

Telework Intensity, Perceived Social Isolation, and Job Satisfaction: The Moderating Role of Perceived Organizational Performance

Laila ZAOUEL, (PhD candidate)
National School of Business and Management
Hassan I University, Settat, Morocco

Fatima Ezzahra SIRAGI, (Associate Professor)
National School of Business and Management
Hassan I University, Settat, Morocco

Correspondence address :	Hassan I University, Route de Casablanca, Km 3.5, B.P. 539, Settat, Morocco
Disclosure Statement :	The authors declare that they have not received any financial support that could have influenced the objectivity of this study. They take full responsibility for any potential plagiarism, the use of artificial intelligence in the writing process, as well as for the results presented in this article.
Conflict of Interest :	The authors report no conflicts of interest.
Cite this article :	ZAOUEL, L., & SIRAGI, F. E. (2026). Telework Intensity, Perceived Social Isolation, and Job Satisfaction: The Moderating Role of Perceived Organizational Performance. <i>International Journal of Accounting, Finance, Auditing, Management and Economics</i> , 7(6), 338–354. https://doi.org/10.5281/zenodo.20448262
License	This is an open access article under the CC BY-NC-ND license

International Journal of Accounting, Finance, Auditing, Management and Economics - IJAFAME
ISSN: 2658-8455
Volume 7, Issue 06 (2026)

Telework Intensity, Perceived Social Isolation, and Job Satisfaction: The Moderating Role of Perceived Organizational Performance

Résumé :

Cette étude analyse les mécanismes par lesquels l'intensité du télétravail influence la satisfaction au travail. Alors que la littérature documente largement les effets contrastés du travail à distance, elle reste peu disert sur les mécanismes médiateurs et modérateurs susceptibles d'expliquer ces divergences, en particulier dans les contextes émergents tels que le Maroc, encore sous-représentés dans la recherche internationale. Pour combler ce vide, cette recherche mobilise le modèle des Demandes-Ressources au Travail (Bakker & Demerouti, 2007) et propose un modèle médié-modéré dans lequel l'isolement social perçu constitue le mécanisme explicatif central, tandis que la performance organisationnelle perçue joue le rôle d'une ressource contextuelle protectrice. Les données ont été recueillies auprès de 320 salariés marocains recourant au télétravail – majoritairement sous une forme hybride avec en moyenne 2,54 jours et 51,45 % d'heures travaillées à distance par semaine – et analysées par modélisation en équations structurelles fondée sur la variance (PLS-SEM). Les résultats confirment l'effet positif du télétravail sur l'isolement ($\beta = 0,624$), l'effet négatif de l'isolement sur la satisfaction ($\beta = -0,362$) et l'effet amortisseur de la performance organisationnelle perçue (β interaction = $-0,298$). L'effet indirect conditionnel varie de $-0,333$ (POP faible) à $-0,118$ (POP élevée), confirmant une médiation complète modulée par les ressources organisationnelles. Le modèle explique 55,2 % de la variance de l'isolement et 58,0 % de celle de la satisfaction. Au-delà de la réplification d'études antérieures, la contribution centrale réside dans l'introduction d'une variable modératrice tridimensionnelle (performance managériale, clarté du cadre organisationnel, performance digitale) qui reconfigure la chaîne d'effets télétravail-isolement-satisfaction et révèle des leviers managériaux différenciés selon le niveau de ressources organisationnelles disponibles.

Mots clés : télétravail ; isolement social perçu ; satisfaction au travail ; performance organisationnelle perçue ; PLS-SEM ; Maroc.

Classification JEL : M12, M54, J28.

Type du papier : Recherche empirique.

