Antecedents of Psychological Capital (PsyCap): An Analysis of Technical and Social Variables

Master Thesis

Sofia Theodorovicz Badotti

Home tutors:

João Viseu, PhD and Nuno Rebelo dos Santos, PhD

Host Tutor:

José Luís Condom Bosch, PhD

Coimbra, June 2025

Abstract

Psychological capital (PsyCap) is a multidimensional construct comprising resilience, self-efficacy, optimism, and hope. It has been consistently associated with favorable work attitudes and behaviors, as well as job performance. However, its antecedents remain underexplored, particularly concerning contextual variables. Grounded in Sociotechnical Systems Theory, this study investigated how technical (role conflict and role ambiguity) and social (supervisor support and perceived organizational justice) variables are associated with PsyCap. A quantitative method with a cross-sectional design was employed to achieve this objective, collecting data via an online protocol consisting of self-report measures and a sociodemographic questionnaire. The sample comprised 723 Portuguese workers, with 42.8% females and 57.2% males, meeting the inclusion criteria of being at least 18 years old and in active employment. Hierarchical multiple linear regression using R software has been selected as this research's primary data analysis technique. The analysis of the last regression model (M3) revealed that distributive, procedural, and interpersonal justice and supervisor support did not establish a statistically significant relationship with PsyCap ($p>.05$). Also, informational justice ($\beta=-.09$, $p<.01$) and role ambiguity ($\beta=-.47$, $p<.001$) were negatively related to PsyCap. Contrary to expectations, role conflict ($\beta=.17$, $p<.001$) was positively associated with PsyCap. These findings emphasize the importance of fair treatment and positive organizational interactions, as they are positively associated with PsyCap, and highlight the nuanced roles of role stressors in its development. This study provides evidence to guide organizational practices to enhance psychological resources in employees.

Keywords: Psychological Capital, Antecedents, Organizational Justice, Supervisor Support, Role Conflict, and Role Ambiguity.

Table of Contents

1. Introduction

In recent decades, organizational research has increasingly drawn on the principles of positive psychology to better understand how psychological resources can support employee well-being and performance. Psychological capital (PsyCap) has emerged as a critical construct in positive psychology, emphasizing its significant impact on individual and organizational outcomes. Defined as a multidimensional construct encompassing resilience, self-efficacy, optimism, and hope, PsyCap has been consistently linked to favorable work attitudes and behaviors, as well as enhanced performance (Luthans et al., 2014). In the last two decades, research has also highlighted PsyCap's potential for growth and its role in mitigating negative workplace outcomes, such as cynicism and counterproductive behaviors (Newman et al., 2014). By equipping individuals with psychological resources to navigate challenges, PsyCap enhances job satisfaction, organizational commitment, and worker motivation (Köse & Uğurluoğlu, 2018).

While the benefits of PsyCap are well-documented, its antecedents remain underexplored, leaving a gap in understanding the factors that foster or inhibit its development. This study aimed to address this gap by identifying key technical and social antecedents of PsyCap, contributing to a broader comprehension of its formation within organizational contexts. Guided by the Sociotechnical Systems Theory (Eason, 2014), which emphasizes the interplay between technical and social factors in organizational functioning, this study focused on role conflict, role ambiguity, supervisor support, and organizational justice as potential antecedents of PsyCap.

Roles in organizational settings are behavior patterns associated with specific positions susceptible to conflict and ambiguity (Kahn et al., 1964). While traditionally viewed as detrimental, recent evidence has suggested that role conflict may positively

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

influence PsyCap by encouraging adaptive behaviors, whereas role ambiguity hinders this concept by creating uncertainty (Baptista, 2021). Similarly, supervisor support, encompassing emotional, informational, and material assistance, is pivotal in shaping employees' psychological resources (Bhanthumnavian, 2003). However, the extent to which this support fosters or inhibits PsyCap remains unclear (Luthans et al., 2008). Additionally, organizational justice, characterized by fairness in procedures, interactions, and outcomes, emerges as a significant predictor of PsyCap, with procedural and interpersonal justice often demonstrating stronger associations (Greenberg, 2011; Avey et al., 2011).

Drawing from Sociotechnical Systems theory, which emphasizes the interplay between social and technical dimensions in optimizing organizational performance (Trist, 1981), this study investigated how these variables jointly contribute to PsyCap development. By exploring social (e.g., supervisor support, organizational justice) and technical (e.g., role conflict, role ambiguity) factors, this research provided a nuanced perspective on PsyCap's antecedents and offered actionable insights for enhancing employee well-being and organizational effectiveness.

In addressing these issues, this study makes three key contributions. First, it bridges the gap in the literature regarding the antecedents of PsyCap, offering empirical evidence of their influence. Second, it challenges traditional notions of role conflict and ambiguity by presenting alternative pathways through which these factors may impact PsyCap. Finally, it integrates theoretical frameworks with practical implications, guiding organizational leaders in enhancing positive psychological states among employees. This investigation advances academic understanding and equips practitioners with strategies to cultivate a resilient, motivated, and optimistic workforce.

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

2. Literature Review

2.1 Psychological Capital (PsyCap)

Understanding PsyCap and its antecedents in organizational settings is essential, as it plays a crucial role in shaping a wide range of individual and organizational outcomes. As a core construct in positive psychology, PsyCap is multidimensional in nature and has been extensively linked to job satisfaction, job performance, occupational well-being, and organizational commitment (Köse & Uğurluoğlu, 2018; Luthans et al., 2014).

PsyCap belongs to the framework of Positive Organizational Behavior (POB), which emphasizes the identification and development of employees' psychological strengths to enhance work effectiveness (Luthans, 2002). According to Luthans et al. (2008), a construct must have strong theoretical underpinnings, valid measurement tools, and a state-like nature to integrate POB. PsyCap meets these criteria, reflecting both current psychological capacities and developmental potential (Luthans et al., 2014). In contrast to constructs like human, social, or economic capital, PsyCap focuses on internal psychological attributes (Luthans et al., 2004).

This construct encompasses four dimensions: self-efficacy, optimism, hope, and resilience. Each dimension is rooted in robust theoretical models with strong empirical support. Based on Bandura's Social Cognitive Theory, self-efficacy reflects confidence in mobilizing cognitive and motivational resources to achieve goals (Bandura, 1997). Individuals with high efficacy believe they can control outcomes and overcome challenges (Stajkovic & Luthans, 1998). Optimism refers to the expectation of positive outcomes and drives individuals to achieve goals even under challenging circumstances (Scheier et al., 2001; Seligman, 1998). Hope, derived from Snyder's (2000) work, involves agency and pathways, enabling individuals to set and achieve goals through adaptive strategies. High

hope is linked to improved job performance, contingency planning, and flexible goal setting (Luthans et al., 2006). Resilience is the ability to recover from adversity and adapt to changing circumstances, enhancing individuals' capacity to manage stress and challenges effectively (Luthans et al., 2006; Masten et al., 2009).

Meta-analyses and systematic reviews have consistently demonstrated PsyCap's predictive power for desirable outcomes. Avey et al. (2011) found links between PsyCap and increased job satisfaction, organizational commitment, and well-being. Beyond attitudinal outcomes, PsyCap has also been tied to behavioral indicators, such as organizational citizenship behaviors and job performance (Luthans et al., 2007), supported by subjective and objective measures. Hobfoll's (2002) Conservation of Resources (COR) theory further explains how psychological resources like PsyCap enable individuals to function more effectively under pressure. Importantly, PsyCap's influence is not limited to promoting positive outcomes; it also mitigates undesirable work-related attitudes and behaviors. Research has shown that individuals with higher PsyCap levels are less prone to stress, cynicism, anxiety, and turnover intentions (Avey et al., 2011). These findings reinforce PsyCap's dual role in enhancing well-being while reducing risk factors.

Recent literature has drawn attention to evolving trends in PsyCap research. Pham et al. (2024) observed a growing body of studies emphasizing constructs such as well-being, job satisfaction, and perceived organizational support. Interestingly, they noted a relative decline in research focusing on leadership as an antecedent, suggesting that attention has shifted toward broader organizational and social factors. This shift reinforces the relevance of the present study, which explored alternative predictors. In line with this trend, Nguyen et al. (2024) called for further inquiry into mediators, moderators, and multilevel antecedents of PsyCap, pointing to a still-developing understanding of its formation.

