

Beyond duty: How meaningful work transforms the presence of calling into performance

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Abstract

Purpose: Although experiencing a calling is often assumed to enhance employee performance, empirical evidence remains mixed and the mechanisms underlying this relationship are not well understood. Drawing on research on meaningful work, this study examines whether and how calling translates into employee performance by proposing meaningful work as a mediating mechanism linking calling to in-role performance and organizational citizenship behavior (OCB).

Design/methodology/approach: We tested our hypotheses using multi-source data from 548 employees and 119 supervisors. Employees reported their sense of calling and experienced meaningful work, while supervisors evaluated employee performance (in-role and OCB). Structural equation modeling, path analysis, and bootstrapping procedures were used to assess the proposed mediation model.

Findings: Calling is positively related to both in-role performance and OCB through the experience of meaningful work. Meaningful work mediates these relationships, indicating that perceiving work as meaningful is the mechanism through which calling translates into higher performance. In the absence of meaningful work, calling alone does not significantly enhance performance.

Practical implications: Organizations that foster meaningful work can leverage employees' sense of calling to enhance both in-role performance and extra-role contributions. This approach benefits companies through higher productivity and discretionary effort, while employees also benefit through improved performance and a stronger sense of purpose and fulfilment in their roles.

Originality/value: This study advances theory on calling and work outcomes by identifying meaningful work as the central mechanism linking calling to performance. By demonstrating that calling does not directly enhance performance in the absence of experienced meaningfulness, the findings help reconcile inconsistent prior results and refine theoretical assumptions about the performance implications of calling.

Keywords: Calling at work, Meaningful work, In-role behavior, Organizational citizenship behavior (OCB), Multi-source data, mediation

Jel Codes: L2, M5

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1. Introduction

Work constitutes a central domain of human life, serving not only as a source of livelihood but also as a foundation for identity, self-determination, and overall life satisfaction (Deci & Ryan, 2000). Because individuals devote a substantial portion of their lives to work, it often becomes a primary context for constructing meaning and pursuing personal fulfilment. Scholars have long differentiated between viewing work as an occupation, a career, or a calling—the latter representing the deepest form of engagement, in which work is experienced as an integral component of one's life purpose and identity (Schabram et al., 2023; Wrzesniewski et al., 1997). For individuals who perceive their work as a calling, the workplace becomes a context for expressing values, serving others, and contributing to the greater good, rather than solely a means of earning income or advancing professionally. Empirical research demonstrates that perceiving work as a calling is associated with greater well-being (Dobrow et al., 2023), job satisfaction (Duffy et al., 2012), and performance (Lee et al., 2018), as well as heightened experiences of meaning and purpose (Duffy et al., 2018; Wrzesniewski, 2003).

Recent research highlights that employees' psychological orientations, such as their sense of meaning, purpose, and alignment between personal values and work, influence individual performance outcomes. Intangible psychological resources can enhance task, and contextual performance through mechanisms such as engagement and innovative behavior (Suhada et al., 2026). Research on human resource systems highlights abilities, motivation, and opportunities as key drivers of performance, underscoring the importance of employees' subjective perceptions and personal orientations in determining how they contribute at work (Marín-García & Martínez-Tomás, 2016). Together, these perspectives suggest that meaning-based resources, such as the experience of calling, may play a central role in shaping employee performance.

A calling has been conceptualized as an approach to work oriented towards purpose and prosocial contribution, often grounded in a belief that one's efforts serve a higher or communal good (Duffy et al., 2018). Employees who view their work as a calling report greater engagement, meaningfulness, and productivity (Fredrickson, 2001). However, intense calling can also produce adverse outcomes, including burnout, workaholism, and susceptibility to exploitation (Bunderson & Thompson, 2009; Cardador & Caza, 2012; Wilson & Britt, 2021). Consequently, scholars emphasize the importance of examining not only whether calling influences work outcomes, but how it does so. This study addresses this issue by focusing on one key positive mechanism: the role of meaningful work as a mediator linking the presence of calling to job performance. Meaningfulness, defined as individuals' evaluation of the significance and value of their work (Grant, 2008), represents the psychological conduit through which calling may enhance both in-role and extra-role performance (Lee et al., 2018).

While the Work-as-Calling Theory posits that callings inherently foster job performance, empirical evidence remains inconclusive (Vianello et al., 2022). As illustrated in Annex, several studies have reported a significant positive direct relationship between calling and job performance (Lee et al., 2018; Park et al., 2019; Rawat & Nadavulakere, 2023; Zhao et al., 2024). However, other studies have found no significant direct effects (Kim et al., 2018; Park et al., 2016; Tosti-Kharas, 2024), particularly when using objective productivity indicators or temporally separated measurements. These discrepancies suggest that the mere presence of a calling does not necessarily translate into its enactment or into superior job performance (Duffy et al., 2019; Hirschi et al., 2018).

The main gap in the current literature arises from three unresolved inconsistencies: differences in performance measurement (self-reports versus supervisor-rated or objective indicators), the distinction between presence and enactment of a calling (having a calling versus actively living it), and the role of contextual moderators (e.g., job demands and organizational support) that may either strengthen or weaken the relationship between calling and performance (Vianello et al., 2022). Furthermore, recent longitudinal evidence has challenged traditional

assumptions regarding causality by suggesting a reverse directional effect, whereby prior job performance contributes to the development of a calling rather than resulting from it (Gerdel et al., 2025). Collectively, these findings highlight the need to move beyond simple direct-effect models and examine the mediating mechanisms and boundary conditions that determine when and how a calling contributes to organizational effectiveness (Park et al.; 2019).

In summary, this study examines how the presence of calling enhances job performance through the mediating role of meaningful work. By integrating Work-as-Calling Theory (Duffy et al., 2018) and the Job Characteristics Model (Hackman & Oldham, 1975), it advances understanding of how purpose-driven work orientations contribute to employee performance and highlight the enduring importance of meaningful work in contemporary organizations. The hypothesized model underscores that in-role performance and organizational citizenship behaviors depend not only on structural and technological efficiencies but also on organizations' ability to foster purpose, autonomy, and prosocial motivation as sustainable drivers of employee contribution.

2. Theoretical Framework and Hypotheses Development

Work-as-a Calling Theory conceptualizes calling as a work orientation characterized by purpose, personal meaning, and a desire to contribute to the greater good, while providing an integrative framework for understanding its antecedents and outcomes (Duffy et al., 2018). A central distinction within the theory is between perceiving and living a calling. Perceiving a calling refers to believing that one is drawn to work that is purposeful and socially meaningful, whereas living a calling involves enacting that calling within one's current work role (Duffy et al., 2022). As a result, individuals may perceive a calling without having opportunities to fully express it in their existing jobs.

