by

exception – will be a condition that will enhance the beneficial effects of telework on proactive performance. By focusing on change-oriented behaviors (i.e., proactive performance), we also elucidate the followers' role in this process.

Second, we advance proactive behavior theory by identifying a critical predictor of proactive performance. Previous research has mainly explored the outcomes of proactive behaviors or personality, such as positive affect (Bakker & Van Woerkom, 2018). In this study, we investigate a significant antecedent: telework. Moreover, by examining the leader's role and determining when telework most effectively fosters proactive performance also contributes to expand what is known about proactive performance. We propose that telework is most beneficial for proactive behaviors when employees have both transformational and transactional leaders.

To answer the research question and the objectives outlined before, the present dissertation is structured as follows. First, the literature review will support the investigation and will serve as a foundation for the development of the research hypotheses. Second, the methodology is described and includes the procedure, participants and instruments used to test the model. Afterwards, the research findings will be described and then discussed. Lastly, the limitations of the research, with some suggestions for future research as well as some practical implications, will be outlined.

2. Literature review

2.1 Telework

Telework emerged in the United States in the 70s in the context of an economic recession and increases in costs related to energy resources; therefore, it was seen as a suitable strategy that could potentially benefit both organizations and employees (Ganhão, 2022). However, it was in the 1990s that academic discussions on telework began to proliferate, driven by Nilles (1994), who coined the term telecommuting to describe performing work tasks remotely through telecommunications, eliminating the need for physical presence at the workplace. Telecommuting was a way of “moving the work to the workers instead of moving the workers to work” (Nilles, 1998, p.1). Globally, there are diverse other concepts referred to as telework, such as telecommuting, home office, homeworking, e-work or remote work, with all having the same meaning (Wang et al., 2020).

In Portuguese law, telework is, at the moment, defined as “the provision of work under legal subordination of the employee to an employer, in a place not determined by the latter, through the use of information and communication technologies” (Código do Trabalho, 2009, Art. 165, §1). Therefore, it is a form of work carried out from home or any place chosen by the employee that is distant from the organization.

In Portugal, the first organization to adopt this flexible work arrangement was Portugal Telecom in 1995, now known as Altice Portugal, the national telecommunications company (Figueiredo et al., 2021). However, it wasn't until 2003 that a legal framework for teleworking was established, prompted by The European Framework Agreement on Telework (Rebelo et al., 2024). These policies outlined telework conditions, technology usage, equal opportunities, privacy rights, and collective representation (Santos & Pereira, 2023). The legal framework has remained largely unchanged from 2003 until 2021, with only a few modifications during that period (Rebelo et al., 2024).

Despite significant technological advancements in this century, telework was surprisingly underutilized before 2020, with only 5% of the EU working population fully engaging in it (Eurostat, 2018). This is particularly striking given that 57% of workers reported using ICT (Information and Communication Technologies) to a medium or high degree of intensity, according to Eurofound's Sixth European Working

Conditions Survey (2017). The Netherlands, Luxembourg and Finland had the highest rates of telework, with about 12% of their population participating. In contrast, Portugal had just 6% - slightly above the EU average – due to telework being limited to very specific organizational and functional contexts, such as managerial ones (Santos & Pereira, 2023).

Despite technological advances, it was the COVID-19 pandemic in 2020 that made telework a strategic substitute for in-person work (Junça-Silva & Coelho, 2023). This health and socio-economic crisis profoundly impacted the lives of millions of people, leading to the widespread adoption of telework across many countries and sectors (Howe et al. 2020). To protect public health and sustain economic operations, telework became mandatory in many countries, including Portugal (Figueiredo et al., 2021), as long as it was compatible with the worker's activity (Rebelo et al., 2024). When confronted with this situation and striving to sustain their operations, the majority of organizations transitioned to telework without any previous preparation. This preparation was, however, fundamental not only for the organizations but also for employees, since the vast majority had no previous experience with teleworking (Figueiredo et al., 2021).

Since 2020, research on telework has significantly increased (Park & Cho, 2022), revealing it to be a crucial strategy for organizations during and after the pandemic crisis (Taskan et al., 2024). What was initially considered a short-term solution has evolved into a permanent feature of modern organizations. The number of people teleworking has been steadily growing, making it an essential practice in today's business environment. For example, many organizations have adopted hybrid work models, which combine remote, and in-person work to leverage the benefits of both systems (Hopkins & Bardoel, 2023).

In summary, the positive experience with telework, driven by the pandemic, is likely to continue in the future. A PwC study (2020) indicated that approximately 75% of Portuguese CEOs believe that telework is “here to stay”, despite the need for efforts and organizational changes, particularly in management policies.

2.1.1 Benefits and disadvantages

The literature highlights both benefits and disadvantages associated with telework, though these vary across studies. It is common to differentiate these impacts across three scopes: individuals (employees), organizations, and society. Based on the study by Figueiredo et al (2021), Table 2.1 summarizes these elements.

Table 2.1 Benefits and disadvantages of telework.

Adapted from Figueiredo et al., 2021

	Benefits	Disadvantages
Employees	<ul style="list-style-type: none">• Schedule flexibility• Reduced travels• More autonomy• More focus and productivity• Motivation and professional satisfaction• Reduced risk of illnesses and accidents• Work-life balance• Costs reductions	<ul style="list-style-type: none">• Isolation• Lack of technical support from the organization• External distractions• Stress Psychological exhaustion• Difficulties in career progression• Unfavorable ergonomic conditions• Lack of work visibility• Time and work overload• Domestic noises• Greater risk of losing your job
Organizations	<ul style="list-style-type: none">• Increase of productivity• Cost reductions• Reduced infrastructures• Null absenteeism• Retention of competence• Increase of motivation• Organizational flexibility• Decentralization of services	<ul style="list-style-type: none">• Costs of implementing telework• Worker exploration• Data and information security• Difficulty in supervise and coordinate work
Society	<ul style="list-style-type: none">• Employment opportunities for workers with disabilities• Contribution to combating unemployment• Reduction in public transport charges• Reduction in road network maintenance costs• Traffic relief in cities and large centers• Reduction of pollution levels• Solving parking problems• Decongestion of services• Offering virtual services• Social inclusion• Response to the phenomenon of globalization	<ul style="list-style-type: none">• Lack of supervision of working conditions• Economic impacts (commerce, services...)

From the table above and other studies, common benefits for employees include schedule flexibility, autonomy in managing their work, increased focus and employee' performance, and a better work-life balance (Bosua et al., 2013; Gunawan et al., 2024).

This supports the notion that teleworkers can more effectively balance their job tasks with family responsibilities, such as caring for children, pets and managing household tasks (Fagan et al. 2012; Junça-Silva et al., 2022a). Another commonly identified benefit is cost reduction, as employees can save money on transportation, gas, meals and clothing (Taschetto & Froehlich, 2019).

Conversely, telework presents challenges for employees, including limited access to technical support, reduced visibility to managers, and less recognition for their work, which can hinder career progression. However, the most significant challenge remains the potential increase in stress, emotional exhaustion, and feelings of isolation due to prolonged periods spent working alone (Bosua et al., 2013; Fagan et al. 2012).

From the organizational perspective, telework has proven to be invaluable, particularly during the COVID-19 pandemic, allowing many organizations to not only maintain operations but also to survive (Lipták et al., 2023). Furthermore, telework continues to be a beneficial strategy as it enables organizations to achieve cost reductions in areas such as physical space rental, equipment, parking and energy consumption (Greer et al., 2023). Moreover, it positively impacts key organizational metrics such as productivity, employee motivation, and reduced absenteeism (Fagan et al. 2012; Souza et al, 2018).