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

2.2 Antecedents of PsyCap

In exploring PsyCap, researchers such as Newman et al. (2014) and Avey et al. (2011) have emphasized the critical need to investigate the factors shaping its formation and development. Responding to this need, Vilarino del Castillo and Lopez-Zafra (2022) proposed an updated classification of PsyCap antecedents, encompassing psychological health, human resources practices, organizational climate, and political variables. Similarly, Avey (2014) examined individual differences, leadership, job characteristics, and demographics as predictors of PsyCap.

Among these factors, leadership has received particular attention due to its potential to shape subordinates' emotions and behavior. However, Avey's (2014) study did not specifically address the role of supervisor support, which may function differently from leadership styles. When employees perceive genuine support, recognition, and appreciation from their supervisors, they tend to feel more confident, motivated, and capable of achieving favorable outcomes. In this regard, Sihag and Sarikwal (2015) found that perceived supervisor support is positively related to elevated PsyCap levels.

The meta-analysis by Wu and Khanh-Van (2019) further emphasized the impact of leadership styles, noting that authentic and ethical leadership are positively linked to job satisfaction and organizational commitment, while abusive leadership correlated with increased stress and reduced commitment. Alongside leadership, perceived organizational support (POS) has also emerged as a significant factor in promoting PsyCap, fostering more adaptive employee attitudes. Notably, this study identified the moderating effects of tenure and age on the relationship between work attitudes and PsyCap, reinforcing the importance of considering individual characteristics in understanding how PsyCap develops.

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

The study conducted by Turgut and Agun (2016) contributed to this discussion by examining the connections between organizational justice, PsyCap, and voice behavior. Although the mediating role of PsyCap was not confirmed, the study underscored the detrimental effects of perceived unfairness on employee attitudes—particularly organizational cynicism, highlighting the relevance of justice perceptions in sustaining a positive psychological environment. In a related research line, Baptista (2021) explored the role of justice in fostering optimism and resilience among employees facing professional challenges. However, that study did not break down the effects by specific dimensions of organizational justice.

While Baptista's research incorporated role ambiguity and conflict, it diverged from prior findings by identifying a positive relationship between role ambiguity and PsyCap, suggesting that ambiguity may sometimes act as a motivational challenge. Additionally, the study revealed unexpected nuances in how supervisor support affected PsyCap, questioning the universally positive assumption often found in the literature.

A broader view is offered by Nolzen (2018), who conducted an extensive review of PsyCap antecedents across individual, team, and organizational levels. On the individual level, variables such as self-concept, positive attitudes, and cultural background influenced PsyCap positively. At the team level, leader PsyCap and leadership behaviors—including authenticity and transformational leadership—played a key role in enhancing followers' psychological resources, primarily by cultivating trust and psychological safety. At the organizational level, predictors included climate, peer relationships, and responsibilities.

García's (2022) research added to this body of knowledge by showing that human resource management practices (HRMP) can foster PsyCap development when implemented within a coherent HRM system. These practices, when perceived as consistent and

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

supportive, serve as day-to-day resources that contribute to employees' psychological growth.

Zhen Yan et al. (2024) provided a more sector-specific perspective and conducted a meta-analytical review of PsyCap in hospitality and tourism. Leadership again emerged as a strong predictor—especially authentic, transformational, and servant leadership. PsyCap was found to strongly correlate with positive outcomes such as job satisfaction, work engagement, and organizational commitment while being negatively associated with role conflict, burnout, and stress. Additionally, PsyCap showed positive effects on innovation, service quality, and psychological well-being while also reducing turnover intentions and reinforcing employees' intention to stay.

Despite the growing body of evidence, Newman et al. (2014) called for a more nuanced understanding of how PsyCap develops, noting that relatively few studies focus on its formation. This call is echoed by Luthans and Youssef-Morgan (2017), who stressed the importance of viewing PsyCap as a developmental process embedded within organizational systems. While recognizing that PsyCap dimensions have a trait-like baseline, limited research has explored their contextual antecedents.

Building upon these insights, this study aimed to address this gap by clarifying a cluster of PsyCap antecedents situated in technical and social dimensions: role conflict, role ambiguity, supervisor support, and organizational justice. Drawing on the framework of the Sociotechnical Systems Theory (Trist, 1981), this study explored how the interplay between social and technical factors within organizations can influence the development of PsyCap.

Eason (2014) posited that sociotechnical systems are built on the coordination of human and technical resources. While organizations often treat individuals as functional components within systems, the Sociotechnical Systems Theory emphasizes that human

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

beings are psychologically complex, driven by motives and emotions that affect their work. This theoretical lens prioritizes motivation, satisfaction, well-being, and participatory structures (Walker et al., 2008), advocating for systems that balance technological and social requirements. It considers factors such as role differentiation, task interdependence, and goal alignment (Cooper & Foster, 1971) while highlighting the core functions of adaptation, integration, and continuity in organizational performance (Cherns, 1976; Parsons, 1951).

The Sociotechnical Systems Theory provides a pertinent framework for examining PsyCap antecedents in organizational settings (Trist, 1981). It facilitates comprehension of the intricate interplay between social and technical elements and their impact on individual and organizational outcomes. By investigating the interaction of social and technical factors within organizational contexts, this study aimed to uncover the mechanisms driving PsyCap development, enriched by integrating factors like role conflict, ambiguity, supervisor support, and organizational justice.

2.2.1 Role ambiguity and role conflict

Roles within organizations play a crucial role in shaping individual behavior and organizational dynamics. In a social unit, a role is a set of behavioral patterns associated with a specific position. In contrast, role perception refers to how individuals perceive the appropriate behavior for a particular situation. Additionally, role expectations concern how others expect an individual to behave in a specific situation (Robbins & Judge, 2015). Kahn et al. (1964) and Gross et al. (1958) established the foundation for understanding role dysfunctions, introducing the concepts of role conflict and ambiguity. Conflict arises from incompatible expectations, while ambiguity results from unclear roles. Palomino and Frezatti (2016) explored the role theory, identifying role conflict and ambiguity as critical

tensions arising from organizational, personal, and interpersonal factors. Role conflict, resulting from simultaneous conflicting role requirements, leads to difficulties in performance. Role ambiguity, on the other hand, stems from a lack of information about responsibilities, contributing to uncertainty. Organizational characteristics and individual factors influence both objective and perceived components of role conflict and ambiguity (Kahn et al., 1964).

From a sociotechnical perspective (Trist, 1981), role conflict and ambiguity represent technical system variables related to how work is structured, defined, and coordinated within the organization. These role-related stressors can disrupt the alignment between technical tasks and individual understanding, affecting employees' capacity to navigate their responsibilities effectively.

Rizzo et al. (1970) further emphasized the impact of role conflict, associating it with distress, dissatisfaction, and reduced organizational effectiveness. Recent research by Baptista (2021) contradicted the traditional negative view of role ambiguity on PsyCap. Higher role ambiguity was unexpectedly linked to increased PsyCap, aligning with the idea that challenges, not obstacles, can positively influence motivation. Illegitimate tasks, characterized by unreasonable demands and conflicting role expectations, can significantly diminish PsyCap. These tasks, perceived as unnecessary or beyond individuals' capacity, undermine their confidence and motivation, leading to decreased resilience. As a result, individuals may struggle to maintain their psychological resources, impacting their participation and well-being (Miao et al., 2024).

2.2.2 Supervisor support

Supervisor support is defined by Bhanthumnavian (2003) as the constructive professional interaction that occurs between a supervisor and their subordinates, encompassing emotional support (empathy), informational support (feedback and guidance), and material support (tangible work assistance). Empirical evidence demonstrated the positive impact of supervisor support on work engagement, job satisfaction, and organizational commitment (Bakker et al., 2007). Aggarwal (2023) highlighted the reciprocal relationship between organizational culture and PsyCap; this concept was significantly related to job satisfaction, organizational commitment, and job performance, enhancing employees' trust in supervisors. This underlines the critical role of supportive leadership practices in fostering a positive work environment. Effective leadership and supportive environments are essential for managing stress levels, promoting positive emotions among employees, and mitigating the harmful effects of workplace bullying. These findings underscore the importance of fostering a supportive and positive work culture through supervisor support.