To explain how the presence of a calling translates into performance, we draw on the Job Characteristics Model (Hackman & Oldham, 1975), which identifies meaningfulness as a critical psychological state linking work experiences to motivation and performance. This perspective complements Work-as-Calling Theory by suggesting that individuals with a stronger sense of calling are more likely to experience their work as meaningful, thereby enhancing work-related outcomes.

Consistent with the Work-as-a-Calling Theory, the effects of calling are not expected to translate directly into observable work behaviors but rather operate through psychological and contextual mechanisms (Lee et al., 2018). Meaningful work represents a key mechanism in this process, as perceiving a calling is associated with a stronger sense of purpose and significance at work, which in turn promotes positive outcomes (Zaho et al.; 2024). At the same time, opportunities to enact a calling and supportive work conditions may strengthen these effects, whereas contextual constraints may limit them (Hirschi, 2012). Building on this framework, the present study examines whether the presence of calling enhances employees' in-role performance and organizational citizenship behavior through increased meaningful work.

2.1. Calling at Work

The concept of calling originated in sixteenth-century theology as a divine summons to fulfil God's purpose but has since evolved into a largely secular construct associated with work and career (Schuurman, 2004). Despite its long history, no consensus exists regarding its precise definition (Dik & Shimizu, 2019).

Scholars generally distinguish between neoclassical and modern perspectives on calling. Neoclassical approaches emphasize a transcendent summons and prosocial duty, whereby individuals feel drawn to meaningful work that serves a greater purpose (Bunderson & Thompson, 2009; Dik & Duffy, 2009; Dik & Shimizu, 2019). In contrast, modern perspectives conceptualize calling as an internally driven experience characterized by passion, fulfilment, and life purpose (Dobrow & Tosti-Kharas, 2011; Hall & Chandler, 2005). Integrative perspectives combine these views, defining calling as work that is both personally fulfilling and socially valuable (Elangovan et al., 2010; Wrzesniewski et al., 1997).

Across these perspectives, three recurring elements emerge: purpose and meaning, prosocial motivation, and a transcendent summons (Dik & Duffy, 2009). Callings are also viewed as dynamic, developing through the interaction of external influences (divine calling, social contribution) and internal factors (personal values,

interests, and abilities). The strongest experience of calling occurs when both are simultaneously high, creating a sense of harmony, purpose and destiny (Dik & Duffy, 2009; Thompson & Bunderson, 2019).

Building on this literature, the present study defines calling as the perception of being drawn toward work that provides life purpose while contributing to the greater good. Following Dik and Duffy (2009), we focus on the presence of calling and examines whether it enhances work meaningfulness and, in turn, employee performance.

2.2. Calling's Impact on Meaningful Work

In their seminal formulation of the Job Characteristics Model, Hackman and Oldham (1975) introduced meaningful work as a core psychological state, defined as the degree to which employees perceive their job as significant, valuable, and worthwhile. They argued that five core job dimensions—autonomy, feedback, skill variety, task identity, and task significance—shape this perception, thereby influencing both personal and work-related outcomes. Subsequent research has reinforced this perspective, demonstrating that job characteristics are central to shaping employees' experience of meaningful work and, in turn, their motivation and performance (Humphrey et al., 2007).

Individuals with a presence of calling actively seek fulfillment by intertwining their sense of purpose with a desire to contribute to the greater good. For example, Bunderson and Thompson (2009) found that zookeepers who perceived their work as a calling experienced deeper meaning and significance in their roles, despite demanding working conditions. Similarly, qualitative research shows that Christian mothers perceived their calling as a meaningful pursuit (Schermer-Sellers et al., 2005), and counseling psychologists described their calling as central to their professional identity and purpose (Duffy et al., 2012).

Empirical research consistently supports a positive relationship between the presence of calling and meaningful work. Duffy et al. (2016) identified meaningful work as a key outcome of calling, while Hirschi (2012) found that the presence of calling is associated with greater meaningfulness, occupational self-efficacy, work engagement, and person-job fit. More recent studies reinforce these findings. Zhao et al. (2024) showed that career calling enhances meaningfulness by aligning work with employees' values, purposes, and beliefs, thereby shaping how they experience daily tasks. Similarly, Vianello et al. (2022) reported that individuals with a stronger sense of calling derive greater meaning and motivation from their work, because they view it as an opportunity to fulfill social and psychological needs rather than merely earn compensation.

Building on this evidence, Work-as-Calling Theory proposes a reciprocal relationship between calling and meaningful work (Duffy et al., 2018), a proposition further supported by meta-analytic evidence demonstrating a robust and significant association between these constructs across occupations and cultures (Dobrow et al., 2023).

Taken together, Work-as-Calling Theory (Duffy et al., 2018), the Job Characteristics Model (Hackman & Oldham, 1975), and empirical evidence (Rawat & Nadavulakere, 2023; Zhao et al., 2024) suggest that perceiving a calling fosters a stronger sense of purpose and significance at work, thereby enhancing meaningful work. Accordingly, we hypothesize:

H1. The presence of calling predicts meaningful work.

2.3. Calling's Contribution to Employee Job Performance

The presence of a calling reflects a deep sense of purpose (Dik & Duffy, 2009) that may enhance job performance, defined as the overall value an organization derives from an employee's behavior (Motowidlo, 2003). This study focuses on two dimensions of performance: in-role behavior and organizational citizenship behavior. In-role behavior refers to the effective execution of core job responsibilities that contribute directly to organizational functioning (Borman & Motowidlo, 1993), whereas organizational citizenship behavior encompasses discretionary behaviors that support organizational effectiveness beyond formal job requirements (Organ, 1988).

Employees with a strong sense of calling may demonstrate greater adaptability, self-awareness and commitment to work goals (Cardador & Caza, 2012; Hall & Chandler, 2005). However, although Work-as-Calling Theory

suggests that performance benefits are most evident when individuals actively live out their calling, evidence regarding the direct relationship between the presence of a calling and in-role behavior remains mixed.

Several studies report positive effects. Lee et al. (2018) found that calling was associated with better task performance, while Rawat and Nadavulakere (2023) and Zhao et al. (2024) showed that employees with stronger callings exhibited higher job performance and greater proactive behavior. Longitudinal evidence further suggests that the presence of a calling predicts supervisor-rated performance over time (Park et al., 2019).