Nevertheless, telework can pose several challenges. It often requires significant changes in how managers coordinate and supervise their employees, and it may increase the risk to the security of organizations' confidential data (Taschetto & Froehlich, 2019; Barros & Silva, 2010). Additionally, Gerding et al. (2021) suggest that organizations should enable employees to acquire ergonomic equipment for their home offices, such as chairs, external monitors, keyboards, and mice, as laptops alone do not provide adequate ergonomic support.

Regarding society at large, both benefits and challenges can be identified with telework. By reducing the need for commuting, it can mitigate traffic congestion and transportation-related pollution, as well as alleviate parking issues in urban areas (Taschetto & Froehlich, 2019). Moreover, telework has the potential to enhance social inclusion and create more employment opportunities for individuals with disabilities and those residing in remote locations (Souza et al, 2018).

Conversely, there are concerns about reduced supervision of working conditions, which could impact employee well-being. Additionally, there may be economic

implications for commerce and service provision, necessitating innovation in commercial practices (Taschetto & Froehlich, 2019; Souza et al, 2018).

All in all, telework has advantages and disadvantages. Striking a balance that maximizes the benefits while effectively addressing the challenges is essential for organizations to harness telework successfully in today's evolving work landscape.

2.2 The relationship between telework and proactive performance

The literature on telework indicates a significant association with job performance, with some authors suggesting a positive relationship (Junça-Silva et al., 2024) while others argue the opposite (Hamouche & Parent-Lamarche, 2022). Most studies have been conducted during the pandemic, which complicates understanding whether these effects persist under normal circumstances. Additionally, research has often focused on specific aspects of job performance, like adaptive and task performance, neglecting proactive performance. Therefore, this study investigates the link between telework and proactive performance.

Job performance is a key focus in organizational research since it measures actions, behaviors and outcomes undertaken by employees at work (Pavalache-Ilie, 2014). It is defined by the way through which behaviors contribute to achieving organizational success (Campbell, 1990). Job performance can be divided into task, proactive and adaptive performance (Griffin et al., 2007). Task proficiency or task performance refers to actions that can be systematized and exist independently of social situations. These actions demonstrate how well an employee fulfills the established expectations and responsibilities of their individual role (Griffin et al., 2007). Adaptive performance is the ability to adjust their behaviors in response to new work situations or environments (Griffin & Hesketh, 2003). Individual task adaptability gauges how well individuals manage, respond to, and/or facilitate changes that impact their individual roles.

Proactive performance refers to individuals' initiate in taking future-oriented actions to modify their work circumstances, roles, or personal development (Griffin et al., 2007). Similar to adaptive performance, it involves change-oriented behavior and is crucial in dynamic and unpredictable markets, characterized by rapidly evolving technologies and unexpected changes in daily work routines, as seen in contemporary times. To thrive in such environments, individuals must be proactive in their thoughts and actions to manage changes in their job roles and surroundings. (Shoss et al., 2011).

Therefore, proactive performance involves behaviors that anticipate challenges in the work context and proactively transform the job to minimize these challenges. This makes it particularly relevant in telework settings (Park & Jae, 2022). Hence, this study will focus on proactive performance.

According to Stasielowicz (2019), proactive performance is crucial for enhancing performance effectiveness and mitigating the negative impacts of organizational change. This includes scenarios involving the adaptation of work procedures or management of emergencies (Cachola, 2020). Moreover, proactive performance becomes even more significant in teleworking environments (Hackney et al., 2022), as telework fosters autonomy and flexibility, allowing employees to manage their workday, procedures, and task execution methods (Hamid, 2023). This work arrangement necessitates proactive approaches to adapt to shifts in work dynamics and achieve job goals effectively (Okkonen et al., 2019). For instance, Mutiganda et al. (2022) observed that individuals roles requiring high levels of interdependence and autonomy may encounter challenges with telework, as it necessitates greater proactivity in their daily work routines. Hence, proactive performance appears to be a crucial dimension for teleworking.

While limited research has investigated the connection between telework and proactive performance, some studies indicate that telework can influence job performance. For instance, Hackney et al. (2022) demonstrated that telework can enhance productivity and adaptive performance by minimizing distractions and enabling greater focus on tasks. Additionally, Junça-Silva and Caetano (2024) found that the uncertainty of telework routines affects change-oriented behaviors, including employees' adaptive performance. Similarly, Park and Jae (2022) showed that telework improved job performance.

All in all, telework has been shown to significantly influence work dynamics, and subsequently affect how employees behave under flexible working conditions and more autonomous work roles (Junça-Silva & Caetano, 2024). Understanding the relation between these two variables is becoming crucial to understanding how employees respond to flexible work environments and how organizations can manage it effectively.

In this way, the following hypothesis is proposed:

Hypothesis 1: Telework will positively correlate with proactive performance.

2.3 The moderating role of leadership

The relationship between telework and proactive performance may be conditional upon the role of the leaders as these can conditionate how employees act during their work routines (Gunawan et al., 2024)

For decades now, many authors have been fascinated by the concept of leadership. It is a multidimensional phenomenon that impacts organizational dynamics and influences people's lives. According to Northouse (2010), leadership is “a process whereby an individual influences a group of individuals to achieve a common goal”, (p.3). A successful leader can be defined as someone who can adjust his/her behavior, accurately and flexibly, to several situations (Miner, 2006).

Zenger and Folkman (2009) identified the common capabilities of notable leaders. Their findings align with previous studies, emphasizing that no one-size-fits-all pattern exists for leadership (Junça-Silva & Caetano, 2024). Effective leadership is complex and multifaceted, making it unrealistic to propose a single secret to success in leadership. Research indicates that exceptional leaders are defined by their strengths rather than their absence of weaknesses (Zenger & Folkman, 2010). Therefore, the aim of leadership development should be to enhance and leverage these distinct strengths. Furthermore, the contemporary business environment necessitates leadership and leadership capabilities distributed throughout the organization.

Numerous studies have examined the challenges and essential qualities required for leadership during times of crisis (Samad et al., 2022). In any crisis, leaders play pivotal roles across various stages, particularly in making critical decisions and effectively communicating them to their teams (Hao et al., 2020). During these stages, leaders must swiftly and efficiently prepare, maintain strong communication networks with all stakeholders, ensure alignment on goals and anticipated outcomes, allocate resources for contingencies, and monitor progress (Nathanial & van der Heyden, 2020).

At these times, individuals look up to their superiors and trust them to minimize the impact of the situation in question (Gunawan et al., 2024). The demands, due to existing pressures, may be unique and require a different set of skills than would normally be expected from everyone (Oliveira, 2022).

In the telework environment, leadership support becomes particularly crucial due to the unique work dynamics and shifts in interpersonal interactions it entails. Leaders must be adaptable, capable of adjusting work routines, and responsive to the specific

needs of both employees and the organization (Dirani et al., 2020). While telework provides employees with greater flexibility and autonomy, managers must also recognize the additional responsibilities and workload that come with this work arrangement (Hassard & Morris, 2021).

Numerous leadership theories, each advocating different leadership styles, have been developed (Cherry, 2022), making the FRLT one of the most applied (Bass, 1985). Therefore, this study will focus on transformational and transactional leadership, given their distinct and complementary impacts on employee performance and overall organizational effectiveness.