Abstract:

This study examines the mechanisms through which telework intensity influences job satisfaction. While the literature extensively reports mixed findings on remote work, it remains comparatively silent on the mediating and moderating mechanisms that may explain these divergences, particularly in emerging contexts such as Morocco, which remain underrepresented in international research. To address this gap, this research draws on the Job Demands-Resources model (Bakker & Demerouti, 2007) and proposes a moderated-mediation model in which perceived social isolation acts as the central explanatory mechanism, while perceived organizational performance functions as a protective contextual resource. Data were collected from 320 Moroccan employees engaged in telework – mainly under hybrid arrangements averaging 2.54 days and 51.45% of weekly hours worked remotely – and analyzed using partial least squares structural equation modeling (PLS-SEM). The results confirm the positive effect of telework on isolation ($\beta = 0.624$), the negative effect of isolation on satisfaction ($\beta = -0.362$), and the buffering effect of perceived organizational performance (β interaction = -0.298). The conditional indirect effect ranges from -0.333 (low POP) to -0.118 (high POP), supporting a complete mediation modulated by organizational resources. The model accounts for 55.2% of the variance in isolation and 58.0% in job satisfaction. Beyond replicating prior studies, the central contribution lies in introducing a three-dimensional moderating variable (managerial performance, organizational framework clarity, digital performance) that reconfigures the telework-isolation-satisfaction chain and reveals managerial levers differentiated according to the level of organizational resources available.

Keywords: telework; perceived social isolation; job satisfaction; perceived organizational performance; PLS-SEM; Morocco.

JEL Classification: M12, M54, J28.

Paper type: Empirical Research.

1. Introduction

Telework has become firmly established in the contemporary organization of work. Initially considered as a flexible arrangement applicable to certain functions, it now constitutes a central object of reflection for both researchers and organizations. However, despite the abundance of work devoted to its effects, the literature offers no stabilized conclusion regarding its impact on job satisfaction. Some studies highlight its benefits, particularly in terms of flexibility, autonomy and reduced commuting time, while others emphasize its less favorable effects, including isolation, the fragmentation of exchanges and the weakening of the sense of belonging (Auton & Sturman, 2024; Figueiredo et al., 2025; Zöllner & Sulikova, 2021).

This heterogeneity of results suggests that it is hardly relevant to address the relationship between telework and job satisfaction in terms of a direct and uniform effect. The most recent research indicates rather that the effects of remote work depend on intermediate mechanisms and specific organizational resources (Oleksa-Marewska & Tokar, 2023; Peiró et al., 2024; Zvireliene et al., 2025). From this perspective, perceived social isolation appears as a particularly relevant mechanism. Telework modifies the forms of interaction, access to information and organizational visibility – three dimensions likely to affect job satisfaction.

From a theoretical standpoint, this study draws on the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007; Demerouti et al., 2001), which conceptualizes work environments as combinations of job demands that consume employees' energy and resources that protect them and foster engagement. The Conservation of Resources theory (Hobfoll, 1989) complements this framework by suggesting that individuals strive to acquire, retain and protect valued resources, and that resource loss – such as the erosion of relational and informational support induced by remote work – is a primary driver of strain. Within this dual lens, telework intensity acts as a demand that depletes social and informational resources, while organizational resources may attenuate this depletion process.

The Moroccan context provides a particularly relevant setting to investigate these dynamics. Although telework remained marginal before 2020, the COVID-19 crisis accelerated its institutionalization: according to the High Commission for Planning (HCP, 2021), nearly 24% of formal-sector employees experienced some form of remote work during the lockdown period, and recent surveys conducted by the CGEM (2022) indicate that hybrid arrangements have persisted in approximately 18% of medium and large Moroccan firms, particularly in the service, banking and digital sectors. Yet, the Moroccan regulatory framework on remote work remains under construction, managerial practices are heterogeneous, and the digital maturity of organizations varies considerably. These features make Morocco an instructive case to examine how organizational resources moderate the psychosocial costs of telework in a context where these resources are themselves unevenly distributed.