In contrast, other studies have reported null direct effects. Park et al. (2016) found no direct relationship between calling and objective productivity indicators, and Kim et al. (2018) reported a non-significant association between calling and self-rated in-role behavior. These inconsistencies suggest that merely possessing a calling may not be sufficient to improve performance without intervening mechanisms or favorable conditions.

Research increasingly points to contextual moderators as important boundary conditions. Although calling is often positively associated with performance, excessive workload, performance pressure, time pressure, and multitasking demands can weaken or eliminate its benefits (Mauno & Vianello, 2024; Vianello et al., 2022). Moreover, recent longitudinal evidence has challenged the traditional causal assumption by suggesting that high performance may contribute to the subsequent development of a calling rather than result from it (Gerdel et al., 2025).

Given these mixed findings, the present study further examines the direct relationship between the presence of calling and in-role performance. Accordingly, we hypothesize:

H2. The presence of calling predicts in-role behavior.

Organizational citizenship behavior refers to the discretionary actions that extend beyond formal job requirements and contribute to organizational effectiveness (Park et al., 2016). Individuals with a strong calling often demonstrate exceptional dedication to work that aligns with their values and purpose, exceeding prescribed goals, and motivating them to contribute beyond formal duties and rewards (Wrzesniewski et al., 1997). Accordingly, prior research has suggested a positive association between calling and organizational citizenship behavior (Organ & Ryan, 1995). However, such extra-role contributions may sometimes be directed toward activities closely related to one's calling rather than toward broader organizational responsibilities.

Research on meaningful goals provides further insight into this relationship. Individuals who experience a calling pursue purpose-driven goals and devote additional effort to activities they perceive as socially valuable (Dobrow et al., 2023; Elangovan et al., 2010). Because prosocial motivation is a core dimension of calling, employees with a strong sense of calling are more likely to engage in discretionary behaviors that benefit others and support organizational functioning (Grant, 2008). Empirical evidence consistently supports the link between calling, contextual performance, and organizational citizenship behavior. Rawat and Nadavulakere (2015, 2023) found that individuals with strong work calling exhibit higher levels of contextual performance because they view their work as a personal purpose and passion. Similarly, Lee et al. (2018) reported a positive relationship between calling and contextual performance, particularly in supporting organizational climates.

Research has also identified several mechanisms through which calling promotes organizational citizenship behavior. Park et al. (2016) showed that the relationship operates both directly and indirectly through occupational self-efficacy, while Xie et al. (2017) found that the perceptions of organizational instrumentality partially explain this effect. Likewise, Zhao et al. (2024) argue that employees with a strong calling feel a deep obligation to contribute proactively to organization goals. Consistent with this view, Bunderson and Thompson (2009) observed that employees driven by a calling are often willing to sacrifice personal time, comfort and financial rewards in service of their work.

However, the strength of this relationship appears contingent upon the nature of job demands. Mauno and Vianello (2024) found that while high career calling is generally positively related to organizational citizenship behavior, this effect is significantly strengthened by job-related planning and decision-making demands, which provide the autonomy needed to live out a calling. Conversely, work intensification, time pressure and multitasking demands can weaken these positive effects, by limiting employees' ability to engage in discretionary behaviors.

Building on these insights, we hypothesize:

H3. The presence of calling predicts organizational citizenship behavior (OCB).

2.4. Impact of Meaningful Work on Job Performance

The extent to which employees perceive their work as meaningful is a critical determinant of job outcomes, particularly performance (Hackman & Oldham, 1980; Wrzesniewski, 2003). Understanding how meaningfulness evolves and influences work behavior is therefore important for both scholars and organizations seeking to enhance employee effectiveness.

Research identifies job resources and work characteristics as key antecedents of meaningful work (Humphrey et al., 2007; Michaelson et al., 2014). Job resources—including autonomy, task significance, and social support—help employees achieve work goals, cope with demands, and support personal growth and learning (Bakker et al., 2023; Demerouti et al., 2001). Similarly, work characteristics such as skill variety, task identity, and task significance shape employees' perceptions of the value and impact of their work (Grant & Parker, 2009). Together, these factors foster meaningfulness and are associated with higher levels of employee performance (Hirschi et al., 2018; Humphrey et al., 2007).

Meaningful work, in turn, motivates employees to invest greater effort, engage more deeply with their tasks, and exceed formal job requirements, thereby enhancing both in-role performance and organizational citizenship behavior (Michaelson et al., 2014; Mihalca et al., 2024). Empirical evidence supports this relationship. Allan et al. (2018) found that meaningful work is positively associated with subjective job performance, while Zhao et al. (2024) showed that employees who view their work as valuable are more motivated to achieve high-quality outcomes. Consistent with Work-as-Calling Theory, meaningful work serves as a psychological mechanism through which purpose is translated into concrete organizational behavior (Duffy et al., 2018; Zhao et al., 2024).

Meaningful work also promotes extra-role behaviour. Employees who find significance in their work are more likely to support coworkers, volunteer for additional responsibilities, and contribute to the broader social and psychological functioning of the organization (Rawat & Nadavulakere, 2015). Because meaningful work aligns with employees' values and beliefs, it can also encourage proactive behaviors aimed at improving organizational processes and effectiveness (Zhao et al., 2024). Accordingly, individuals who derive high levels of meaning from their work are more likely to engage in contextual performance and organizational citizenship behaviors (Rawat & Nadavulakere, 2023).

Therefore, we hypothesize that employees' perceptions of meaningful work will positively influence both in-role and OCB behaviors. Thus, we anticipate:

H4. Meaningful work predicts in-role behavior.

H5. Meaningful work predicts organizational citizenship behavior (OCB).

2.5. The Mediating Role of Meaningful Work

Individuals who perceive their work as a calling are more likely to experience their work as meaningful because it aligns with their values, purpose, and desire to contribute to the greater good (Bunderson & Thompson, 2009; Dik & Duffy, 2009). Meaningful work emerges when employees view their work as valuable and purposeful, fostering deeper psychological investment and motivation (Steger et al., 2013). As a result, individuals with a stronger sense of calling tend to derive greater meaning from their work and approach their roles as opportunities to fulfill important social and psychological needs (Vianello et al., 2022; Zhao et al., 2024).

Consistent with Work-as-Calling Theory, the effects of calling on work behavior are not expected to occur directly but through psychological mechanisms that enable individuals to enact their calling (Duffy et al., 2018). Meaningful work represents a central mechanism in this process because it translates a sense of purpose into sustained effort and work engagement. Employees who perceive their work as meaningful are more motivated to achieve high-quality outcomes and persist beyond minimum job requirements (Allan et al., 2018; Zhao et al., 2024; Gerdel et al., 2025).