In the Sociotechnical Systems Theory (Trist, 1981), supervisor support is conceptualized as a social system variable. It reflects the quality of interpersonal relationships and social integration at work, contributing to employees' sense of belonging, recognition, and psychological safety within the organizational environment.

Luthans et al. (2008) emphasized the interplay between PsyCap and a supportive organizational climate for sustainable growth and performance. A supportive organizational climate encompasses perceived support from various sources, peers, direct supervisors, and the different departments of an organization. When employees feel supported, they are more likely to engage in hope-driven exploration of new methods and resiliently bounce back from

setbacks. The research by Liu (2013) revealed that employees with higher levels of supervisor support exhibit elevated PsyCap levels, subsequently predicting heightened job performance. Baptista's (2021) research challenged the expected positive link between supervisor support and PsyCap. Despite literature recognizing supervisors' positive impact, Baptista's findings hinted at a potential negative association with PsyCap. The study explored aspects of the supervisor-subordinate relationship, like power imbalances and subpar performance, which contributed to this unexpected outcome. While a supportive organizational climate creates favorable conditions for PsyCap to flourish, the nuances of supervisor support underscore the complexity of these relationships and their potential impacts on individual well-being and organizational effectiveness.

2.2.3 Organizational justice

As conceptualized by Greenberg (2011), organizational justice revolves around perceived fairness in organizational procedures, encompassing the distribution of rewards, decision-making processes, and interpersonal relations. The Equity Theory by Adams (1965) was the theoretical foundation of this construct, asserting that job satisfaction and work success are linked to perceptions of equal treatment. The study of organizational justice often focuses on four dimensions: distributive, procedural, interpersonal, and informational. Distributive justice pertains to the perceived fairness in outcome distribution (e.g., rewards, penalties, and wages). It involves evaluating the fairness of organizational outcomes received by employees (Cohen, 2013). Procedural justice concerns the correctness of the decision-making processes that lead to reward distribution. This dimension emphasizes evaluating employees' rights of choice and voice in decisions (Bies & Shapiro, 1988). Interpersonal justice concerns the treatment of employees, both formally and informally,

with an emphasis on respect and dignity from supervisors or other individuals (Colquitt et al., 2001). In contrast, informational justice pertains to the degree to which employees can access information that clarifies the reasons behind certain decisions and their consequences (Colquitt et al., 2001). Within the Sociotechnical Systems framework (Trist, 1981), organizational justice is considered a social system variable, as it shapes perceptions of fairness, communication, and interpersonal respect

Previous research has consistently demonstrated the positive associations of organizational justice with various organizational outcomes, including job satisfaction, organizational commitment, and PsyCap (Avey, Luthans, & Youssef, 2011). Baptista's (2021) dissertation aligned with these findings, indicating a positive association between organizational justice and PsyCap. This connection has implications for optimism, positive expectations of success, and resilience in the face of professional challenges. Drawing insights from the Broaden-and-Build Theory (Fredrickson & Levenson, 1998), this study placed organizational justice as a positive experience contributing to positive psychological resources, such as PsyCap. This theory suggests that fairness in organizational procedures allows individuals to cultivate positive cognitions, enlarging and utilizing their PsyCap. Conversely, inequity generates negative emotions, leading to adverse cognitive aspects and negative organizational outcomes.

Complementing these earlier findings, a more recent study by Yetgin (2024) confirmed that three justice dimensions (procedural, interactional, and distributive) were significantly and positively associated with PsyCap. Fair decision-making processes, respectful interpersonal treatment, and equitable reward distribution enhanced employees' hope, optimism, and resilience. These results reinforce the central role of justice perceptions

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

in promoting both psychological well-being and job satisfaction in diverse organizational contexts.

3. Research Objectives

3.1 Main Objective

This study aimed to identify a set of antecedents, comprising both technical (role conflict and role ambiguity) and social elements (supervisor support and organizational justice), of PsyCap and observe how they relate to this concept.

3.2 Specific Objectives

More specifically, through a hierarchical multiple regression model, this study examined how social variables (organizational justice and supervisor support) and technical variables (role ambiguity and role conflict) were associated with PsyCap. This approach aimed to contribute to a better understanding of possible predictors of PsyCap, providing insights into their relative influence. The variables were sequentially added to the model to assess their incremental contribution. First, the dimensions of organizational justice (distributive, procedural, informational, and interpersonal) were tested. Next, the social predictor of supervisor support was included. Finally, the technical predictors (role conflict and role ambiguity) were integrated. This design allowed the identification of variables that were more or less strongly related to PsyCap, as well as the direction (positive or negative) of these associations.

3.3 Research Hypotheses

According to the literature review and the objectives defined, the following research hypotheses were proposed:

Hypothesis 1 (H1): Organizational justice dimensions, distributive, procedural, interpersonal, and informational justice, are positively associated with PsyCap.
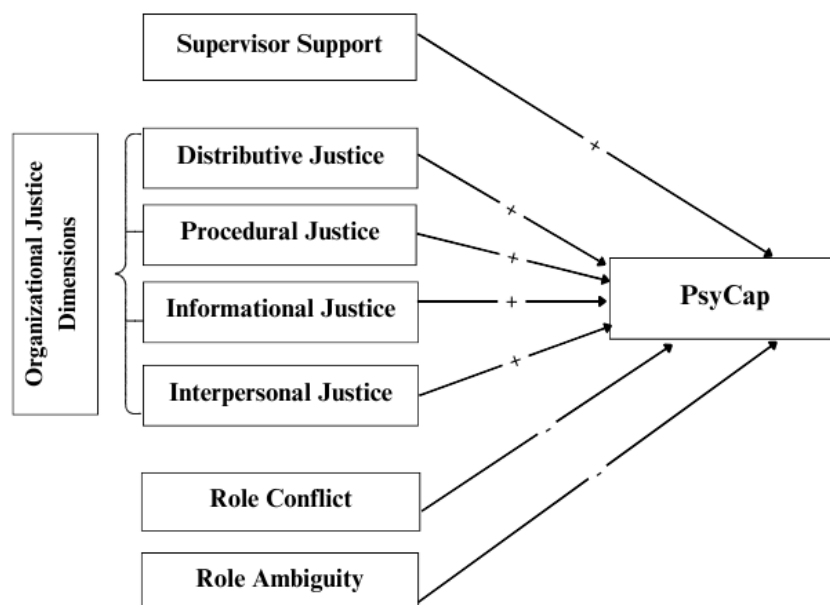
Hypothesis 2 (H2): Supervisor support is positively associated with PsyCap.

Hypothesis 3 (H3): Role conflict and role ambiguity are negatively related to PsyCap.

Figure 3.1 exhibits the theoretical model tested.

Figure 3.1

Theoretical Model Tested

4. Method

4.1 Participants

The study included 723 Portuguese workers, meeting the inclusion criteria of being at least 18 years old and in active employment during data collection. Of the participants, 42.8% were females, and 57.2% were males, representing various sectors and educational levels. Table 4.1 provides detailed sociodemographic characteristics, including age, marital status, employment contract type, and management responsibilities.