The present study thus proposes a model in which telework intensity acts on job satisfaction through perceived social isolation, while perceived organizational performance attenuates the effect of telework intensity on isolation. Accordingly, this research addresses the following question: *to what extent does telework intensity affect job satisfaction through perceived social isolation, and is this mechanism moderated by perceived organizational performance in the Moroccan context?* Three contributions are advanced. First, the study enriches the literature on telework by proposing a moderated mediation model anchored in the JD-R framework. Second, it confers on perceived social isolation a central explanatory role and articulates its multidimensional nature (relational, informational and symbolic) with telework intensity. Third, it provides empirical results from the Moroccan context, which remains underrepresented in international research on remote work.

The remainder of this article is organized as follows. Section 2 reviews the literature on telework, social isolation, job satisfaction and perceived organizational performance, articulates

the theoretical framework, develops the research hypotheses and presents the conceptual model. Section 3 describes the methodology, including the sampling procedure, the measurement scales, the ethical safeguards and the analytical approach. Section 4 reports the empirical results. Section 5 discusses these results in light of the existing literature. Sections 6 and 7 expose the theoretical and practical contributions, the limitations and the avenues for future research, before Section 8 concludes the article.

2. Literature review and hypothesis development

2.1. Theoretical framework: A Job Demands-Resources perspective

The conceptual model proposed in this study is grounded in the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007; Demerouti et al., 2001), which has emerged as one of the most influential frameworks for understanding the dual dynamics of workplace well-being. The JD-R model conceptualizes any work environment as the combination of two broad categories of characteristics: job demands, which consume employees' physical, cognitive or emotional resources, and job resources, which support goal attainment, reduce the cost of demands and stimulate personal growth. This framework explicitly accommodates an interaction between demands and resources: resources buffer the impact of demands on strain outcomes, an assumption that lies at the heart of the moderated mediation model proposed here. The JD-R perspective is complemented by the Conservation of Resources (COR) theory (Hobfoll, 1989, 2001), which posits that individuals are motivated to acquire, retain and protect valued resources, and that resource loss is the primary driver of strain. Applied to telework, both frameworks converge on the idea that remote work intensity may represent a demand that depletes relational, informational and symbolic resources – a depletion captured here by perceived social isolation – and that organizational resources may attenuate this loss spiral. The Social Exchange Theory (Eisenberger et al., 1986) is also implicitly mobilized, as perceived organizational support and performance signal reciprocity and recognition that employees value as exchange-based resources.

Within this integrated framework, telework intensity is conceptualized as a job demand, perceived social isolation as the strain mechanism, perceived organizational performance as a contextual resource that buffers the demand-strain relationship, and job satisfaction as the affective outcome. This theoretical anchoring offers a coherent rationale for testing not only direct effects but also mediated and moderated pathways.

2.2. Telework intensity and perceived social isolation

The intensification of telework transforms the ordinary conditions of participation in the work collective. When distance becomes more frequent, spontaneous interactions decrease, informal exchanges become rarer, and certain recognition signals become less accessible. Under these conditions, employees may experience a sense of being kept at a distance that does not pertain only to the relational register, but also to access to information and visibility within the organization (Figueiredo et al., 2025; Toscano & Zappalà, 2020).

Perceived social isolation in telework is conceptualized here as a multidimensional construct integrating three distinct yet interrelated dimensions, consistent with the work of Bartel et al. (2012), Marshall et al. (2007) and Gajendran and Harrison (2007). The *relational dimension* captures the reduction of informal social contacts and emotional support from colleagues. The *informational dimension* refers to the perceived deprivation of incidental knowledge, organizational news and procedural cues that normally circulate in face-to-face settings. The *symbolic dimension* captures the perceived loss of visibility, recognition and inclusion in the organizational membership. Recent empirical work suggests that each dimension responds differently to telework intensity: relational isolation increases sharply with the number of

remote days, whereas informational and symbolic isolation are more sensitive to managerial practices and to the formalization of communication routines (Allen et al., 2015; Bailey & Kurland, 2002).

H1. Telework intensity positively influences perceived social isolation.