Meaningful work also promotes organizational citizenship behavior. By aligning work with personal values and beliefs, it encourages employees to contribute beyond formal role requirements, support coworkers, and engage in behaviors that benefit the organization (Rawat & Nadavulakere, 2023; Zhao et al., 2024). Conversely, when work lacks meaning, employees are less likely to invest discretionary effort or exceed prescribed responsibilities (Duffy et al., 2018). Accordingly, meaningful work is expected to serve as a key pathway through which the presence of calling enhances both in-role performance and OCB. Therefore, we hypothesize:

H6. Meaningful work mediates the relationship between the presence of calling and in-role behavior.

H7. Meaningful work mediates the relationship between the presence of calling and organizational citizenship behavior (OCB).

Figure 1 details the ‘Calling and performance’ research model.

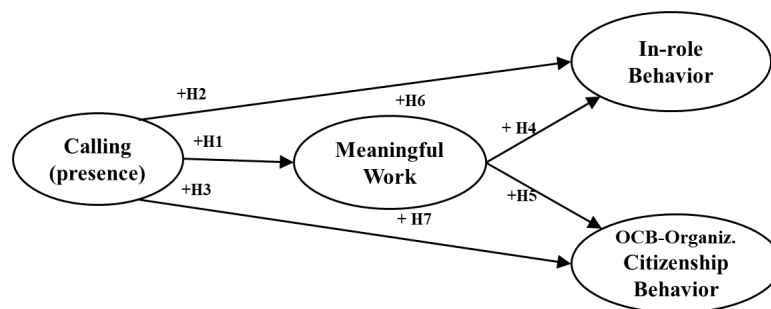


Figure 1. Hypothesized calling and performance model

3. Methodology

3.1. Participants

The sample included 548 employees and their 119 supervisors from 25 organizations in Spain, representing diverse positions and hierarchical levels. Of the participants, 62.2% were women. Most employees (62.5%) were between 25 and 45 years old, and 33.9% were over 45. Regarding marital status, 28.5% were single, 62.2% were married or cohabiting, and 9.3% were separated, divorced, or widowed. In terms of education, 19.5% held a master's or doctoral degree, 41.2% an undergraduate degree, 26.6% a vocational qualification, and 12.6% had completed only primary or secondary education.

3.2. Procedure

Organizations were recruited through personal contacts and snowball sampling. The final sample comprised 25 organizations of varying sizes (small, medium, and large) from diverse sectors, including healthcare, retail, technology, education, engineering, agriculture, transportation, manufacturing, social services, security services, and non-profit organizations. This diversity was intended to enhance the heterogeneity of the sample and the applicability of the findings across occupational contexts.

Within organizations, employees were selected from different departments, positions, and hierarchical levels. In most cases, participants were randomly selected from staff lists, whereas all employees were invited to participate in smaller organizations. A designated organizational contact coordinated communication and survey distribution.

A total of 608 employees completed the survey, of which 596 responses were retained after data screening. Organizations subsequently identified the direct supervisors of participating employees. Overall, 119 supervisors completed performance evaluations for 618 employees, with 600 evaluations retained following screening. Employee and supervisor responses were matched using a confidential coding system that assigned unique identifiers to organizations, supervisors, and employees. Cases with missing or invalid codes were excluded, resulting in a final sample of 548 employee-supervisor dyads. The matched response rate was 88.6% for employees and 100% for supervisors, while organizational response rates ranged from 50% to 100%. Because complete information on nonrespondents was unavailable, formal nonresponse bias analyses could not be performed.

Participation was voluntary, no incentives were offered, and informed consent was obtained from all participants. The study protocol received approval from the university's research ethics committee.

Questionnaire validation. To validate the study questionnaire, the Calling and Vocation Questionnaire (Dik et al., 2012) and the In-Role Behavior Scale (Williams & Anderson, 1991) were translated into Spanish using Brislin's (1986) back-translation procedure. Two bilingual translators independently conducted the translation and back-translation, and discrepancies were resolved through iterative review. A panel of four subject-matter experts evaluated the translated versions using Sperber's (2004) comparability and interpretability criteria. Cultural and conceptual equivalence was further assessed through a pilot study with 11 participants from diverse occupational and educational backgrounds and five cognitive interviews.

3.3. Measures

We used established validated measures; all rated on a 5-point Likert scale ranging from 1 (totally disagree) to 5 (totally agree). We reversed items into their positive form before the survey. Predictor variables were assessed by employees, and criterion variables by their direct supervisors. The specific measures used were the following:

Perceiving a calling: Employees' perceptions of calling were measured using the 12-item Presence subscale of the Calling and Vocation Questionnaire (Dik et al., 2012). A sample item is: "The most important aspect of my career is its role in helping meet the needs of others." However, two items were removed because they exhibited comparatively low standardized factor loadings (0.36 and 0.51), indicating weaker associations with the latent construct than the remaining items. Specifically, "I believe I have been called to my current line of work", and "I try to live out my purpose when I am at work" leaving 10 items with loadings between 0.66 and 0.83. Cronbach's alpha of the new scale was 0.88.

Meaningful work: Meaningful work was assessed with three items from the Psychological Empowerment in the Workplace Scale (Spreitzer, 1995). A sample item is: "The work I do is meaningful to me." Factor loadings ranged from 0.86 to 0.89, with a Cronbach's alpha of 0.91.

In-role behavior: Supervisors evaluated employees' in-role behavior using the 7-item scale developed by Williams and Anderson (1991). An example item is: "Adequately completes responsibilities." Factor loadings ranged from 0.69 to 0.88, and Cronbach's alpha was 0.93.

Organizational citizenship behavior (OCB): Supervisors rated employees' OCB using the Citizenship Performance Questionnaire (Coleman & Borman, 2000). A sample item is: "Displaying dedication on the job." Factor loadings ranged from 0.65 to 0.88, with a Cronbach's alpha of 0.96.

Control variables: To ensure that the hypothesized relationships were not confounded by demographic or professional characteristics known to influence work attitudes and behaviours, we controlled for age, tenure, education, and gender. These variables were operationalized as follows: gender (1 = male, 2 = female, 3 = other), age (1 = up to 25 years, 2 = 25–45 years, 3 = over 45), education (1 = primary/secondary, 2 = vocational, 3 = undergraduate, 4 = Master's/PhD), and organizational tenure (1 = less than 1 year, 2 = 1–3 years, 3 = 3–10 years, 4 = more than 10 years).