2.3.2 Transformational leadership

One influential approach is the full-range leadership model (Bass, 1985). Bass's original model included four transformational and two transactional leadership dimensions. However, Bass and his colleagues (Avolio & Bass, 1991; Bass, 1998; Bass & Avolio, 1994) expanded the theory and in its current form, the model includes nine single-order factors: five transformational leadership, three transactional, and one laissez-faire leadership factor.

According to this model, transactional leaders lead through social exchange, such as by offering rewards and recognition in return for creative ideas and productivity. In contrast, transformational leaders provide individualized consideration to followers, inspiring them to reach their full potential and develop their own leadership skills (Bass & Riggio, 2006). Transformational leadership is characterized by leaders who empower their workers by motivating them to achieve outcomes beyond their self-interests (Bakker et al., 2023). These leaders foster a sense of belonging and collaboration between their team members and may provide a shared vision (Czakert et al., 2024). They lead by example, demonstrating their qualities and their commitment to the organization (Bass, 1990; Bass and Avolio, 1992).

According to Bass (1985), this type of approach is characterized by: (1) *Idealized influence*: Leaders earn respect and trust through their self-confidence, values, and emotional intelligence. Effective leadership entails inspiring subordinates with a vision and passion that motivates them to exceed expectations; (2) *Inspirational motivation*: Leaders convey excitement, optimism, and enthusiasm about the organization's future, inspiring subordinates to strive for peak performance; (3) *Intellectual stimulation*:

Leaders encourage employees to enhance their knowledge and creativity by exploring new approaches and ideas to solve challenges; (4) *Individual consideration*: Leaders show respect and attentiveness to the unique needs of each follower. This coaching and mentoring approach fosters a sense of importance among followers, thereby enhancing their productivity.

These dimensions together contribute to job performance, satisfaction, involvement and innovative behavior (Zhong et al. 2020). Transformational leadership is crucial in uncertain and volatile environments (Taskan et al., 2024), as it enables employees to align around shared goals and supports their performance (Korejan & Shahbazi, 2016). This leadership style helps to improve job performance as it creates conditions that foster continuous learning and encourage proactive behaviors even under uncertain work environments (Faupel & Süß, 2018).

The shift to telework in recent years has posed challenges for employees, necessitating greater support from leaders (Ipsen et al., 2021). Leaders can facilitate this transition by promoting empathy, flexibility, open communication, and providing personalized support (Mainka et al., 2024). These actions create an environment conducive to enhancing employees' motivation to be proactive and transforming the dynamics of telework (Bauwens et al., 2024). Transformational leaders inspire their teams to embrace change, foster a strong sense of camaraderie despite physical distance, and assist in developing new technical skills and effective time management, thereby maintaining productivity (Hamid, 2023).

Hence, we argue that transformational leadership may potentially moderate the relationship between telework and proactive performance. Therefore, the second hypothesis is as follows:

Hypothesis 2: Transformational leadership will moderate the relationship between telework and proactive performance. The positive relationship between telework and performance will be stronger under the condition of high versus low transformational leadership.

2.3.2 Transactional leadership

Transactional leadership is defined by a reciprocal exchange relationship between the leader and employees, aimed at satisfying the interests of both parties (Bass, 1999).

According to Bass's Full Range Leadership Theory (1999), this leadership style is characterized by its emphasis on clarifying responsibilities, rewarding employees for meeting objectives, and providing corrective feedback for failures. Transactional leaders strive to enhance organizational performance by setting explicit goals, establishing clear expectations, delivering constructive feedback, and offering rewards for successful outcomes (Klein, 2023).

According to Bass and Avolio (1994) transactional leadership has two dimensions: (1) *Contingent reward*: the leader provides objectives and expectations for the members of their team and rewards them for their performance, and (2) *Active management by exception*: the leader controls and monitors the employees in order to anticipate mistakes and meet the standards.

The main difference between transactional and transformational leadership is the exchange relationship between leaders and followers (Bakker et al., 2023). In a transformational approach, the leaders motivate their members through significant values such as trust, respect, or praise, and in the transactional approach, the leaders motivate through material rewards (Bass & Avolio, 1994). That is, transactional managers incentivize high performance through contingent rewards, offering tangible incentives in return for satisfactory job performance (Dong, 2023). Furthermore, these leaders achieve desired outcomes by setting clear expectations and vigilantly monitoring mistakes, deviations, and errors (active management by exception). Transactional leaders primarily use extrinsic motivation strategies, emphasizing the exchange of rewards or disciplinary actions based on the adequacy of employee performance (Klein, 2023). Hence, transactional leaders, through contingent rewards and clarifying expectations, can amplify the impact of external work conditions (e.g., telework) on job performance (Aljumah, 2023).

Teleworkers have more flexibility and autonomy when carrying out tasks, hence, there needs to be better supervision and monitoring so that workers can perform better (Kairupan, 2023). These behaviors are part of transactional leadership styles (Bass, 1985). Studies indicated that clear communication, and clear establishment of each person's tasks and goals are very important in the promotion of proactive behaviors in virtual environments (Höddinghaus et al., 2023). Transactional leaders can strength the positive relationship between telework and proactive performance because they tend to motivate their followers by clearly defining expectations and task requirements,

recognizing employee accomplishments, and rewarding excellence, all of which significantly boost their motivation and performance (Bass et al., 2003).

We argue that in light of the changing nature of work for more flexible work arrangements, the transactional leadership style may be a condition that amplifies the link between telework and proactive performance (Gemedda & Lee, 2020). In today's context, transactional leadership proves effective by appraising the contributions of both the organization and the job itself. Consequently, the exchange of financial and non-financial rewards emerges as a critical condition that will strengthen the positive association between telework and proactive performance (Klein, 2023).

All of these behaviors are common to transactional leaders, which supports the third hypothesis:

Hypothesis 3: Transactional leadership will moderate the relationship between telework and proactive performance. The positive relationship between telework and proactive performance will be stronger under the condition of high versus low transactional leadership.

2.3.3 The moderated moderation model

Given the specificities associated with flexible work arrangements, there is a growing recognition of the need to reassess traditional leadership approaches to ensure their effectiveness in telework environments, as they significantly influence employee engagement, performance, and organizational culture (Junça-Silva & Caetano, 2024). Consequently, it is not surprising that the discussion on leadership in telework settings revolves around leadership styles that support employees' behaviors (Gunawan et al., 2024).

Dai and colleagues (2013) contend that the most effective outcomes are achieved when transformational and transactional leadership styles are applied simultaneously. Transformational leaders provide the vision and inspiration necessary to navigate changes in the work environment (Mainka et al., 2024), while transactional leaders offer clear guidelines and feedback, ensuring employees stay focused and rewarding positive work behaviors (Aljumah, 2023; Xenikou, 2017).

In telework settings, effective leadership is essential for promoting self-actualization, skill development, and employee empowerment, while also addressing the

psychological and emotional needs of teleworkers (Hamid, 2023). By empowering employees to be autonomous, proactive, and take personal initiative, leaders can enhance the benefits of flexible work arrangements on proactive performance (Bakker et al., 2023; Hamid, 2023). Leadership characterized by idealized influence, inspirational motivation, intellectual stimulation, individual consideration, contingent reward, and management by exception will likely shape employee behavior in telework environments. Therefore, both transformational and transactional leadership encompass a range of behaviors that can "shape" teleworkers' actions, motivating them to be proactive (Klein, 2023).