Table 4.1

Sociodemographic Characterization (N=723)

	n	*%*
Gender		
Male	406	57.18
Female	304	42.82
Age		
18-24 years	113	16.38
25-34 years	336	48.70
35-49 years	184	26.67
50-65 years	55	7.97
> 65 years	2	.29
Education		
Primary school	46	6.50
Secondary school	365	51.55
Bachelor's degree	185	26.13
Postgraduate course	42	5.93

Master's degree	64	9.04
Doctorate	6	.85

Marital Status

Married or in a civil union	219	30.80
Separated or divorced	65	9.14
Single	421	59.21
Widower	4	0.56
Missing	2	.28

Current employment status

Employee	566	80.17
Self-employed	140	19.83

Employment contract

Full-time	596	85.63
Part-time	100	14.37

Activity sector

Primary	26	3.73
Secondary	220	31.56
Tertiary	451	64.71

Management positions

No	471	66.15
Yes	240	33.71
Missing	1	0.14

4.2 Measures

PsyCap was assessed through the Compound PsyCap Scale (CPC-12; Lorenz et al., 2016), which can be found in Appendix A. This study used the Portuguese version of the CPC-12, previously adapted and validated by Benvindo (2021). This scale, initially designed by Lorenz et al. (2016), encompassed 12 items across four distinct dimensions: hope (e.g., "If I found myself in difficulties, I would consider various ways to resolve them"), optimism (e.g., "I am looking forward to the life ahead of me"), resilience (e.g., "Sometimes I force myself to do things, whether I want to or not"), and self-efficacy (e.g., "I am confident that I could handle unexpected situations efficiently"). Each dimension consists of three items that respondents rated on a six-point scale, ranging from 1 (*Strongly Disagree*) to 6 (*Strongly Agree*). The CPC-12 demonstrated robust reliability, as indicated by a Cronbach's alpha value of .82 in the initial study (Lorenz et al., 2016). Similarly, in our sample, the Cronbach's alpha value was .77.

Organizational justice was measured by the Organizational Justice Questionnaire (Rego, 2000), included in Appendix A. This instrument comprised 17 items categorized into four dimensions: distributive justice (e.g., "In general, the rewards that I receive are fair"), procedural justice (e.g., "Employees can disagree or appeal decisions made by their superiors"), interpersonal justice (e.g., "My supervisor shows genuine interest in being fair with me"), and informational justice (e.g., "When deciding on my work, my superior provides meaningful explanations to me"). Respondents rated their agreement with each item on a six-point scale, ranging from 1 (*Completely False*) to 6 (*Completely True*). Rego (2000) reported satisfactory psychometric properties for this measure, with Cronbach's alpha values ranging from .76 to .94. In our sample, the global Cronbach's alpha value was .92. Furthermore, distributive justice displayed a Cronbach's alpha coefficient of .94, procedural

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

justice registered a coefficient of .85, and interpersonal justice presented a value of .89. However, the Cronbach's alpha value for informational justice was lower at .54. This low reliability may compromise the interpretability of this dimension and poses a potential threat to the internal validity of the results. Future studies should consider revising the items used to assess informational justice or, if appropriate, re-evaluating the inclusion of this dimension in the main analyses.

Role ambiguity and conflict were analyzed using the scale developed by Schuler et al. (1977), reproduced in Appendix A. This instrument comprised 14 items, with six items addressing role ambiguity (e.g., "I know what my responsibilities are") and eight items examining role conflict (e.g., "I receive an assignment without adequate resources and materials to execute it"). The items were scored on a seven-point Likert scale, ranging from 1 (*Very False*) to 7 (*Very True*). This scale achieved reliability values above the threshold of .70 (Schuler et al., 1977). Within our sample, the global Cronbach's alpha value was .78. Furthermore, the Cronbach's alpha coefficient for role ambiguity was .84, and the Cronbach's alpha coefficient for role conflict was .79.

Supervisor support was assessed using one dimension from the Portuguese version of the Copenhagen Psychosocial Questionnaire-II (COPSOQ-II; Kristensen et al., 2005; Silva et al., 2011), presented in Appendix A. This dimension consisted of three items (e.g., "How often does your superior talk with you about how well you carry out your work?"). Respondents rated their experiences on a five-point Likert scale, ranging from 1 (*Never/Almost Never*) to 5 (*Always*). This measure revealed adequate reliability, with á Cronbach's alpha value higher than .70 (α= .87). Likewise, within our sample, the Cronbach's alpha coefficient was .86.

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

The sociodemographic questionnaire (Appendix A) used in this study served to characterize the sample collected, grouping information about sex, age, marital status, highest educational level, current employment status, type of employment contract (e.g., full-time, part-time), economic sector of employment, and performance of management tasks of the participants.

4.3 Research Procedures

This research employed a quantitative method using a cross-sectional research design, i.e., data were collected at a single point in time using the same research protocol. The information was gathered via an online platform, specifically Google Forms. The research protocol encompassed the core variable of this study, PsyCap, alongside a range of antecedents (organizational justice, role ambiguity, role conflict, and supervisor support), all assessed using self-report measures. Additionally, a sociodemographic questionnaire was also developed and administered.

A non-probabilistic sampling technique was adopted using convenience and snowball sampling methods, with two inclusion criteria established for participation: being actively employed at the time of the response to the research protocol and being 18 years or older. Before filling out the research protocol, participants were required to read and agree to a set of information, explicitly stating that their participation in the study was voluntary and that they could withdraw without repercussions to any parties involved. Furthermore, participants were informed that no monetary or otherwise compensation would be provided for their participation.

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

4.4 Data Analysis Procedures

Initially, missing values were analyzed; when necessary, these were replaced by the mean values of each item, as Hill and Hill (2008) recommended. Descriptive statistics were provided for the analyzed latent constructs, presenting the mean (M), standard deviation (SD), minimum (Min.), and maximum (Max.) values. Additionally, a correlational analysis was performed through Pearson's correlation coefficient (r) and its statistical significance value ($p<.05$).

The main objective of this research, namely identifying the possible antecedents of PsyCap, was achieved through a hierarchical multiple linear regression (HMLR) analysis following the maximum likelihood (ML) estimation method. The assumptions included: evaluation of the uni- and multivariate normal distribution, skewness ($|sk|$) and kurtosis ($|ku|$) values must be lower than three and ten, respectively (Curran et al., 1996; Marôco, 2021a); identification of outliers using the Mahalanobis distance (D^2), values lower than .05 may indicate the presence of a multivariate outlier (Marôco, 2021b; Menard, 1995); and examination of multicollinearity using the Variance Inflation Factor (VIF) coefficient, values below five are expected (Marôco, 2021b; Menard, 1995).

The present study assessed the association between seven independent variables (distributive justice, procedural justice, interpersonal justice, informational justice, role ambiguity, role conflict, and supervisor support) and the dependent variable PsyCap. Through this analysis, it was possible to observe whether the association of the independent variables with PsyCap had statistical significance ($p<.05$) and to examine which had greater/smaller relationship with the dependent variable. Furthermore, it was also possible to determine the percentage of variance explained by the model (R^2). Lastly, the common method variance was analyzed using Harman's single-factor test (Podsakoff et al., 2003),

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

and an analysis of the magnitude (β) and statistical significance ($p<.05$) for the relationship established between the defined variables was also performed (Marôco, 2021b).

5. Results

Statistical analyses were conducted using the R statistical software. These analyses encompassed descriptive statistics, correlational analysis, and HMLR to test the research hypotheses. The subsequent sections delineate these analyses in detail.

5.1 Descriptives Statistics

The mean (*M*), standard deviation (*SD*), minimum (Min.), maximum (Max.), kurtosis (|ku|), and skewness (|sk|) values were calculated for each research variable (Table 5.1). The distribution of |sk| and |ku| values showed that all variables fall within acceptable ranges for these coefficients, suggesting that the data approximate normal distributions according to the literature (Curran et al., 1996). Consequently, these values support the assumption that the data are suitable for regression analyses.

Table 5.1

Descriptive Analysis (N=723)

	M	*SD*	Min.	Max.	|ku|	|sk|
PsyCap	4.81	.611	2.1666	6	.319	-.444
Distributive	3.84	1.462	1	6	-1.007	-.215
Procedimental	4.01	1.295	1	6	-.633	-.362
Interpersonal	4.47	1.238	1	6	-.379	-.601

	M	SD	Min	Máx	|sk|	|ku|
Informational	4.35	.913	1.500	6	-.229	-.491
Role Ambiguity	2.42	1.057	1	6	.022	.042
Role Conflict	4.48	1.207	1	7	-.394	-.033
Supervisor Support	3.55	1.102	1	5	-.663	-.449

Note. *M*=mean values; *SD*=standard deviation values; Min.=minimum values; Máx.=maximum values; |sk|=skewness values; |ku|=kurtosis values.