Prior research on calling and related constructs has commonly included these variables as controls. For example, studies examining calling and its outcomes have controlled for gender and tenure (e.g., Lee et al., 2018; Kim et al., 2018; Park et al., 2016), while Xie et al. (2017) controlled for gender, education, and tenure. In addition, a meta-analysis by Wang and Dai (2017) identifies age as an important factor associated with differences in vocational development and calling-related perceptions.

3.4. Data Analysis Strategy

We first examined the psychometric properties of the measures, including internal reliability, validity, and consistency, using a series of confirmatory factor analyses (CFAs) in IBM SPSS (version 27) and AMOS (v. 29). To test the hypothesized model, we employed structural equation modeling (SEM) and parameters were estimated using the maximum likelihood (ML) estimator. To address potential deviations from multivariate normality, we employed bootstrapping procedures (50,000 resamples) to obtain more robust estimates of indirect effects and confidence intervals. The bootstrap confidence intervals were specified as bias-corrected

percentile confidence intervals, as implemented in AMOS. Standard errors were evaluated using the conventional ML-based approach supplemented with bootstrap estimates, which are robust to non-normality in mediation testing.

To assess the robustness of the findings, the mediation model was estimated both with and without the control variables. The pattern of results remained substantively unchanged, indicating that the relationships among calling, meaningful work, and performance were robust to the inclusion of demographic controls.

3.5. Measurement model

Although our study's research design includes two different informants, we controlled for potential common-method variance. Specifically, we applied Harman's single-factor test (Podsakoff et al., 2003) by estimating a single-factor CFA model to evaluate whether it accounted for most of the covariance among variables and yielded superior fit indices. Model fit was considered satisfactory according to conventional criteria: CFI and TLI ≥ 0.90 , RMSEA ≤ 0.08 , and SRMR ≤ 0.08 .

Table 1 shows that the 4-factor model yielded a good fit for the data [$\chi^2(549) = 1931.1, p < .001, \chi^2/df = 3.52$, comparative fit index (CFI) = 0.91, root-mean-square error of approximation (RMSEA) = 0.07, Tucker Lewis Index (TLI) = 0.90, standardized root mean square residual (SRMR) = 0.06], while the single-factor model had a poor fit: [$\chi^2(560) = 6\,955.1, p < .001, \chi^2/df = 12.42$, CFI = 0.57, RMSEA = 0.14, TLI = 0.54, SRMR = 0.15].

To summarize, common method variance is unlikely to represent a major concern in this study because the data were obtained from two independent informants, thereby reducing the risk of common rater bias. Furthermore, acknowledging that Harman's single-factor test alone cannot definitively rule out common method variance (Podsakoff et al., 2003), this test suggested that a single factor did not account for the majority of the variance.

	χ^2	(df)	p	χ^2/df	CFI	RMSEA	TLI	SRMR
1 factor (employees)	1326.9	65	.001	20.4	0.64	0.19	0.57	0.12
2 factors (employees)	274.2	61	.001	4.50	0.94	0.08	0.92	0.07
1 factor (supervisors)	3089.5	209	.001	14.8	0.74	0.16	0.72	0.09
2 factors (supervisors)	1288.8	206	.001	6.26	0.90	0.10	0.89	0.08
1 factor (employees & supervisors)	655.1	560	.001	12.4	0.57	0.14	0.54	0.15
4 factors (employees & supervisors)	131.1	549	.001	3.52	0.91	0.07	0.90	0.06

Note: χ^2 = Chi squared; (df) = (degrees of freedom); $\chi^2/(df)$ = Ratio Chi squared by degrees of freedom; CFI = Comparative fit index; RMSEA = Root mean square error of approximation; TLI = Tucker–Lewis index; SRMR = Standardized root mean-square residual.

Table 1. Harman's single-factor test

Table 2 presents the construct reliability of the study variables, as well as evidence of convergent and discriminant validity for the measurement model. All composite reliability (CR) estimates exceeded the recommended threshold of 0.70, indicating satisfactory internal consistency across constructs (Hair et al., 2010). Convergent validity was supported, as the average variance extracted (AVE) values for all constructs exceeded the recommended threshold of 0.50. Specifically, AVE was 0.55 for Presence of Calling, 0.77 for Meaningful Work, 0.68 for In-Role Behavior, and 0.81 for Organizational Citizenship Behavior (OCB), with each value remaining lower than its corresponding composite reliability (CR), as suggested by Henseler et al. (2009). Discriminant validity was also established, as the AVE values for each construct exceeded both the maximum shared variance (MSV) and the average shared variance (ASV), providing strong evidence for construct distinctiveness (Hair et al., 2010).

	Alpha the Cronbach	CR	AVE	MSV	ASV
Presence of calling	0.88	0.79	0.55	0.46	0.16
Meaningful work	0.91	0.91	0.77	0.46	0.19
In-role behavior	0.93	0.94	0.68	0.59	0.21
Organizational Citizenship Behavior (OCB)	0.96	0.89	0.81	0.59	0.23

Note: CR = Construct Reliability; AVE = Average Variance extracted; MSV = Maximum Shared Variance; ASV = Average Shared Variance.

Table 2. Measurement model results: Reliability and convergent validity

4. Results

Table 3 details the descriptive statistics and zero-order correlations among study variables.

	Mean	SD	1	2	3	4	5	6	7	8
1. Gender	1.63	0.49	--							
2. Age	2.32	0.51	-0.04	--						
3. Education	2.68	0.93	0.08	-0.21***	--					
4. Seniority	3.04	1.00	-0.10*	0.25***	-0.01	--				
5. Calling (presence)	3.08	0.70	0.11**	0.10*	0.02	0.01				
6. Meaningful work	3.97	0.80	0.01	0.08	0.10*	0.04	0.51***			
7. In-role behavior	4.35	0.63	0.18***	-0.06	0.20***	-0.02	0.03	0.15**		
8. OCB	4.17	0.69	0.08	-0.04	0.18**	-0.02	0.10*	0.25***	0.73***	

Note: N = 548; ***p < .001, **p < .01, *p < .05; Gender: 1= Male, 2= Female, 3= other; Age: 1= [under 25 years old], 2= [25 to 45 years old], 3= [over 45 years old]; Education: 1= [primary & high school], 2= [vocational training], 3= [undergraduate studies], 4= [Master's or PhD]; Seniority: 1= [less than 1 year working in the company], 2= [between 1 to 3 years], 3= [between 3 to 10 years], 4= [More than 10 years].