2.3. Perceived social isolation and job satisfaction

Job satisfaction depends in part on the quality of social relations, the sense of belonging and the impression of being recognized in one's professional environment (Locke, 1976; Judge et al., 2001). Within the JD-R framework, the relational and symbolic dimensions of organizational life constitute key resources whose erosion is expected to reduce overall job satisfaction (Bakker & Demerouti, 2007). When these dimensions weaken, the overall evaluation of work tends to deteriorate. Studies on telework show in this regard that more pronounced isolation is generally associated with lower satisfaction (Gajendran & Harrison, 2007; Rokach & Brock, 1998; Zöllner & Sulikova, 2021; Zvireliene et al., 2025).

H2. Perceived social isolation negatively influences job satisfaction.

2.4. The mediating role of perceived social isolation

Recent research suggests that the effects of telework on professional attitudes rarely operate through a direct link. They more often fall within a chain of intermediate mechanisms, including isolation, technostress and the quality of organizational support (Auton & Sturman, 2024; Suh & Lee, 2017). Within the COR framework (Hobfoll, 1989), this indirect pathway reflects a resource depletion process: telework intensity does not directly degrade satisfaction but does so by eroding the relational, informational and symbolic resources captured by perceived social isolation.

H3. Perceived social isolation mediates the relationship between telework intensity and job satisfaction.

2.5. The moderating role of perceived organizational performance

Organizational resources play a determining role in the experience of telework. Managerial support, the clarity of rules, access to digital tools and the quality of the coordination framework contribute to making remote work more sustainable (Auton & Sturman, 2024; Oleksa-Marewska & Tokar, 2023; Peiró et al., 2024).

The JD-R model explicitly predicts that job resources buffer the negative impact of job demands on strain outcomes (Bakker & Demerouti, 2007; Bakker et al., 2005). Resources operate as protective mechanisms that either reduce the perceived intensity of demands, provide functional support to cope with them, or substitute for the eroded resources. In the telework context, perceived organizational performance is conceptualized here as a higher-order resource that combines three functionally distinct components, each of which corresponds to a recognized type of organizational resource in the JD-R literature.

First, *perceived managerial performance* refers to the quality of managerial behaviors – feedback, recognition, availability, ability to coordinate at a distance – and constitutes a social-relational resource that compensates for the relational dimension of isolation (Bakker & Demerouti, 2017; Eisenberger et al., 1986). Second, the *clarity of the organizational framework* refers to the structuring effect of explicit rules, role expectations and procedural transparency, and operates as a structural resource that compensates for the informational dimension of isolation (Demerouti et al., 2001). Third, *perceived digital performance* refers to the reliability, accessibility and adequacy of digital tools and infrastructures, and operates as a technical resource that enables visibility, participation and information access – three functions that

compensate for the symbolic and informational dimensions of isolation (Wang et al., 2021). Modeling these three components as a higher-order construct is consistent with the recent trend in JD-R research toward latent resource bundles that capture a coherent protective configuration (Bakker & Demerouti, 2017).

H4. Perceived organizational performance negatively moderates the relationship between telework intensity and perceived social isolation, such that this relationship is weaker when perceived organizational performance is high.

2.6. Telework in the Moroccan and emerging-country contexts

Although the international literature on telework has expanded rapidly in the wake of the COVID-19 pandemic, empirical evidence remains largely concentrated in Northern American and European contexts, in which digital infrastructures are mature, managerial cultures are formalized and remote work was already partially institutionalized before 2020 (Allen et al., 2015; Gajendran & Harrison, 2007). The few studies conducted in North African and Maghrebian settings underline a markedly different configuration: hierarchical and presence-oriented managerial cultures, a regulatory framework on remote work still under construction, heterogeneous digital maturity across sectors and a stronger weight of family and informal social ties in workers' everyday experience (Boussebaa, 2021; HCP, 2021).

Within Morocco specifically, the still-scarce empirical literature converges on three observations: (i) hybrid arrangements are now the dominant form of telework, mainly in the service, banking and digital sectors; (ii) managerial practices vary substantially across organizations, ranging from highly formalized to almost entirely informal coordination; and (iii) the digital infrastructure available to teleworkers is uneven, with notable disparities between large firms and SMEs (CGEM, 2022). These features make the Moroccan context particularly relevant for testing a moderated-mediation model in which organizational resources are likely to vary considerably across firms, providing meaningful between-organization variance to capture the buffering effect.