5.2 Correlational Analysis

Table 5.2 presents the correlation matrix for the research variables. The correlations between PsyCap and distributive justice, procedural justice, and interpersonal justice, as well as between PsyCap and supervisor support, were positive and statistically significant. Also, PsyCap correlated positively with role conflict. This means that justice dimensions, supervisor support, and conflict are positively associated with PsyCap. In opposition, role ambiguity was negatively correlated with PsyCap, suggesting that higher levels of role ambiguity are associated with lower levels of PsyCap.

Table 5.2

Correlation Analysis using Pearson's Correlation Coefficient (N=723)

	1.	2.	3.	4.	5.	6.	7.	8.
1. PsyCap	1							
2. DJ	.312**	1						
3. PJ	.366**	.763**	1					

4. ITJ	.362**	.722**	.791**	1				
5. IFJ	.040	.215**	.228**	.264**	1			
6. RC	.241**	-.014	.071	-.023	-.054	1		
7. RA	-.499**	-.512**	-.616**	-.688**	-.233**	-.123**	1	
8. SS	.251**	.548**	.596**	.696**	.226**	.015	-.505**	1

Note. DJ=distributive justice; PJ=procedural justice; ITJ=interpersonal justice; IFJ=informational justice; RC=role conflict; RA=role ambiguity; SS=supervisor support. Statistically significant value for *p<.05, Statistically significant value for **p< .01, Statistically significant value for ***p<.001.

5.3 Hierarchical Multiple Linear Regression Analysis

The main goal of this research was to identify the potential antecedents of PsyCap through a HMLR model. The analysis was performed in three stages, each model incorporating additional predictors to evaluate their association with PsyCap. The assumptions of normality, linearity, multicollinearity, and homoscedasticity were verified and met, ensuring the robustness of the regression analyses.

The first regression model (Model 1) examined the association between the four dimensions of organizational justice – distributive, procedural, informational, and interpersonal – and PsyCap. The results indicated that procedural justice (β=.20, $p<.01$) and interpersonal justice (β=.20, $p<.01$) were significantly associated with PsyCap. However, distributive and informational justice did not establish significant relationships with PsyCap. The model explained 15.2% of the variance in PsyCap (R^2=.152; $F(4, 718)$=32.21, $p<.001$) (Table 5.3). Therefore, Hypothesis 1 (H1), which proposed that distributive, procedural,

interpersonal, and informational justice dimensions were positively associated with PsyCap, was partially supported.

Table 5.3

Regression Model 1: Relationship Between the Dimensions of Organizational Justice (Distributive, Procedural, Informational, and Interpersonal) and PsyCap (N=723)

Variables	*B*	*SE*	β	*t-value*	*p-value*
			PsyCap		
Constant	4.13	.115		36.034	<.000***
Distributive Justice	.01	.023	.03	.493	.622
Procedural Justice	.10	.030	.20	3.235	.001**
Informational Justice	-.04	.024	-.06	-1.814	.070
Interpersonal Justice	.10	.029	.20	3.332	.000906***
R^2	.152**				
Adjusted R^2	.147				
SE	.564				
F	$F(4, 718)=32.21, p<.001$				

Note. *B*=unstandardized regression coefficient; *SE*=standard error; β=standardized regression coefficient; *t*=test of the significance of regression coefficients; R^2=determination coefficient; *F=F* test; Adjusted R^2=adjusted determination coefficient. Statistically significant value for **p<.01; Statistically significant value for ***p<.001.

The second regression model (Model 2) added supervisor support to the predictors from Model 1. Despite the inclusion of this variable, the explanatory power of the model did

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

not increase (R^2=.152; $F(5, 717)$=25.76, p< .001). Table 5.4 reveals that procedural justice (β=.21, p< .01) and interpersonal justice (β=.21, p< .01) were significantly related to PsyCap. At the same time, supervisor support was not a significant predictor (β=-.02, p>.05). Consequently, Hypothesis 2 (H2), which posited that supervisor support was positively associated with PsyCap, was not supported by these findings.

Table 5.4

Regression Model 2: Relationship between the dimensions of organizational justice (Distributive, Procedural, Informational, and Interpersonal) and Supervisor Support with PsyCap (N=723)

	PsyCap				
Variables	*B*	*SE*	β	*t-value*	*p-value*
Constant	4.14	.116		35.730	< 2e-16***
Distributive Justice	.01	.023	.03	.508	.611
Procedural Justice	.10	.030	.21	3.248	.001**
Informational Justice	-.04	.024	-.06	-1.791	.074
Interpersonal Justice	.10	.032	.21	3.160	.002**
Supervisor Support	-.01	.027	-.02	-.333	.740
R^2	.152**				
Adjusted *R^2*	.146				
SE	.565				
F	$F(5, 717)$=25.76, p< .001				

Note. *B*=unstandardized regression coefficient; *SE*=standard error; β=standardized regression coefficient; *t*=test of the significance of regression coefficients; *R^2*=determination

coefficient; *F=F* test; Adjusted *R²*=adjusted determination coefficient. Statistically significant value for **p<.01; Statistically significant value for ***p<.001.

The third regression model (Model 3) incorporated role ambiguity and conflict in addition to the variables from Model 2. This comprehensive model significantly increased the explanatory power (R^2=.313; $F(7, 715)$= 46.55, $p<.001$). As shown in Table 5.5, as expected, role ambiguity was negatively related to PsyCap (β=-.27, $p<.001$), indicating that higher levels of role ambiguity are associated with lower levels of PsyCap. In contrast to our initial hypothesis, role conflict exhibited a positive relationship with PsyCap (β=.17, $p<.01$). Hence, H3 was partially supported. Also, informational justice established a negative association with PsyCap (β=-.09, $p<.01$).

Table 5.5

Regression Model 3: Relationship between the dimensions of organizational justice (distributive, procedural, informational, and interpersonal), Supervisor Support, Role Ambiguity, and Role Conflict with PsyCap (N=723)

	PsyCap				
Variables	*B*	*SE*	*β*	*t-value*	*p-value*
Constant	3.04	.139		22.007	< 2e-16***
Distributive Justice	.03	.021	.08	1.492	.140
Procedural Justice	.03	.027	.06	1.084	.278
Informational Justice	-.06	.022	-.09	-2.641	.008**
Interpersonal Justice	-.01	.032	-.01	-.200	.841

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

Supervisor Support	-.03	.024	-.05	-1.117	.265
Role Ambiguity	-.27	.026	-.47	10.549	< 2e-16***
Role Conflict	.09	.016	.17	5.332	1.31e-07***
R^2	.313**				
Adjusted R^2	.306				
SE	.509				
F	$F(7, 715)= 46.55, p<.001$				

Note. *B*=unstandardized regression coefficient; *SE*=standard error; β=standardized regression coefficient; *t*=test of the significance of regression coefficients; R^2=determination coefficient; *F=F* test; Adjusted R^2=adjusted determination coefficient. Statistically significant value for **p<.01; Statistically significant value for ***p<.001.

All models' variance inflation factor (VIF) values were below the threshold of five, ranging from 1.07 to 4.32, indicating no critical multicollinearity concerns (Marôco, 2021b; Menard, 1995). The results of Harman's single-factor test, conducted via exploratory factor analysis (EFA) using the minres method, revealed that a single factor explains 45% of the total variance in the data. This percentage, though substantial, falls below the recognized threshold of 50%, indicative of significant common-method bias (Podsakoff et al., 2003).

Table 5.6

Beta Coefficients of Linear Regression for the Models in the Hierarchical Process

	M1	M2	M3
Distributive Justice	.011	.012	.031

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

Procedural Justice	.096**	.097**	.030
Informational Justice	-.043	-.042	-.057**
Interpersonal Justice	.098**	.102**	-.006
Supervisor Support		-.009	-.027
Role Ambiguity			-.271**
Role Conflict			.087**
R^2	.152**	.152**	.313**

Note. R^2=determination coefficient. **$p<.01$.

The HMLR analysis revealed a pattern of relationships between the independent variables and PsyCap that partially aligns with expectations. As anticipated, procedural and interpersonal justice remained positively and significantly associated throughout the models (Table 5.6). Distributive and informational justice, however, showed a more complex interplay.