Table 3. Descriptive statistics and correlation coefficients

4.1. Direct Effects of Employees Having a Calling

Hypotheses 1 to 3 tested the direct effect of the presence of calling on outcomes. Hypothesis 1 predicted a positive association between calling and meaningful work (first path of the mediation). As shown in Table 4, calling was significantly related to meaningful work ($\beta = 0.04$, $p < .001$), with the 95% bias-corrected bootstrap confidence interval, based on 50,000 bootstrap samples, entirely above zero (0.71, 1.26). Thus, Hypothesis 1 was corroborated.

Hypothesis 2 anticipated a direct positive relationship between the presence of calling and in-role behaviors. Results indicated no significant association ($\beta = -0.13$, $p = \text{ns.}$), with the 95% bias-corrected bootstrap confidence interval including zero (-0.32, 0.06). Therefore, Hypothesis 2 was not supported.

Similarly, Hypothesis 3 predicted a direct positive link between the presence of calling and OCB behavior. Results again showed no significant association ($\beta = -0.07$, $p = \text{ns.}$), with the 95% confidence interval including zero (-0.29, 0.17). Thus, Hypothesis 3 was not supported.

Outcomes		Meaningful work (M)		In-role behavior (Y)		OCB (Y)	
Predictors		Unstandardized path (SE)	β	Unstandardized path (SE)	β	Unstandardized path (SE)	β
Gender		--- --	---	0.22*** (.05)	0.18	0.09 (.06)	0.06
Age		--- --	---	-0.03 (.05)	-0.02	-0.03 (.06)	-0.03
Education		--- --	---	0.12*** (.03)	0.02	0.12***(.03)	0.16
Tenure		--- --	---	-0.01 (.03)	-0.01	-0.01 (.03)	-0.01
Calling (X)		0.94*** (.11)	0.68	-0.13 (.09)	-0.11	-0.07 (.10)	-0.05
Meaningful work (M)		--- --	---	0.19** (.06)	0.22	0.28*** (.07)	0.30
R2		0.463		0.092		0.092	
Total Effects (Standardized)				Estimate (Boot SE)		Bias-corrected CI	
Calling → Meaningful work → In-role behavior				0.04 (0.05)		[-0.06, 0.14]	
Calling → Meaningful work → OCB				0.15** (0.06)		[0.04, 0.26]	
Direct Effects (Standardized)				Estimate (Boot SE)		Bias-corrected CI	
Calling → Meaningful work → In-role behavior				-0.11 (0.08)		[-0.26, 0.05]	
Calling → Meaningful work → OCB				-0.05 (0.08)		[-0.21, 0.12]	
Indirect Effects (Standardized)				Effect (Boot SE)		Bias-corrected CI	
Calling → Meaningful work → In-role behavior				0.15** (0.05)		[0.05, 0.27]	
Calling → Meaningful work → OCB				0.20*** (0.06)		[0.10, 0.32]	
Fit indexes of the full mediated model							
χ²	(df)	p	χ²/df	CFI	RMSEA	TLI	SRMR
2 294.35	(687)	.001	3.34	0.89	0.07	0.89	0.07

Note: N = 548; **p < .01, ***p < .001. β = Standardized path coefficients; SE = Standard error; $\chi^2/(df)$ = Chi squared (degrees of freedom); GFI = Goodness of fit index; CFI = Comparative fit index; RMSEA = Root mean square error of approximation, TLI = Tucker–Lewis index, SRMR = Standardized Root Mean Square Residual. X = Antecedent variable; M = Mediator; Y = Dependent. CI = Confidence interval; CIs containing zero are interpreted as non-significant. Results are based on 50,000 bootstrap samples.

Table 4 Mediation results: Indirect effect of calling on outcomes via meaningful work

4.2. Effects of Meaningful Work

Hypotheses 4 and 5 predicted the second path of mediation for both dependent variables. Consistent with hypothesis 4, meaningful work was positively associated with in-role behavior ($\beta = 0.19, p < .01$), with the 95% of bias-corrected bootstrap confidence interval excluding zero (0.06, 0.32), thus supporting Hypothesis 4. Likewise, supporting Hypothesis 5, meaningful work significantly predicted OCB ($\beta = 0.28, p < .001$), with the 95% bias-corrected bootstrap confidence interval entirely above zero (0.13, 0.43).

4.3. Mediating Role of Meaningful Work

Hypotheses 6 and 7 predicted that meaningful work mediates the relationship between the presence of calling and performance. As shown in Table 4, the indirect effect of calling on in-role behavior via meaningful work was significant ($ab = 0.18; p < .01$; 95% CI: [0.06, 0.34]), supporting Hypothesis 6. Similarly, the indirect effect of calling on OCB through meaningful work was significant ($ab = 0.26; p < .001$; 95% CI: [0.12, 0.46]), supporting Hypothesis 7.

Taken together, these results provide clear evidence that meaningful work mediates the relationship between calling and both in-role and OCB behaviors (see Figure -2 for a summary). However, the indirect effects of calling on in-role performance and organizational citizenship behavior through meaningful work were statistically significant, the amount of variance explained in these outcomes was relatively modest ($R^2 = .092$). Thus, meaningful work represents an important, but not exclusive, mechanism through which calling influences employee performance. Employee performance is a complex and multidimensional phenomenon shaped by numerous individual, relational, and organizational factors, including ability, motivation, leadership, job design, organizational climate, and available resources. Consequently, the present findings should be interpreted as

identifying one meaningful pathway, rather than a comprehensive explanation of performance differences among employees. In contrast, the substantially larger proportion of variance explained in meaningful work ($R^2 = .463$) suggests that calling is particularly important for understanding how employees experience significance and purpose in their work.

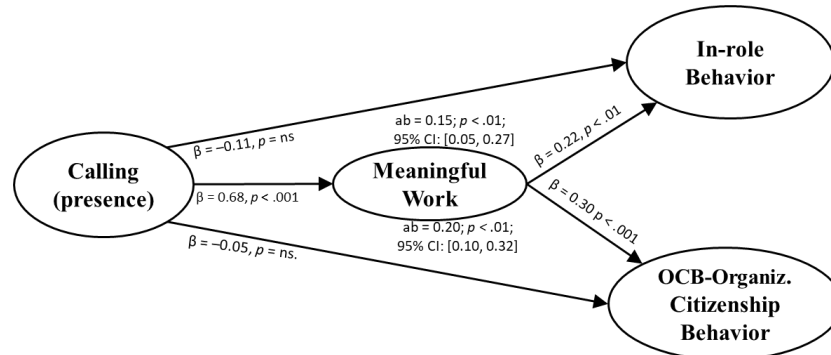


Figure 2. Results calling and performance model

5. Discussion

This study examined the relationship between the presence of a calling and employee performance, with particular attention to the mediating role of meaningful work. The findings indicate that calling influences both in-role performance and organizational citizenship behavior indirectly through meaningful work, while no significant direct relationships were observed. These results suggest that perceiving a calling alone is insufficient to enhance performance. Rather, its benefits emerge when employees experience their work as meaningful.