Table 1: Summary of Research Hypotheses

Hypothesis	Statement
H1	Telework intensity positively influences perceived social isolation.
H2	Perceived social isolation negatively influences job satisfaction.
H3	Perceived social isolation mediates the relationship between telework intensity and job satisfaction.
H4	Perceived organizational performance negatively moderates the relationship between telework intensity and perceived social isolation.

Source: Authors.

3. Methodology

3.1. Sample and data collection

This study is based on a quantitative survey conducted among employees engaged in telework in the Moroccan context. After verification of completeness and consistency of the data, the final database comprises 320 usable observations. The sample is mainly characterized by hybrid telework arrangements, with an average of 2.54 days teleworked per week and an average proportion of 51.45% of hours worked remotely.

Data were collected between [month/2024] and [month/2024] through a self-administered online questionnaire deployed via the Qualtrics platform, in line with the recommended protocol for cross-organizational telework surveys (Podsakoff et al., 2003). A purposive non-probabilistic sampling strategy was adopted, complemented by a snowball component, in order to reach the still-fragmented population of Moroccan teleworkers across sectors. The survey

was distributed through three complementary channels: (i) direct dissemination via professional networks (HR managers and association mailing lists in the banking, insurance, IT services and consulting sectors); (ii) targeted dissemination through LinkedIn groups dedicated to Moroccan professionals; and (iii) snowball referral, with respondents invited to forward the link to peers also engaged in telework. The questionnaire was made available in French. To be retained in the final sample, respondents had to meet three inclusion criteria: (i) being currently employed in a Moroccan organization (public or private), (ii) having practiced telework – fully or in hybrid form – for at least three consecutive months prior to the survey, and (iii) completing all measurement scales of the model. Of the 412 questionnaires initially returned, 92 were excluded due to incomplete responses, suspicious response patterns (straight-lining, response time below the recommended threshold) or non-fulfillment of the inclusion criteria, yielding the final sample of 320 usable observations.

3.2. Socio-demographic description of the sample

Table 2 presents the main socio-demographic characteristics of the final sample. The exact values reported below should be verified against the analyst's descriptive statistics output before submission.

Table 2: Socio-Demographic Characteristics of the Sample (N = 320)

Variable	Categories	Frequenc y	%
Industry Sector	IT / Telecom	62	19,4
	Services	58	18,1
	Public Administration	57	17,8
	Finance / Insurance	37	11,6
	Education / Teaching	34	10,6
	Healthcare	32	10,0
	Trade / Commerce	21	6,6
	Industry / Manufacturing	19	5,9
Employment Status	Permanent Contract	230	71,9
	Fixed-Term Contract	62	19,4
	Self-Employed	14	4,4
	Other	11	3,4
	Entrepreneur	3	0,9
Organization Type	Private	200	62,5
	Public	120	37,5
Organization Size	Fewer than 10 employees	26	8,1
	10 to 49 employees	36	11,2
	50 to 249 employees	67	20,9
	250 to 999 employees	82	25,6
	1,000 employees or more	109	34,1
Professional Experience	Less than 1 year	28	8,8
	1 to 3 years	62	19,4
	4 to 7 years	96	30,0
	8 to 15 years	87	27,2
	More than 15 years	47	14,7
Organizational Tenure	Less than 1 year	170	53,1
	1 to 3 years	101	31,6
	4 to 7 years	38	11,9
	8 to 15 years	9	2,8
	More than 15 years	2	0,6
Telework Intensity	Days teleworked per week (average)	2,54	—
	Weekly hours worked remotely (average)	51,45 %	—

Source: Authors, based on descriptive statistics from the final dataset (N = 320).