As such, we argue that the interactive effect of transformational and transactional leadership styles will potentially addresses both the emotional and practical needs of teleworkers, motivating them to engage in more proactive behaviors (Hamid, 2023; Xenikou, 2017).

Based on the assumptions, the following hypothesis was proposed:

Hypothesis 4: There will be a three-way interaction between transformational and transactional leadership and telework in the prediction of proactive performance. Employees who telework and have transformational and transactional leaders will have higher proactive performance (see Figure 2.1).

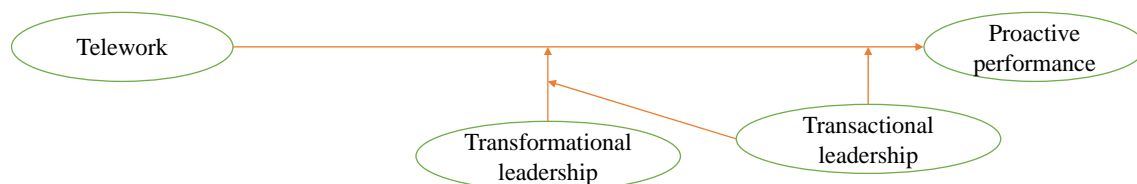


Figure 2.1 The proposed moderated moderation model

3. Methodology

To achieve the research goals, a quantitative approach was employed using online surveys. This method was chosen for its efficiency in assessing the study variables. Surveys were deemed the most suitable research method for this study because they offer a structured and systematic way to collect quantitative data from a representative sample of the target population, enabling the inference of results to the broader population (Rattray & Jones, 2007). Questionnaires are an efficient method for collecting data from a large number of participants simultaneously, eliminating the need for one-on-one interviews. This approach simplifies the process of gathering responses from many individuals. Additionally, questionnaires ensure respondent anonymity, which encourages honest and truthful input, especially in sensitive areas such as leadership and the workplace climate.

Data was collected using an online survey hosted on the Qualtrics platform. The survey was distributed via LinkedIn, Facebook, and other social media platforms. Consequently, a convenience sampling strategy was employed, as participants were selected based on their ease of access. Sharing an online survey does not guarantee representation of every segment of the population. Therefore, we encouraged some participants to share the survey link with others, resulting in a snowball effect as participants distributed the survey within their social networks. This sampling strategy can increase the external validity of the results by enhancing the heterogeneity of the sample (Demerouti & Rispens, 2013). Despite these limitations, online surveys can gather a large number of responses and enhance representation across various industries, organizational sizes, and geographical regions. Data was collected between October and December 2023.

There were no criteria for participation in the study. Participants did not receive any compensation for their participation. Before data collection, participants were informed about the general purpose of the study and were made aware that their participation was voluntary and their responses confidential. They indicated their consent (informed consent) to participate by selecting a "yes" or "no" option on the cover page of the online questionnaire. A positive response allowed them to proceed to the questionnaire.

3.1 Sample

Overall, participated in this study 201 workers.

The majority of participants, 62.2% ($N=125$), were female, 36.8% ($N=74$) were male, and 1% ($N=2$) chose the option “Other”. The mean age was 33.54 years old ($SD=12.32$).

Regarding the level of education, the majority of respondents had completed a bachelor’s degree (57.2%; $N=115$). The second most common level of education was a master’s degree or higher, accounting for 25.4% of the sample ($N=51$). Additionally, 33 respondents (16.4%) reported having completed High School. Of the 201 workers, only 32 (15.9%) had managerial positions. Overall, 67.6% ($N = 136$) were teleworking and the remaining were working on-site (32.3%).

Regarding their current contractual situation, 110 participants (54.7%) reported having a permanent contract with their organization, while 64 participants (31.8%) had a fixed-term contract.

3.2 Measures

To analyse the variables in this study, we employed scales that have been previously used in research and rigorously validated. These measures were selected based on their demonstrated internal consistency. According to Gomes and Cesário (2014), Cronbach's alpha coefficient (α) above .90 is considered very good, while values between .80 and .90 are regarded as good. Consistency in the range of .70 to .80 is considered acceptable, whereas values between .60 and .70 are considered weak, with .60 being the minimum acceptable threshold.

3.2.1 Telework

To measure telework, participants were asked about their work regime in the month. The options were “1 – No (*on-site work*)” and “2 – Yes (*telework*)”.

3.2.2 Proactive Performance

To measure performance, three items from Individual Task Adaptivity Scale (Griffin et al., 2007) were used.

These items were measured on a 5-point Likert-type scale, where 1 = “*Very Little*”; 5= “*a great deal*”. An example item is: “Initiated better ways of doing your core tasks”. The items used demonstrated an acceptable consistency ($\alpha = 0.81$).

3.2.3 Transformational Leadership

To measure transformational leadership, the Global Transformational Leadership (GTL) Scale (Carless et al., 2000) was used. This scale included seven items and was designed to measure transformational leadership behaviors exhibited by leaders in various organizational contexts. It consists of seven dimensions: vision; staff development; supportive leadership; empowerment; innovative thinking; lead by example; and charisma.

The items were measured on a 5-point Likert-type scale, where 1 = “*Strongly disagree*”, 5= “*Strongly agree*”. An example item is: “My team leader communicates a clear and positive vision of the future”. The items used demonstrated a very good consistency ($\alpha = 0.954$).

3.2.4 Transactional Leadership

To measure transactional leadership, Bass and Avolio’s (1995) Multifactor Leadership Questionnaire 5X (MLQ 5X) was adopted. The MLQ 5X measures three leadership styles, but for this study, only eight items of transactional leadership were used.

These items were measured on a 5-point Likert-type scale, where 1 = “*Not at all*”, 5= “*Frequently, if not always*”. An example item is: “I provide others with assistance in exchange for their efforts”. The items used demonstrated a good consistency ($\alpha = 0.86$).

3.2.5 Control variables

To conduct this study, two sociodemographic questions were used, which acted as control variables: sex and age.

Sex was used as a control because some studies have showed that men and women have different visions of leadership, work environment and behaviors (Kiser, 2015).

Furthermore, age could also influence the variables under study, as there have been identified differences in the perception of work between older and younger people (Truxillo et al., 2012).

4. Obtained results

4.1 Data obtained analysis

First, the internal consistencies and descriptive analyses of the variables under study, as well as their correlations, were analysed. Subsequently, to test the hypotheses, model 3 of the PROCESS macro in SPSS (Hayes, 2018) was used. This macro is particularly relevant as it is a modeling tool utilizing ordinary least squares (OLS) and logistic regressions for both basic and complex path analyses. With robust algorithms and modular capabilities, it can manage simultaneous moderation and mediation effects, including moderated-moderation effects. The products (moderations) were centered on their mean value, and the bootstrapping method (5000 times) was used to calculate the confidence intervals (CI). To provide a more detailed test of the hypotheses, a simple slope analysis was conducted, and slope difference tests were performed according to Dawson and Richter (2006).

4.1.1 Common method bias and multicollinearity issues

Despite our efforts to minimize potential common method bias through recommended procedures—such as incorporating closed-ended questions within the survey and using previously validated surveys to assess the variables under study—it cannot be entirely eliminated (Podsakoff et al., 2003). Therefore, we followed specific recommendations from Podsakoff et al. (2003) to assess the presence of common method bias in the study.