Consistent with prior research, the presence of a calling was positively associated with meaningful work (Dobrow et al., 2023). However, contrary to expectations, calling did not directly predict either in-role performance or organizational citizenship behavior. This finding aligns with previous studies reporting weak or non-significant direct effects of calling on performance outcomes (Park et al., 2016). A possible explanation lies in the distinction between perceiving and living a calling (Duffy et al., 2022). Employees may feel drawn to purposeful work yet lack opportunities, resources, or supportive conditions to enact that calling in their current roles. As proposed by Work-as-Calling Theory (Duffy et al., 2018), the effects of calling are therefore likely to depend on psychological and contextual mechanisms that enable individuals to translate purpose into action.

In contrast, meaningful work showed strong positive relationships with both in-role performance and organizational citizenship behavior. Employees who perceive their work as meaningful are more likely to invest effort, remain engaged, and contribute beyond formal role requirements (Wrzesniewski, 2003). The results further revealed that meaningful work fully mediated the relationship between calling and both performance outcomes, indicating that calling contributes to performance only when it is translated into a meaningful work experience. This finding supports the argument that individuals who derive meaning from their calling are more likely to become deeply engaged in their work and contribute to organizational effectiveness (Bunderson & Thompson, 2009).

More broadly, the findings support Work-as-Calling Theory (Duffy et al., 2018) by suggesting that the effects of calling on employee outcomes depend on psychological processes that enable individuals to translate purpose into work behavior. The results also align with the Job Characteristics Model (Hackman & Oldham, 1980), which identifies meaningfulness as a key psychological state linking work experiences to performance.

5.1. Theoretical Contribution

The study contributes to the literature in two important ways. First, the study extends Work-as-Calling Theory (Duffy et al., 2018) by indicating that the relationship between calling and performance operates indirectly through employees' experience of meaningful work. The findings suggest that the benefits of calling emerge

when employees experience their work as meaningful, providing a more nuanced explanation of how purpose-driven work orientations translate into employee outcomes.

Second, the study extends the Job Characteristics Model (Hackman & Oldham, 1975) by highlighting the role of individual differences in shaping experiences of meaningfulness. Whereas the original model emphasizes job characteristics as primary antecedents of meaningful work, the present findings suggest that personal orientations, such as calling, also contribute to the development of meaningfulness. This perspective broadens the model's explanatory scope by integrating individual and contextual sources of meaningful work.

Taken together, these contributions bridge Work-as-Calling Theory and the Job Characteristics Model, offering a more integrated understanding of how personal purpose and work experiences jointly influence employee performance.

5.2. Practical Implications

The findings suggest that organizations should focus on creating conditions that enhance employees' experience of meaningful work by strengthening their sense of purpose, contribution, and connection to their work.

A primary implication concerns job design. Organizations should enhance autonomy, task significance, task identity, and feedback, as these characteristics strengthen perceptions of work value and impact (Hackman & Oldham, 1975). Participative decision-making and greater work discretion can help employees, particularly those with a strong sense of calling, thrive and avoid emotional exhaustion (Rawat & Nadavulakere, 2015). Highlighting how work benefits others may further strengthen the link between calling, meaningfulness, and performance.

Organizations can also promote meaningful work through career development and job crafting interventions. Mentoring, career-development conversations, purpose-reflection workshops, and job crafting initiatives can help employees align daily activities with personal values and long-term goals, especially when opportunities to express a calling are limited (Dik & Duffy, 2009). Assessing calling and meaningful work during talent management processes may also support person–job alignment and career development.

While the explained variance in employee performance in our model is relatively modest, this aligns with the inherently multidimensional nature of job performance. Employee performance is rarely driven by a single set of variables; rather, it is continuously shaped by a complex interplay of individual characteristics (e.g., personality, motivation), relational dynamics (e.g., leadership support, team cohesion) and broader organizational factors (e.g.; culture, resources availability). Consequently, accounting for a modest portion of this variance still offers valuable, targeted insights for both theory and practice. Accordingly, efforts to strengthen meaningful work should be integrated with supportive leadership, effective performance management, developmental opportunities, adequate resources, and policies that promote autonomy and growth.

Organizations should evaluate these efforts by monitoring indicators such as meaningful work perceptions, engagement, job satisfaction, well-being, retention, supervisor-rated performance, and organizational citizenship behavior. Longitudinal assessment can help determine whether positive effects are sustained.

These implications are particularly relevant in the context of artificial intelligence (AI). Technologies such as generative AI, algorithmic surveillance, and data-driven decision systems are reshaping work and motivation (Khan et al., 2025; Wang et al., 2025). While AI can improve efficiency and job enrichment, poorly implemented systems may undermine autonomy, purpose, and belonging (Bankins et al., 2024; Mendy et al., 2025). Organizations should therefore preserve autonomy, task significance, and opportunities for meaningful human contribution, while regularly assessing meaningful work, AI-enabled job quality, and performance outcomes to ensure that technological change supports, rather than undermines, the pathways linking calling and performance.

5.3. Limitations and Future Research

Despite its contributions, this study has several limitations. First, its cross-sectional design precludes establishing temporal precedence and drawing causal conclusions regarding the relationships among calling, meaningful work,

in-role performance, and organizational citizenship behavior. Although the hypothesized model was grounded in Work-as-Calling Theory, alternative causal explanations remain possible. For example, recent evidence suggests that higher performance may contribute to the subsequent development of a sense of calling (Gerdell et al., 2025). Future research should employ longitudinal, time-lagged, or experimental designs to clarify causal ordering and further test the proposed mediation process.

Second, even though supervisor-rated performance reduced concerns about common method variance, other sources of bias may remain, including halo effects and supervisors' limited opportunities to observe employee behavior. Although Harman's single-factor test did not indicate substantial common method variance, this diagnostic has well-recognized limitations and cannot conclusively exclude method bias. Nevertheless, our multisource design substantially mitigates this concern. Future research could further strengthen validity by incorporating multiple performance indicators, such as peer ratings, objective performance metrics, behavioral measures, and longitudinal performance records.