Including role ambiguity and conflict in the final model has led to a substantial increase in R^2, more than doubling the explained variance compared to Model 1 focused solely on justice dimensions (Table 5.6). This suggests that role dynamics establish a relevant relationship with PsyCap. As expected, role ambiguity exhibited a significant negative coefficient, indicating that higher levels of role ambiguity are associated with lower PsyCap. This aligns with previous research suggesting that unclear expectations and roles can harm employee well-being. Interestingly, including role variables also yielded a significant negative coefficient for informational justice. When controlling for the association of role ambiguity and conflict alongside the justice dimensions, the negative association between informational justice and PsyCap emerged. This suggests that

informational justice might have a buffering effect, counteracting the negative relationship between role challenges and PsyCap. The strong positive effects of procedural and interpersonal justice in the initial models might have masked this effect.

Supervisor support, though positively correlated with PsyCap in the zero-order correlations, did not relate significantly with this construct in any of the regression models. This, along with the high correlations between supervisor support and the justice dimensions in the correlation matrix, suggests that the justice variables might partially capture supervisor support, rendering it statistically redundant in the final model. From a practical standpoint, supervisor support is a valuable aspect of organizational functioning. Still, the findings align with existing literature, suggesting a more nuanced relationship between supervisor support and PsyCap. The explained variance in PsyCap increased to 31.3% after incorporating role variables, highlighting the parsimonious explanatory power of this model compared to one solely based on justice dimensions. In contrast, supervisor support alone explained a minimal portion of the variance (.06%).

6. Discussion

This study explored how dimensions of organizational justice, supervisor support, role conflict, and role ambiguity relate to PsyCap. The goal was to identify key social and technical factors as antecedents of employees' psychological resources, including resilience, optimism, self-efficacy, and hope. The regression analysis offered insights into these relationships, confirming some theoretical expectations while challenging others.

The analysis results partially supported H1, indicating that procedural and interpersonal justice were positively associated with PsyCap, while distributive and informational justice were not. These results align with prior research emphasizing the role

of fair procedures and respectful treatment in promoting positive employee outcomes (Avey, Luthans, & Youssef, 2011; Bies & Shapiro, 1988; Colquitt et al., 2001). However, the absence of significant associations with distributive and informational justice contrasts with findings such as Yetgin (2024), who reported consistent positive relationships between all justice dimensions and PsyCap. This discrepancy may reflect contextual factors specific to the sample or how the justice dimensions were operationalized. Employees may also prioritize transparent procedures and interpersonal respect over resource distribution and communication clarity.

Nonetheless, informational justice deserves attention. Although it was not positively associated with PsyCap in the main analysis, it showed a significant negative relationship when role ambiguity and conflict were included. This suggests that when employees face unclear or conflicting roles, poor communication from the organization may further reduce their psychological resources. These findings reinforce the idea that communication practices within organizations can either buffer or intensify the psychological effects of role-related stressors.

Those nuances underscore the need for further investigation into when and why specific justice dimensions are associated with PsyCap. Despite supporting evidence, each justice dimension explained only a modest proportion of PsyCap variance. This highlights that while fair treatment fosters psychological resources, other variables also contribute significantly to their development. Prior research reinforces this point: Flinkman et al. (2023) showed that organizational justice promotes higher PsyCap and work engagement and reduced stress, while Hur et al. (2016) found that distributive and procedural justice were positively related to PsyCap among service employees.

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

Contrary to H2, supervisor support did not show a statistically significant association with PsyCap. This result challenges the assumption that supportive leadership always enhances psychological resources. Although the literature often portrays supervisor support as a beneficial factor (e.g., Bakker et al., 2007; Luthans et al., 2008), some studies reported inconsistent or non-significant associations. For example, Halbesleben (2006), Kaufmann and Beehr (1986), and Posig and Kickul (2003) found that social support may aggravate stress depending on context or individual interpretation. In such cases, support may be perceived as intrusive, reinforcing helplessness, or distracting from problem-solving strategies. Several explanations for these counterintuitive results have been offered, including recall of negative emotions, overestimation or "catastrophization" of distressing events, and distraction from more problem-oriented coping strategies (Carver et al., 1989). However, the absence of a significant relationship between supervisor support and PsyCap in this study suggests that other factors may influence the development of psychological resources among employees.

Moreover, the measure used in this study included only three items, which may have limited its ability to capture the full complexity of supervisor support. It is also possible that the effects of supervisor support are indirect, acting through other job resources such as autonomy, feedback, and skill variety (Bakker & Demerouti, 2017). This perspective is supported by findings showing correlations between supervisor support and organizational justice dimensions, suggesting that supportive behaviors may contribute to fairness perceptions, which in turn promote PsyCap. Therefore, future research should further explore these indirect paths and consider broader, multidimensional assessments of supervisory support.

The regression analysis provided mixed support for H3. As expected, role ambiguity

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

was negatively associated with PsyCap, which is consistent with existing literature indicating that unclear job expectations undermine well-being and PsyCap. However, contrary to conventional assumptions, role conflict was positively associated with PsyCap. This finding suggests that, under certain conditions, experiencing role conflict may enhance employees' problem-solving skills and resilience, ultimately contributing to higher PsyCap. This paradox aligns with the Job Demands–Resources (JD-R) Theory, which proposes that job demands (e.g., role conflict) may enhance motivation and resourcefulness when adequate job or personal resources are present (Bakker & Demerouti, 2017). High PsyCap individuals may interpret conflicting roles as challenges rather than threats, engaging in adaptive coping behaviors. As Wrzesniewski and Dutton (2001) explained, such individuals might reframe or reshape their roles, turning ambiguity and conflict into opportunities for growth. Evidence by Xanthopoulou et al. (2013) also supports this idea, showing that job resources reinforce personal psychological resources, which in turn enhance work engagement and job performance. These results suggest that the organizational context, access to job resources, and individual differences in coping strategies likely moderate the effects of role-related stressors on PsyCap.

These findings align with the Sociotechnical Systems Theory, which emphasizes the joint relationship of social and technical subsystems, such as interpersonal support and role structures, on individual functioning. The observed results support the theoretical premise that both variables interact to predict employee outcomes. While some expected associations were confirmed (e.g., procedural justice, role ambiguity), others (e.g., supervisor support, role conflict) revealed unexpected dynamics that underscore the complexity of the sociotechnical environment.

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

7. Conclusion

The findings of this study contribute significantly to understanding the factors shaping PsyCap within organizational settings by integrating theoretical perspectives from organizational justice, supervisor support, and role theory. The results revealed complex relationships between organizational factors and employee psychological resources, highlighting expected and unexpected outcomes. By combining social and technical variables within the same predictive model, the study also offered a concrete application of the Sociotechnical Systems Theory, reinforcing its relevance for understanding how organizational environments influence psychological resources.

This study underscores the importance of procedural and interpersonal justice in fostering PsyCap among employees. Procedural justice, which pertains to the fairness of decision-making processes, and interpersonal justice, which concerns respectful and fair treatment by supervisors, were positively associated with PsyCap. These findings suggest that organizations should prioritize creating a transparent and supportive work environment, as such contexts are associated with higher psychological resources among employees.

Contrary to expectations, supervisor support did not emerge as a significant predictor of PsyCap. This suggests that while supervisor support is generally perceived as beneficial, other contextual factors may influence its direct relationship with PsyCap. Organizations should consider the quality of supervisor-subordinate relationships and the specific nature of the support provided. Training programs aimed at enhancing supervisors' supportive behaviors, empathy, and communication skills could be beneficial in fostering a positive work environment and enhancing PsyCap.

The findings regarding role ambiguity and role conflict are particularly noteworthy. As hypothesized, role ambiguity was negatively associated with PsyCap, indicating that

unclear job expectations can undermine employees' psychological resources. However, contrary to the initial hypothesis, role conflict was positively associated with PsyCap, suggesting that conflicting demands might, in some contexts, enhance psychological resources by stimulating resilience and adaptability. Organizations should, therefore, focus on clarifying job roles and providing clear and consistent communication to mitigate the adverse effects of role ambiguity while recognizing that some degree of role conflict might contribute positively to PsyCap by fostering adaptive coping mechanisms.