First, we conducted Harman's single-factor test to check for common method bias. The initial general factor that emerged from the analysis accounted for only 45.35% of the explained variance. While this result does not completely eliminate the possibility of common method variance (CMV), it suggests that CMV is unlikely to significantly affect the findings. According to Podsakoff et al. (2003), if the first emerging factor accounts for less than 50% of the explained variance, CMV is not a probable explanation for the results.

Second, following Kock's (2015) recommendation, we performed a full collinearity assessment to identify potential common method bias. The results showed that all variance inflation factor (VIF) values ranged from 1.02 to 2.77; since these values were below the cutoff point of 3.33, multicollinearity was not a major concern in this study.

Lastly, we conducted three confirmatory factor analyses (CFA) in JASP software to confirm the independence of the variables under study. To assess the model's adequacy and compare it with other reasonable alternative models, we analysed various fit indices (Hair et al., 2010), namely CFI, TLI, SRMR, and RMSEA. Model 1 was the hypothesized three-factor model, comprising separate scales for transformational leadership, transactional leadership and proactive performance. Model 2 was a two-factor model, combining transformational leadership and transactional leadership into one factor. Lastly, Model 3 was a one-factor solution in which all items were loaded onto a single factor.

Table 4.1 shows that the three-factor model (Model 1) provided the best fit for the data ($\chi^2/df = 1.99$, $p < 0.001$, CFI = 0.97, TLI = 0.96, SRMR = 0.03, and RMSEA = 0.07 CI 95% [0.05, 0.08]) (see Figure 4.1), while all other alternative models showed a poorer fit. These results, along with Cronbach's alpha reliability scores across all measurement scales, demonstrated the discriminant and convergent validity of the study. Consequently, we proceeded with testing the hypotheses.

Table 4.1 Confirmatory factor analysis results

Models	χ^2/df	CFI	TLI	RMSEA	SRMR
Model 1	1.99	0.97	0.96	0.07	0.03
Model 2	3.03	0.93	0.91	0.10	0.05
Model 3	5.63	0.83	0.80	0.15	0.10

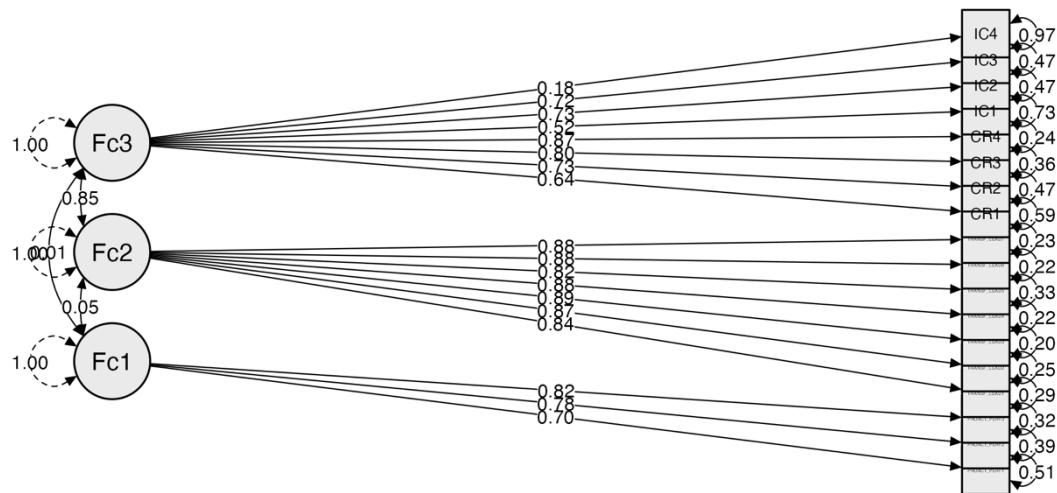


Figure 4.1 Confirmatory factor analysis results

4.1.2 Descriptive statistics and correlations

Before testing the proposed model, the variables under study were analyzed in terms of descriptive statistics (mean and standard deviation) and correlations. The results are presented in Table 4.2. Firstly, the analysis of transformational leadership ($M=3.884$, $SD=1.008$) revealed that participants generally view their leaders as displaying a moderately high degree of transformational leadership behavior. Further, participants perceived their leaders as also displaying moderate transactional leadership behavior ($M=3.185$, $SD=0.822$). As for proactive performance ($M=3.686$, $SD=0.737$), the results indicated a moderate level of adaptive performance among participants in the sample. As suggested by Field (2009), the relatively small standard deviations compared to the means of the variables indicate that the means accurately represent the observed data.

Secondly, the correlation analysis indicated that telework had a positive correlation with transformational leadership ($r=0.161$; $p<0.05$), transactional ($r=0.144$; $p<.05$) and a negative correlation with proactive performance ($r= -0.111$; $p>0.05$). Proactive performance had a positive and significant correlation with transformational ($r= .381$; $p<0.01$) and transactional ($r = .295$; $p < 0.01$) leadership. Lastly, transformational leadership and transactional leadership had a strong positive and significant correlation ($r= .753$; $p < .01$).

Furthermore, the reliability of the study variables, as shown in Table 4.2, exceeded the recommended threshold of 0.70, consistent with Fornell and Larcker (1981). For convergent validity, which measures how well the indicators correlate with the latent construct, the Average Variance Extracted (AVE) values for all latent constructs in the study were above 0.5. Additionally, each construct's AVE was compared to its correlation with other constructs, and the AVE value was found to be greater than the construct's correlation with other constructs, thereby supporting convergent validity.

Regarding discriminant validity, which demonstrates the uniqueness of the indicators for each latent variable, the square roots of the AVE, as indicated by the diagonal values for each latent variable, were all greater than the correlations between each variable (Hair et al., 2010). Furthermore, the Maximum Shared Variance (MSV) was analysed, and the results showed that the MSV was lower than the AVE for all constructs. Thus, discriminant validity was supported.

In summary, the reliability, convergent validity, and discriminant validity of the study were confirmed. Based on the validity of the study instrument, we proceeded with testing the study's hypotheses.

Table 4.2 Descriptive statistics

	M	SD	CR	AVE	MSV	1.	2.	3.	4.	5.	6.
1. Telework	1.677	.469	-	-	-	-					
2. Transformational Leadership	3.884	1.008	0.96	0.79	0.56	.161*	(0.88)	[0.95]			
3. Transactional Leadership	3.185	.822	0.90	0.70	0.56	.14*	.753**	(0.84)	[0.86]		
4. Proactive Performance	3.686	.737	0.89	0.73	0.14	-.111	.381**	.295**	(0.85)	[0.81]	
5. Sex	1.64	.501	-	-	-	.010	-.014	-.070	.224*	-	
6. Age	33.54	12.32	-	-	-	-.070	-.056	-.004	.168*	.051	-

Note: N= 201; * $p > 0.05$ ** $p > 0.001$.

¹Scale 1 to 5.

²Gender: 1- male; 2- female.

The square roots of the Average Variance Extracted (AVE) are in parentheses. M = Mean; SD = Standard Deviation; AVE = Average Variance Extracted; MSV = Maximum Shared Variance; CR = Composite Reliability. Cronbach's alphas are in brackets [].