Third, additional individual and contextual factors may influence the relationships examined in this study. Variables such as organizational support, leadership quality, job autonomy, spirituality, socioeconomic status, hierarchical position, career opportunities, and person–environment fit may affect employees' ability to translate a calling into meaningful work and positive workplace behaviors. Future research should examine these factors as potential moderators, mediators, or boundary conditions. Related constructs, including role conflict, emotional labor, workload, and perceived exploitation, may also help explain when the benefits of calling are strengthened or constrained.

Fourth, the use of a convenience sample from a single cultural context may limit the generalizability of the findings. Future studies should test the proposed model across diverse cultural, occupational, and organizational settings. Furthermore, future research should assess the robustness of the proposed relationships by testing alternative model specifications, incorporating additional organizational controls, and examining whether the findings are replicated across different samples, contexts, and analytical approaches.

Finally, although this study did not examine artificial intelligence (AI) directly, the findings have important implications for increasingly AI-augmented workplaces. As automation reshapes job tasks and human contributions, future research should investigate how AI-related factors, such as AI task intensity, algorithmic transparency, and AI literacy, influence employees' experience of meaningful work and their ability to translate a sense of calling into performance and organizational citizenship behaviors.

6. Conclusion

This study provides the first empirical evidence linking calling to job performance through the mediating role of meaningful work, thereby supporting a core proposition of the Work-as-Calling Theory. The findings indicate that performance improvements arise not from perceiving a calling alone but from experiencing work as meaningful. Within the Job Characteristics Model, meaningful work functions as the key mechanism connecting individual orientations to job characteristics.

Meaningful work, however, is not a universal explanation of employee effectiveness but a mechanism embedded in a broader organizational context. The positive effects of calling depend on supportive conditions: job resources such as autonomy and task significance facilitate the enactment of calling, whereas hindrance stressors, including excessive workload and unrealistic deadlines, can diminish or eliminate its benefits. Accordingly, calling is most likely to enhance performance in organizations that provide supportive climates and family-friendly HR practices. In the context of AI-driven transformation, preserving employees' autonomy, impact, and sense of purpose will be critical for sustaining engagement and performance. As artificial intelligence reshapes work, understanding how calling translates into organizational outcomes through meaningful work will become increasingly important.

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Authors' contributions

Maria Dolores Arderiu: Study conception and design, Data collection, Analysis and interpretation of results, Writing - original draft preparation, Writing - review and editing.

Merce Mach: Analysis and interpretation of results, Writing - original draft preparation, Writing - review and editing.

Frederic Marimon: Study conception and design, Analysis and interpretation of results, Writing - review and editing.

All authors approved the final version of the manuscript.

Data availability

Data available upon request

Use of Artificial Intelligence

During the preparation of this work, the authors used ChatGPT to improve the English language expression, grammar, and readability of the manuscript. After using this tool, the authors reviewed and edited the content as needed and took full responsibility for the accuracy and integrity of the final text.

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Annex

Mapping of Inconsistent Findings in Calling and Job Performance Research

Study	Sample	Calling concept/ Measures	Performance Measures	Key Findings	Why Mixed/Gap
Lee et al. (2018)	186 employees, from 24 organizations. (Two-wave procedure).	Sense of Calling (Perceived) / Calling and Vocation Questionnaire (CVQ)	Task and Contextual (Self-rated)	Direct Effect: Positive relationship supported for both task & contextual performance.	Contextual: Supportive climate acts as a cross-level moderator; results may vary across industries.
Kim et al. (2018)	Profit & non-profit organizations & two-wave design. (Two studies: 200 & 304 participants).	Perceiving a Calling/ Neoclassical Calling Scale	In-role Performance (Self-rated)	Null Effect: Calling was not a significant predictor of performance.	Measurement: Reliance on self- versus supervisor ratings.
Park et al. (2016)	160 insurance South Korean salespersons,	Presence of Calling / Presence of Calling Scale (CVQ)	Objective Productivity (Sales commission / policies)	Null Effect: Direct effect was non-significant.	Enactment: Effect is fully mediated by occupational self-efficacy; “having” a calling without confidence not equal objective productivity.
Park et al. (2019)	145 newcomers’ employees. Time-lagged collection (3 waves).	Presence of Calling / Presence of Calling Scale (CVQ)	Supervisor-rated Task Performance	Direct Effect: Positive relation supported 2 years after organization entry.	Enactment: High-visibility “forced distribution” ratings may bias results; mediator (job involvement) is critical.
Vianello et al. (2022)	Multisource study on salesmen & managers dyads (n= 965).	Perceiving & living a calling/ Unified Multidim. Calling Scale (UMCS)	Self-rated, Manager-rated, & Productivity	Mixed: Direct effect is moderate but suppressed by high job demands.	Contextual Moderator: High demand stressors (workload/pressure) nullify the benefits of calling for performance.
Rawat and Nadavulakere (2023)	298 teachers & aides, working in 113 classrooms.	Calling Orientation/ Calling Orientation Scale	Emotional Availability (External observers)	Direct Effect: Positive association with job performance supported.	Affective Mechanism: Role of emotional labor (deep vs. surface acting) as a crucial mediator is often overlooked.
Mauno and Vianello (2024)	Two-wave lagged design Finnish teachers (n = 507).	Living a Calling / Career Calling (single Scale)	Task Performance and OCB (Self-rated)	Direct Effect: Positive link supported at T-2.	Moderator Inconsistency: Some demands (planning) help, while others (time pressure) impair performance for called workers.

Study	Sample	Calling concept/ Measures	Performance Measures	Key Findings	Why Mixed/Gap
Gerdell et al. (2025)	285 US employees (3 waves)	Career Calling/ Unified Multidimensional Calling Scale (UMCS)	Task Performance (Self-rated)	Reverse Causal Effect: Performance predicts calling more strongly than vice- versa.	Theoretical Gap: Challenges WCT; performance feedback antecedent that develops a sense of calling.
Zhao et al. (2024)	293 Chinese supervisor– employee dyads (3 waves)	Perceived Career Calling/ Calling and Vocation Question. (CVQ)	‘Taking Charge’ (Supervisor- rated)	Direct Effect: Positive relationship with proactive performance.	Contextual: Benefits are amplified by family- friendly HR practices, showing the need for external resource support.

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