7.1 Limitations and Future Directions

Despite its valuable contributions, this study is not without limitations. Firstly, the cross-sectional design limits the ability to establish causality between the identified antecedents and PsyCap. Additionally, using a cross-sectional design increases the likelihood of common-method bias. Another consideration is the nature of the measures used; relying on self-report measures may introduce response biases, such as social desirability bias. In light of the findings, it is essential to acknowledge the dynamic interplay between personal resources, such as PsyCap, and the broader sociotechnical environment. While this study focused on contextual predictors, PsyCap itself may also influence how individuals perceive and interact with organizational structures, leadership, and justice-related processes. Further studies could explore this bidirectional relationship, reinforcing the importance of integrating individual and contextual dimensions in organizational psychology.

Furthermore, while the study's sample is diverse, it may not fully represent all organizational contexts, thereby limiting the generalizability of the results. Replicating this research across different cultural settings and industry sectors could enhance the external

validity and generalization of the findings. Future studies could also consider incorporating work arrangement variables—such as remote, hybrid, or on-site work models—as these may influence how employees experience organizational justice, support, and role dynamics. Research with longitudinal designs would also be valuable in assessing whether variables such as organizational justice and supervisor support have a direct causal influence on the development of PsyCap over time. This would help clarify the directionality and strength of the observed associations. Another limitation concerns the measurement of supervisor support. The scale used included only three items, which may restrict the breadth and depth with which this construct was assessed. Using more comprehensive measures could better capture the multifaceted nature of supervisor support and its relationship with PsyCap.

In terms of future research directions, it is crucial to clarify the role of supervisor support by examining different types of support and contextual factors. This could deepen our understanding of how this construct relates to PsyCap. Additionally, exploring the conditions under which role conflict can be beneficial and how organizations can effectively support employees in navigating these challenges would be worthwhile. Moreover, there is a need to review the complete justice scale to identify critical items that offer unique insights without redundancy. This is essential for determining whether perceived justice within an organizational context is coherent or merely overlapping, which can affect model simplicity and reduce collinearity.

In addition, future studies could benefit from a closer examination of data distribution patterns, including variables with greater dispersion, as this may offer further insights into contextual or perceptional variability within the sample. Lastly, future research should investigate potential mediators and moderators, such as organizational culture, job resources,

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

and individual differences. Such research could provide comprehensive insights into the mechanisms underlying the relationships between organizational factors and PsyCap.

7.2 Practical Implications

This study offers significant practical implications for organizational leaders and human resources (HR) practitioners. Organizations can cultivate an environment conducive to developing PsyCap by promoting procedural and interpersonal justice. Training programs for supervisors should emphasize supportive behaviors, empathy, and communication skills to support employees better. Additionally, clear communication, role clarity, and effective role management are crucial in mitigating the negative impacts of role ambiguity and conflict. Although role ambiguity showed the expected negative association with PsyCap, role conflict demonstrated a positive relationship, indicating that specific challenging role dynamics may relate to enhanced psychological resources. Strategies should, therefore, focus on helping employees navigate role conflicts effectively to strengthen problem-solving skills and resilience.

Moreover, our findings highlight the importance of informational justice. Our study revealed a significant negative coefficient for informational justice when considering role ambiguity and conflict. This underscores the need for clear and transparent organizational communications, empowering employees to handle challenges related to role ambiguity and conflict effectively. Organizations should ensure that information about reward distribution, performance evaluations, and critical decisions are communicated clearly to all employees to mitigate misunderstandings and reduce the negative effect of unclear roles on employee PsyCap.

Antecedents of psychological capital (PsyCap): The role of technical and social variables,
Sofia Theodorovicz Badotti
European Master in Work, Organizational and Personnel Psychology, 2023-2025

Furthermore, organizations should implement formal protocols ensuring fair and transparent decision-making processes while fostering respectful and supportive interactions. These protocols must establish clear guidelines that promote fairness and respect, ultimately enhancing the work environment and employee well-being. Exploring the role of communication channels and technologies in promoting informational justice can offer insights into effective organizational practices. Addressing informational justice alongside procedural and interpersonal justice creates a comprehensive framework for enhancing PsyCap and fostering a positive work environment conducive to employee well-being and organizational success.

7.3 Theoretical Implications

This study provides significant contributions to organizational psychology by offering new insights into the antecedents of PsyCap. It moves beyond traditional perspectives to include social and technical factors, identifying antecedents within the frameworks of organizational justice, supervisor support, and role theory. By integrating social and technical variables in the same predictive model, the study offers a concrete application of Sociotechnical Systems Theory. This reinforces its originality, as it goes beyond models focused solely on individual characteristics.

The positive association between role conflict and PsyCap and the lack of a significant relationship between supervisor support and PsyCap raised relevant theoretical considerations. The link between role conflict and PsyCap suggests that, under certain conditions, navigating conflicting roles may contribute to developing personal resources such as resilience. This interpretation aligns with Wrzesniewski and Dutton's (2001) work, questioning the assumption that role stressors are necessarily negative and indicating that

they might also be experienced as opportunities for growth, depending on the context and individual interpretation.

Although unexpected, the absence of a significant relationship between supervisor support and PsyCap may reflect the influence of contextual or structural factors. This aligns with sociological perspectives such as Burawoy's (1989), which emphasized how organizational dynamics mediate interpersonal relationships. These findings highlight the need for more nuanced theoretical models considering how different support dimensions and specific organizational environments shape employee outcomes.

This study contributes to the existing literature by examining how workplace social and technical conditions relate to PsyCap, broadening the analysis beyond individual traits. It includes variables such as the four dimensions of organizational justice (distributive, procedural, interpersonal, and informational), supervisor support, and role ambiguity and conflict, offering a more comprehensive view of the organizational context. This approach is consistent with perspectives that view PsyCap as influenced by social interactions and structural characteristics (Luthans & Youssef-Morgan, 2017). While previous studies often emphasized personality traits or leadership styles (Wu & Khanh-Van, 2019; Zhen Yan et al., 2024), they overlooked how organizational justice and role dynamics might also relate to PsyCap. For instance, this study suggested that role ambiguity may not always hinder well-being and could, in some circumstances, foster adaptive responses (Baptista, 2021).

In alignment with Sociotechnical Systems Theory (Trist, 1981), this study operationalized the integration of social and technical dimensions by including both interpersonal factors (e.g., supervisor support, justice perceptions) and structural aspects (e.g., role clarity and conflict) within the same analytical model. This illustrates how

interactions between systems (social and technical) may influence the development of psychological resources such as PsyCap.

In summary, this study integrates theoretical perspectives from psychology, sociology, and organizational theory to expand understanding of PsyCap antecedents. It reinforces the relevance of justice perceptions, support mechanisms, and role-related dynamics as contextual factors that may contribute to employees' psychological resources. These insights may guide future theoretical developments and inform organizational practices to support employee well-being and effectiveness.

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European Master in Work, Organizational and Personnel Psychology, 2023-2025

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Antecedents of psychological capital (PsyCap): The role of technical and social variables,
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European Master in Work, Organizational and Personnel Psychology, 2023-2025

Appendix A

SECÇÃO I (MEDIDA DE CAPITAL PSICOLÓGICO)

As seguintes afirmações procuram perceber a sua opinião sobre si mesmo. Com recurso a uma escala de seis pontos (*1-Discordo totalmente, 2-Discordo, 3-Discordo em parte, 4- Concordo em parte, 5-Concordo* e *6-Concordo totalmente*), indique o seu grau de concordância com cada uma das seguintes afirmações.