Telework intensity was assessed using a perceptual measure composed of three items adapted from Gajendran and Harrison (2007), capturing the subjective frequency and centrality of remote work in the respondent's professional activity. Two factual indicators were also used for robustness purposes: the number of days teleworked per week and the proportion of hours worked remotely.

Perceived social isolation was operationalized as a multidimensional construct integrating relational isolation, informational isolation and isolation related to recognition and visibility, drawing on the scales developed by Marshall et al. (2007) and adapted to the telework context by Toscano and Zappalà (2020). All items were measured on a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree").

Perceived organizational performance was modeled as a second-order construct comprising perceived managerial performance, the clarity of the organizational framework and perceived digital performance, with items adapted from Eisenberger et al. (1986) for the managerial dimension, from Rizzo et al. (1970) for organizational framework clarity, and from Wang et al. (2021) for digital performance.

Job satisfaction was measured using three reflective items adapted from the Brayfield-Rothe scale (1951) revisited by Judge et al. (1998), which provides a parsimonious global evaluation of job satisfaction widely used in PLS-SEM applications.

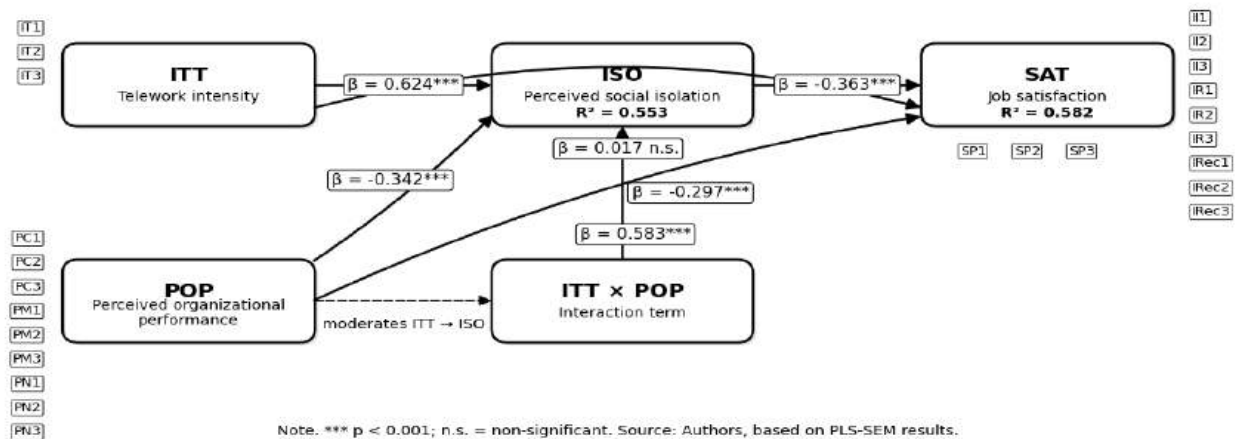
3.4. Ethical considerations

The data collection complied with the ethical standards required for research involving human participants. Before answering the questionnaire, respondents were presented with an informed consent statement specifying the objectives of the study, the academic nature of the research, the anonymous and confidential treatment of all data, the voluntary nature of participation and the possibility of withdrawing at any time. No personally identifiable information was collected, no professional or organizational identifier was requested, and the data were stored on a secured, password-protected server accessible only to the authors. The research protocol was reviewed and approved by the research committee of the National School of Business and Management, Hassan I University. Aggregate results only are reported, in line with the European General Data Protection Regulation (GDPR) principles and with Moroccan Law 09-08 on the protection of personal data.