4.1.2. Hypotheses test

Hypothesis 1 posited that telework would be positively related to proactive performance. The results obtained (see Table 4.2), after controlling variables sex and age, indicated that telework was negatively related to proactive performance ($\beta = -0.35$; $p < 0.01$). Therefore, these results did not support hypothesis 1. In addition, sex and age were not related to proactive performance (sex: $\beta = 0.04$; $p > 0.05$; age: $\beta = -0.00$; $p > 0.05$).

In hypotheses 2 and 3, transformational and transactional leadership were expected to moderate the relationships between telework and proactive performance. The results showed that the interaction between telework and transformational leadership was significantly related to proactive performance ($\beta = 0.34$; $p < 0.05$). Furthermore, the findings evidenced that transactional leadership also moderated the relationship between telework and proactive performance ($\beta = -0.40$; $p > 0.05$).

To clarify these results, the interaction was graphically illustrated by plotting the moderator variable (transformational leadership in Figure 4.2) at 1 SD below and 1 SD above the mean. For transformational leadership as a moderator, simple slopes were significant for employees with high ($B = 1.016$, $t = 3.387$; $p < 0.001$) but not for those with low perceived transformational leaders ($B = -0.011$, $t = -0.096$; $p > 0.05$).

Figure 4.2 shows how transformational leadership buffers the negative relationship between telework and proactive performance. That is, the effect of telework on proactive performance is stronger for workers with transformational leaders compared to those with non-transformational leaders. These results supported hypothesis 2.

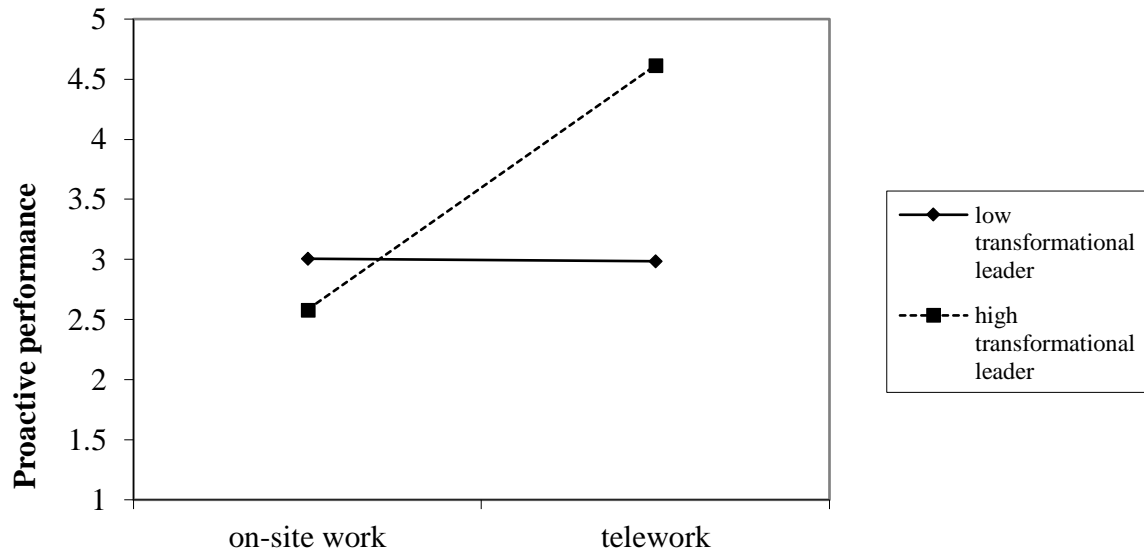


Figure 4.2 Transformational leadership as moderator of the relationship between telework and proactive performance

We performed the same for hypothesis 3. Figure 4.3 portrays the moderation effects. The simple slopes were significant for employees with high ($B = -0.750$, $t = -6.847$; $p < 0.001$) and low perceived transactional leaders ($B = -0.353$, $t = -7.887$; $p < 0.001$).

Figure 4.3 shows how transactional leadership strength the negative relationship between telework and proactive performance. That is, the negative effect of telework on proactive performance is stronger for workers with transactional leaders compared to those with non-transactional leaders. These results partially supported hypothesis 3.

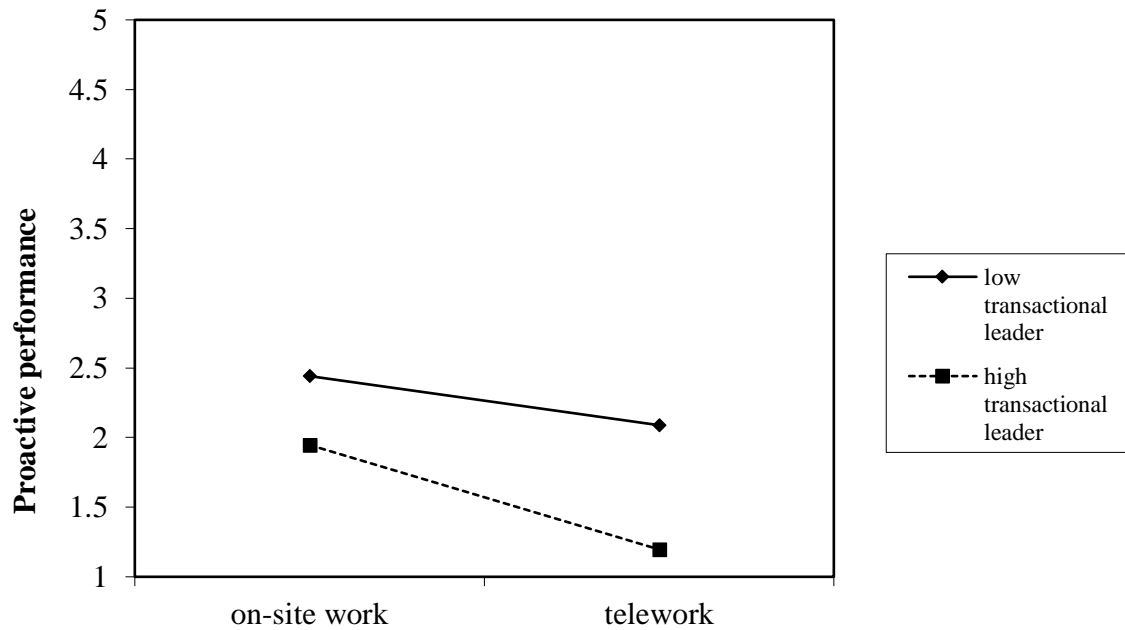


Figure 4.3 Transactional leadership as moderator of the relationship between telework and proactive performance

Hypothesis 4 proposed that the interaction of transformational and transactional leadership would moderate the relationship between telework and proactive performance. After accounting for control variables, independent variable effects, and interactions among the independent variables, the results showed that the three-way interaction significantly increased the explained variance of proactive performance ($\Delta R^2 = 0.14$, $F_{(1, 197)} = 3.2475$, $p < 0.05$). Overall, the model explained 16.29% of the variance in proactive performance. The findings revealed a significant three-way interaction for ($\beta = 0.18$; $p < 0.001$, CI [0.00, 0.38]), supporting hypothesis 4, as it is illustrated in Figure 4.4.

Simple slopes were significant for workers with high transformational and high transactional leaders ($t = 7.143$; $p < 0.01$; effect = 1.126) and with high transformational and low transactional leaders ($t = 4.995$; $p < 0.01$; effect = 0.825). These results suggested that telework negatively affected proactive performance, with the effect being becoming positive and stronger for workers who were teleworking and had both high transformational and high transactional leaders or for teleworkers with high transformational but low transactional leaders. Furthermore, the effect became non-

significant and weaker for those who worked on-site with low transformational but high transactional leaders.