	1	2	3	4	5	6
1. Se me encontrasse em dificuldades, pensaria em diversas formas de as resolver.	☐	☐	☐	☐	☐	☐
2. Neste momento, vejo-me como uma pessoa bem-sucedida.	☐	☐	☐	☐	☐	☐
3. Posso pensar em várias maneiras para alcançar os meus objetivos atuais.	☐	☐	☐	☐	☐	☐
4. Estou ansioso(a) pela vida que tenho pela frente.	☐	☐	☐	☐	☐	☐
5. O futuro reserva-me coisas muito boas.	☐	☐	☐	☐	☐	☐
6. No geral, espero que me aconteçam mais coisas boas do que más.	☐	☐	☐	☐	☐	☐
7. Às vezes obrigo-me a fazer coisas, quer queira quer não.	☐	☐	☐	☐	☐	☐
8. Quando estou numa situação difícil, geralmente consigo arranjar uma solução.	☐	☐	☐	☐	☐	☐
9. Não me importo se houver pessoas que não gostam de mim.	☐	☐	☐	☐	☐	☐
10. Estou confiante de que poderia lidar eficientemente com situações inesperadas.	☐	☐	☐	☐	☐	☐
11. Posso resolver a maioria dos meus problemas, se investir o esforço necessário.	☐	☐	☐	☐	☐	☐
12. Posso permanecer calmo(a) ao enfrentar dificuldades, pois posso confiar nas minhas competências de *coping.*	☐	☐	☐	☐	☐	☐

SECÇÃO II (MEDIDA DE JUSTIÇA ORGANIZACIONAL)

Por favor, refira em que medida as afirmações seguintes são ou não verdadeiras. Para tal, utilize a escala de seis pontos definida (*1-É completamente falsa, 2-Na maior parte, é falsa, 3-É um pouco falsa, 4-É um pouco verdadeira, 5-Na maior parte, é verdadeira* e *6- É completamente verdadeira*).

	1	2	3	4	5	6
1. Em geral, as recompensas que recebo são justas.	☐	☐	☐	☐	☐	☐
2. A minha escola tem um mecanismo que permite aos empregados apelarem das decisões.	☐	☐	☐	☐	☐	☐
3. O meu superior mostra interesse genuíno em ser justo comigo.	☐	☐	☐	☐	☐	☐

	1	2	3	4	5	6
4. O meu superior fornece-me informações acerca do modo como eu estou a desempenhar as minhas funções, permitindo-me aprender a fazer melhor o meu trabalho.	☐	☐	☐	☐	☐	☐
5. O meu salário é justo.	☐	☐	☐	☐	☐	☐
6. As questões que os empregados colocam a respeito da remuneração e da avaliação de desempenho são normalmente respondidas pronta e satisfatoriamente.	☐	☐	☐	☐	☐	☐
7. O meu superior é completamente sincero e franco comigo.	☐	☐	☐	☐	☐	☐
8. Ao decidir sobre o meu trabalho, o meu superior dá-me explicações com sentido para mim.	☐	☐	☐	☐	☐	☐
9. Se considerar os restantes salários pagos nesta escola, reconheço que o meu salário é justo.	☐	☐	☐	☐	☐	☐
10. Através de vários canais, a minha escola tenta compreender as opiniões dos empregados relativamente às decisões e políticas de remuneração.	☐	☐	☐	☐	☐	☐
11. O meu superior trata-me com respeito e consideração.	☐	☐	☐	☐	☐	☐
12. O meu superior discute comigo os objetivos e planos para melhorar o meu desempenho.	☐	☐	☐	☐	☐	☐
13. Se tiver em conta a minha experiência, sinto-me justamente recompensado.	☐	☐	☐	☐	☐	☐
14. Os empregados podem discordar ou apelar das decisões tomadas pelos seus chefes.	☐	☐	☐	☐	☐	☐
15. O meu superior oferece justificação adequada para as decisões relativas ao meu trabalho.	☐	☐	☐	☐	☐	☐

16. Tendo em conta o meu esforço, julgo que sou recompensado justamente.	☐	☐	☐	☐	☐	☐
17. O meu superior mostra preocupação pelos meus direitos.	☐	☐	☐	☐	☐	☐

SECÇÃO III (MEDIDA DE AMBIGUIDADE DE PAPEL)

Em seguida, encontra-se um conjunto de afirmações relacionadas com os diferentes papéis que assume na sua organização. Por favor, escolha a opção que melhor se adequa a si, recorrendo para tal à escala de resposta apresenta (*1-Muito falso, 2-Falso, 3-Um pouco falso, 4-Nem falso, nem verdadeiro, 5-Um pouco verdadeiro, 6-Verdadeiro e 7- Muito verdadeiro*).

	1	2	3	4	5	6	7
1. Tenho metas e objetivos claros e planeados para o meu trabalho.	☐	☐	☐	☐	☐	☐	☐
2. Sei que dividi meu tempo adequadamente.	☐	☐	☐	☐	☐	☐	☐
3. Sei quais são minhas responsabilidades.	☐	☐	☐	☐	☐	☐	☐
4. Sei exatamente o que é esperado de mim.	☐	☐	☐	☐	☐	☐	☐
5. Tenho certeza de quanta autoridade tenho no trabalho.	☐	☐	☐	☐	☐	☐	☐
6. A explicação acerca do que deve ser feito é clara.	☐	☐	☐	☐	☐	☐	☐

SECÇÃO IV (MEDIDA DE CONFLITO DE PAPEL)

Em seguida, encontra-se um conjunto de afirmações relacionadas com os diferentes papéis que assume na sua organização. Por favor, escolha a opção que melhor se adequa a si, recorrendo para tal à escala de resposta apresenta (*1-Muito falso, 2-Falso, 3-Um pouco falso, 4-Nem falso, nem verdadeiro, 5-Um pouco verdadeiro, 6-Verdadeiro e 7- Muito verdadeiro*).

	1	2	3	4	5	6	7
1. Tenho de fazer coisas que devem ser feitas de maneira distinta em diferentes condições.	☐	☐	☐	☐	☐	☐	☐
2. Recebo uma tarefa sem a mão de obra para a completar.	☐	☐	☐	☐	☐	☐	☐
3. Tenho de reverter uma regra ou política para executar uma tarefa.	☐	☐	☐	☐	☐	☐	☐

4. Trabalho com dois ou mais grupos que trabalham de maneira bastante diferente.	☐	☐	☐	☐	☐	☐	☐
5. Recebo pedidos incompatíveis de duas ou mais pessoas.	☐	☐	☐	☐	☐	☐	☐
6. Faço coisas que podem ser aceites por uma pessoa, mas não por outras.	☐	☐	☐	☐	☐	☐	☐
7. Recebo uma tarefa sem os recursos e os materiais adequados para executá-la.	☐	☐	☐	☐	☐	☐	☐
8. Trabalho em coisas desnecessárias.	☐	☐	☐	☐	☐	☐	☐

SECÇÃO V (MEDIDA DE SUPORTE SOCIAL DOS SUPERVISORES)

Das seguintes afirmações selecione a opção que mais se adequa a si. Para tal, utilize a seguinte escala de resposta: *1-Nunca/quase nunca, 2-Raramente, 3-Às vezes, 4-Frequentemente e 5-Sempre.*

	1	2	3	4	5
1. Com que frequência o seu superior imediato fala consigo sobre como está a decorrer o seu trabalho?	☐	☐	☐	☐	☐
2. Com que frequência tem ajuda e apoio do seu superior imediato?	☐	☐	☐	☐	☐
3. Com que frequência é que o seu superior imediato fala consigo em relação ao seu desempenho laboral?	☐	☐	☐	☐	☐

SECÇÃO VI (QUESTIONÁRIO SOCIODEMOGRÁFICO)

1. Qual é o seu sexo?

Feminino	☐
Masculino	☐

2. Qual é a sua idade?

3. Qual é o seu estado civil?

Solteiro(a)	☐
Separado(a) ou divorciado(a)	☐
Casado(a) ou a viver em união de facto	☐
Viúvo(a)	☐

4. Assinale o seu nível de educação mais elevado:

Ensino Básico	☐
Ensino Secundário	☐
Licenciatura	☐
Mestrado	☐
Pós-graduação	☐
Doutoramento	☐

5. Qual é a sua situação laboral?

| Trabalhador por conta própria | ☐ |
| Trabalhador por conta de outrem | ☐ |

6. Assinale o seu regime de trabalho:

| Regime de full-time | ☐ |
| Regime de part-time | ☐ |

7. Há quantos anos trabalha na sua organização atual?

8. Assinale o setor de atividade económica em que trabalha:

Setor primário	☐
Setor secundário	☐
Setor terciário	☐

9. Exerce cargos de gestão?

| Sim | ☐ |
| Não | ☐ |