3.5. Method of analysis

The data were analyzed using PLS-SEM (Partial Least Squares Structural Equation Modeling), implemented in SmartPLS 4. The choice of PLS-SEM over covariance-based SEM (CB-SEM) is justified by four converging criteria recommended in the methodological literature (Hair et al., 2019; Ringle et al., 2015). First, the model includes a higher-order (second-order) construct – perceived organizational performance – which is more efficiently estimated through the repeated-indicators or two-stage approach available in PLS-SEM. Second, the structural model integrates simultaneous mediation, moderation and conditional indirect effects, increasing model complexity in ways that PLS-SEM accommodates more flexibly than CB-SEM. Third, the predictive orientation of the study – assessing the explanatory and predictive relevance of telework intensity and perceived organizational performance on job satisfaction – is more aligned with the predictive logic of PLS-SEM than with the confirmatory logic of CB-SEM (Hair et al., 2019). Fourth, although the sample size ($N = 320$) is sufficient for CB-SEM, PLS-SEM offers more robust estimates under departures from multivariate normality, which is commonly observed in attitudinal survey data. The analysis followed this sequence: evaluation of the measurement model, diagnostic of common method bias, estimation of the structural model, mediation test, moderation test, estimation of conditional indirect effects, and robustness checks.

Figure 1 : Conceptual Research Model



Source: Authors.

4. Results

4.1. Measurement model

The results show satisfactory psychometric quality. Outer loadings range between 0.847 and 0.958. Cronbach's alphas vary from 0.815 to 0.951, composite reliabilities from 0.891 to 0.968, and AVEs from 0.731 to 0.910. These indicators confirm the internal reliability and convergent validity of the measurement model.

Discriminant validity was assessed using the Heterotrait-Monotrait ratio of correlations (HTMT) criterion (Henseler et al., 2015), which is now recommended over the sole Fornell-Larcker criterion in variance-based SEM. As shown in Table 3, all HTMT values are below the conservative threshold of 0.85, providing strong evidence of discriminant validity across the central constructs of the model.

Table 3 : HTMT Matrix (Heterotrait-Monotrait Ratio)

Construct	ITT	ISO	POP	SAT
Telework Intensity (TI)	—			
Perceived Social Isolation (PSI)	0,636	—		
Perceived Organizational Performance (POP)	0,073	0,288	—	
Job Satisfaction (JS)	0,173	0,551	0,729	—

Source: Authors, based on PLS-SEM analysis. Reference threshold: HTMT < 0.85.

4.2. Validity of the second-order construct (Perceived Organizational Performance)

Perceived organizational performance was modeled as a reflective-formative second-order construct, with three first-order reflective dimensions (managerial performance, organizational framework clarity, digital performance) and one second-order formative composite. Following the two-stage approach recommended by Hair et al. (2019), the latent variable scores of the first-order dimensions were first computed, then used as formative indicators of the second-order construct. As shown in Table 4, the three dimensions display significant outer weights and outer loadings, suggesting that each contributes meaningfully to the higher-order

composite. VIF values remain below the recommended threshold of 3, indicating the absence of problematic collinearity at the formative level.

Table 4: Measurement Model of the Second-Order Construct (POP)

Dimension	Indicator	Loading	VIF
Organizational Framework Clarity	PC1	0,865	3,230
Organizational Framework Clarity	PC2	0,858	3,152
Organizational Framework Clarity	PC3	0,860	3,057
Managerial Performance	PM1	0,864	3,196
Managerial Performance	PM2	0,866	3,295
Managerial Performance	PM3	0,873	3,489
Digital Performance	PN1	0,849	2,920
Digital Performance	PN2	0,864	3,282
Digital Performance	PN3	0,868	3,377

Source: Authors, based on PLS-SEM analysis.

4.3. Common method bias

Because the data were collected from a single respondent through a self-administered questionnaire, the risk of common method bias (CMB) was assessed using procedural and statistical safeguards (Podsakoff et al., 2003). Procedurally, respondents were assured of anonymity and confidentiality, evaluative wording was avoided where possible, and the constructs were presented in separate blocks. Statistically, Harman's single-factor test was performed using a principal component analysis with no rotation on all measurement items. The first unrotated factor accounted for 42.0% of the total variance, below the 50% threshold, suggesting that no single factor dominates the variance structure of the data. In addition, full collinearity diagnostics were examined in line with PLS-SEM-specific recommendations (Kock, 2015). All inner VIF values remained below the conservative threshold of 3.3, indicating that common method bias is unlikely to represent a substantive threat in this study. Given the cross-sectional and self-reported nature of the data, the results are nevertheless interpreted as evidence consistent with the proposed theoretical mechanism rather than as definitive proof of causal ordering.