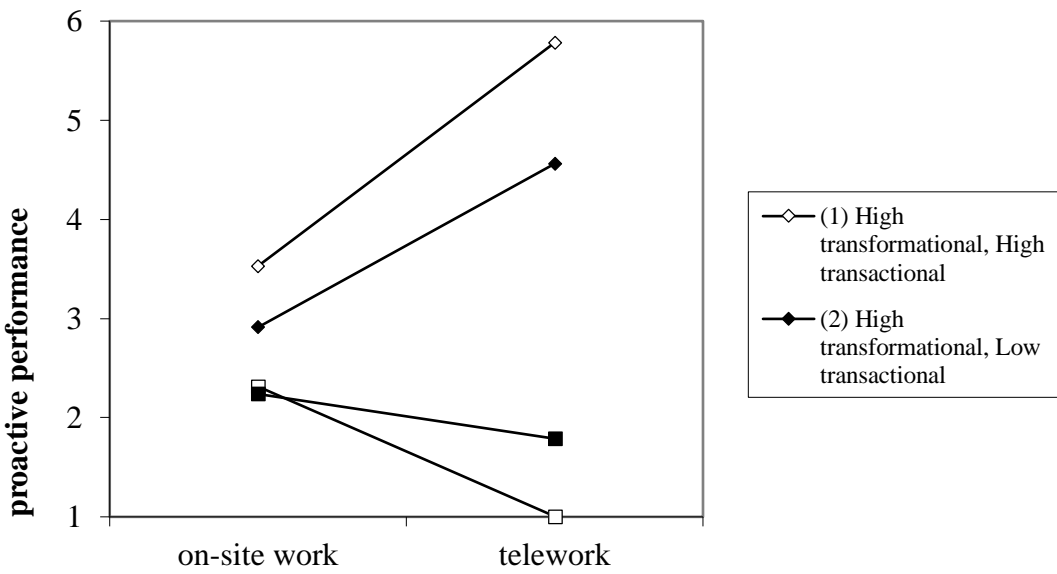


Figure 4.4 Interaction between telework, transformational, and transactional leadership in predicting proactive performance

5. Discussion

The present research aimed to deepen the understanding of the impact of telework on proactive performance. We developed and tested a conceptual model based on the Full Range Leadership Model (FRLM), with transformational and transactional leadership serving as moderating variables. Our goal was to investigate whether these leadership styles could influence the relationship between telework and proactive performance, and whether a combination of both styles would provide additional insights.

The findings reveal that telework is negatively related to proactive performance, contradicting the initial hypothesis. However, transformational leadership significantly moderates this relationship, mitigating the negative effect of telework on proactive performance. Conversely, transactional leadership appears to strengthen the negative relationship between telework and proactive performance. Notably, when examining the combined effect of both leadership styles, the results suggest a significant three-way interaction. This indicates that a leader who effectively integrates both transformational and transactional styles can enhance proactive performance in a teleworking environment.

5.1 Theoretical implications

This research has implications for theory. First, we advance proactive behavior theory by demonstrating an underexplored relationship – the link between telework with proactive performance. Although we have proposed a positive relationship between telework and proactive performance, the findings contradict this hypothesis. That is, the results indicate that telework does not significantly correlate with proactive performance. The literature presents a mixed view on this relationship, and it has not been consistent. While some authors, like Hackney et al. (2022), indicated that telework can enhance performance, others highlighted the challenges experienced by teleworkers (e.g., Junça-Silva and Caetano, 2024). Our findings align more closely to the latter ones. Firstly, telework is not just about working from a different location but involves significant changes in how work is done. For instance, it requires the improvement of digital skills (Okkonen et al., 2019) and more support from the organization (Figueiredo et al, 2021). Additionally, the lack of face-to-face interactions and increased isolation may affect communication and collaboration between colleagues and leaders, and

increase stress and emotional exhaustion (Bosua et al., 2013; Fagan et al. 2012), therefore decreasing the motivation to engage in proactive behaviors (Chang et al., 2022).

Proactive performance involves transforming work to make it more effective and pleasant (Griffin et al., 2007). This type of performance requires high motivation from employees as it goes beyond merely completing assigned tasks (Abdel-Hadi et al., 2021). Consequently, it differs from studies that have examined the relationship between telework and other job performance dimensions, such as task or adaptive performance (e.g., Junça-Silva et al., 2022b). However, it is crucial to consider other factors not measured in this study, such as the type of work, worker motivation, or work-life balance issues, which may influence this relationship.

Second, we extend leadership theory by examining the role of both transformational and transactional leadership styles under telework settings. The findings show that both transformational and transactional leadership moderate the relationship between telework and proactive performance, albeit in different ways. First, transformational leaders mitigate the negative impact of telework on proactive performance. This implies that employees who telework are more likely to exhibit proactive behaviors when they experience higher levels of transformational leadership from their leaders compared to lower levels. Transformational leaders promote empathy, flexibility, open communication, and provide individualized support (Bass, 1985). The results align with the Full Range Leadership Model (FRLM), suggesting that transformational leaders play a critical role in mitigating the challenges of telework and thereby enhancing proactive performance (Bakker et al., 2023). This finding is consistent with empirical evidence showing that transformational leaders, by encouraging skill development, maintaining team cohesion, and ensuring effective communication, can create conditions that facilitate employees' proactive behaviors and innovative approaches to their work (Faupel & Süß, 2018). According to Hamid (2023), the ability to offer robust support and an inspiring vision allows employees to more effectively address the uncertainties and challenges associated with telework, thereby serving as a motivational factor for proactive performance. Thus, these characteristics of transformational leadership help employees remain productive and responsive to the demands of telework.

On the contrary, transactional leadership seems to exert a contrasting effect. Specifically, encountering transactional leadership behaviors in telework settings

appears to amplify the negative impact of telework on proactive performance. According to the literature, transactional leadership is believed to be particularly effective in teleworking environments where employees have increased flexibility and autonomy, necessitating heightened supervision and monitoring to ensure optimal performance (Kairupan, 2023). Höddinghaus et al. (2023) also argue that clear task and goal definition by leaders, along with transparent communication, is crucial for successful telework adaptation. However, our findings suggest that these practices inherent to transactional leadership may have an adverse effect on proactive performance in the telework context. This could be attributed to specific contextual factors of telework, such as workload, which are not fully addressed by the transactional style. Moreover, some studies indicate that in certain conditions, transactional leaders may hinder employee performance due to their conservative approach, tendency to micromanage, and preference for less flexibility (Klein, 2023). Plus, transactional leadership has been often characterized by rigorous monitoring of employees, particularly their mistakes, deviations, and failures (Bass, 1985). This approach tends to heighten employees' focus on their duties and immediate tasks, neglecting their creativity and inclination towards fostering proactive behaviors (Kark et al., 2018). Thus, the tendency to overcontrol or micromanage teleworkers may hinder the beneficial effects of this flexible work arrangement and proactive performance.

Finally, the results reveal a significant three-way interaction among telework, transformational leadership, and transactional leadership in shaping proactive performance. Specifically, employees who engage in telework and are guided by leaders exhibiting both transformational and transactional behaviors demonstrate enhanced levels of proactive performance. The literature underscores the effectiveness of employing both transformational and transactional leadership styles concurrently for optimal leadership outcomes (Hamid, 2023). Transformational leaders offer the vision and motivation necessary to navigate workplace changes, while transactional leaders provide clear directives and feedback to maintain employee focus (Dai et al., 2013; Xenikou, 2017). Consistent with these insights, our findings support the notion that leaders who adeptly integrate both transformational and transactional styles cultivate a work environment conducive to teleworkers' adaptation and proactive engagement. This synthesis of inspiration and structure appears pivotal in enhancing proactive performance within teleworking contexts.

5.2 Practical implications

Telework has emerged as a pervasive reality in today's society, fundamentally transforming the corporate landscape and organizational operations. With its growing significance, it becomes crucial to comprehensively grasp the teleworker experience, identify associated challenges, and explore effective leadership strategies to maximize its benefits. The findings of this study offer valuable insights that can serve as a guide for organizations seeking to optimize their work systems.

Given the negative relationship between telework and proactive performance, organizations should prioritize investments in training to enhance employees' digital skills and proficiency with telework technologies. Additionally, establishing structured communication channels, fostering creativity, and promoting virtual activities can effectively mitigate isolation and bolster collaboration among teleworkers. These initiatives are crucial in cultivating a proactive work environment conducive to maximizing telework's potential benefits.

While transformational leadership has shown a positive association with telework and proactive performance, our findings underscore the importance of adopting a balanced leadership approach that integrates both transformational and transactional styles. Organizations should encourage their leaders to blend these styles to optimize the performance of teleworkers. Transformational leaders can provide vision and motivation, while transactional leaders can offer clear guidelines and constructive feedback. By adopting this dual approach, leaders can effectively cater to the diverse needs of their employees and address the challenges associated with telework.

Moreover, the success of these strategies hinges on organizations implementing mechanisms for ongoing evaluation and feedback. This ensures the effectiveness of the implemented leadership strategies and identifies areas for improvement. By fostering a culture of continuous improvement and adaptation, organizations can better support their teleworking employees and enhance overall performance outcomes. With these changes, organizations are able to bring out the best from their teleworkers and continue to grow even in times of change.

5.3 Limitations and suggestions for future research

While providing valuable insights into the relationship between telework, proactive performance, and leadership styles, this research acknowledges several limitations. First, the relatively small sample size of 201 participants and the limited representation of the sample group may constrain the generalizability of the findings. Second, the data collected for this research relied on self-reported measures, which are susceptible to common method bias (Podsakoff et al., 2012).

For future research, employing a larger and more diverse sample would enhance the ability to generalize the results and provide a more comprehensive understanding of the relationships between the variables studied. Additionally, while this study focused on proactive performance, future research could explore other performance indicators such as adaptive performance and innovative performance. Examining a broader range of performance metrics could yield a more holistic perspective on the impact of telework.

The moderating effect of transactional leadership on the relationship between telework and proactive performance highlights the importance of exploring alternative leadership styles that can better support workers in adapting to the dynamic demands of telework. Future research could investigate other leadership styles, such as charismatic leadership and authentic leadership, to understand their influence on teleworkers' performance more comprehensively. Insights gained from such studies could inform organizational practices and leadership development strategies.

Furthermore, future research might delve into the influence of contextual factors such as organizational culture, industry type, and technological infrastructure. These factors could significantly impact the relationship between telework, leadership styles, and performance outcomes. Considering these contextual factors in research could provide deeper insights into how telework environments can be optimized for enhanced performance and employee well-being.

6. Conclusion

The aim of this study was to investigate the relationship between telework and proactive performance, emphasizing the moderating influences of transformational and transactional leadership styles. This exploration is increasingly pertinent in light of the significant rise in teleworking, accelerated by recent global events such as the COVID-19 pandemic. Understanding how these dynamics affect teleworkers' performance and how leadership can mitigate challenges is crucial.

This research contributes to existing literature by examining how different leadership styles impact employee performance, particularly highlighting the pivotal role of transformational leadership and the potentially negative effects of transactional leadership. Moreover, the study reveals a significant three-way interaction among telework, transformational leadership, and transactional leadership, suggesting that a blended approach integrating both styles may yield superior outcomes.

In conclusion, this study underscores the criticality of effective leadership in addressing the challenges posed by telework and meeting the needs of its employees. It calls for a reassessment of leadership strategies to enhance proactivity in an ever-evolving work environment.

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Annexes

INQUÉRITO

1. No último mês esteve em teletrabalho?
 - ☐ Não.
 - ☐ Sim.
2. Idade (anos) _____
3. Sexo:
 - ☐ Feminino
 - ☐ Masculino
 - ☐ Outro
4. Indique há quanto tempo trabalha: _____ anos
5. Qual o nível mais elevado de instrução que completou?
 - ☐ 2º ciclo do ensino básico (6º ano)
 - ☐ 3º ciclo do ensino básico (9º ano)
 - ☐ Ensino secundário (12º ano)
 - ☐ Bacharelato/Licenciatura
 - ☐ Mestrado ou superior
6. Qual a sua situação contratual atual?
 - ☐ Trabalhador independente (presta serviços a uma ou mais empresas)
 - ☐ Tem vínculo contratual efetivo com uma organização
 - ☐ Tem vínculo contratual a prazo com uma organização
 - ☐ Outra situação
7. Desempenha funções de chefia?
 - ☐ Sim
 - ☐ Não
8. Cargo/função atual _____
9. Em média, quantas horas trabalha por semana? _____ (horas)
10. Como é o seu horário?
 - ☐ Horário fixo
 - ☐ Horário rotativo/turnos

11. Pense na forma como costuma realizar o seu trabalho e indique em que medida as seguintes afirmações correspondem ao que costuma fazer:

	1	2	3	4	5
Iniciou melhores maneiras de realizar as suas tarefas principais					
Teve ideias para melhorar a forma como as suas tarefas principais são feitas					
Fez alterações na forma como as suas tarefas principais são realizadas					

12. Com base na sua experiência, diga por favor em que medida o teletrabalho tem um efeito, para melhor ou pior, do que o trabalho presencial, nos seguintes aspetos:

	1	2	3	4	5
A sua qualidade de vida					
Gestão de horários					
Concentração nas tarefas					
Equilíbrio entre vida profissional e familiar					
Flexibilidade					
Sociabilidade					
Interação com os colegas					
Apoio da chefia					
Cumprimento dos objetivos					
Produtividade do trabalho					

13. Pense agora na sua chefia e indique em que medida concorda/discorda com as seguinte afirmações:

	1	2	3	4	5
Comunica uma visão clara e positiva do futuro.					
Trata os funcionários como indivíduos, apoia e					

incentiva o seu desenvolvimento.					
Incentiva e reconhece os funcionários.					
Promove a confiança, o envolvimento e a cooperação entre os membros da equipa.					
Incentiva a pensar sobre os problemas de novas maneiras e questiona suposições.					
É claro sobre os seus valores e pratica o que prega.					
Inspira orgulho e respeito nos outros e me inspira por ser altamente competente.					

14. Continuando a pensar na liderança da sua chefia direta, indique a frequência dos seguintes comportamentos:

	1	2	3	4	5
Individualiza a atenção.					
Concentra os seus pontos fortes.					
Ensina e treina.					
Diferencia os trabalhadores.					
Esclarece recompensas.					
Ajuda com base no esforço de cada um.					
Recompensa o seu desempenho.					
Reconhece o que vai atingindo					