4.4. Structural model

The results support all the main hypotheses.

Table 5: Structural Model Results (PLS-SEM)

Structural Relationship	β	t	p	Result
Telework Intensity → Perceived Social Isolation	0,624	16,528	< 0,001	H1 Supported
Perceived Social Isolation → Job Satisfaction	-0,362	7,295	< 0,001	H2 Supported
Telework Intensity → Job Satisfaction (direct effect)	0,016	0,326	0,744	Not Significant
Perceived Organizational Performance → Perceived Social Isolation	-0,340	8,984	< 0,001	Significant
Perceived Organizational Performance → Job Satisfaction	0,583	14,655	< 0,001	Significant
Telework × POP → Perceived Social Isolation	-0,298	7,998	< 0,001	H4 Supported

Source: Authors, based on PLS-SEM analysis (bootstrap, 5,000 subsamples).

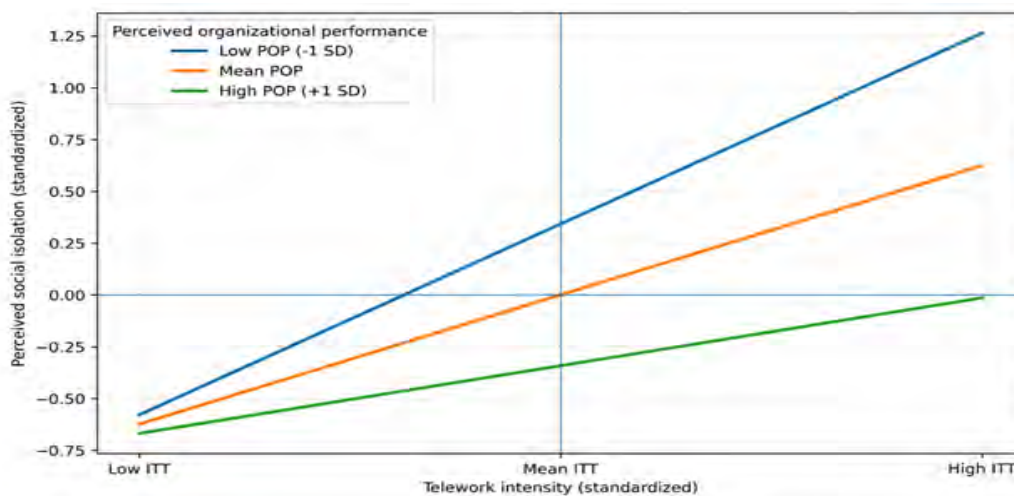
4.5. Mediation and conditional indirect effects

The indirect effect of telework intensity on job satisfaction through perceived social isolation is significant ($\beta = -0.225$; 95% CI [-0.285; -0.168]), which supports H3.

The indirect effect varies depending on the level of perceived organizational performance: at low performance, $\beta = -0.333$; at medium performance, $\beta = -0.225$; and at high performance, $\beta = -0.118$. This pattern indicates that high perceived organizational performance acts as a buffer that substantially reduces – without fully neutralizing – the harmful indirect effect of telework intensity on job satisfaction.

Figure 2 plots the simple slopes of the relationship between telework intensity and perceived social isolation at three levels of perceived organizational performance (one standard deviation below the mean, at the mean, and one standard deviation above the mean). The decreasing slope confirms the buffering role of perceived organizational performance: the steeper the slope, the stronger the impact of telework intensity on isolation when organizational resources are scarce.

Figure 2: Moderating Effect of Perceived Organizational Performance (Simple Slopes)



Note. Simple slopes based on the final PLS-SEM estimates: ITT $\rightarrow$ ISO = 0.624; POP $\rightarrow$ ISO = -0.342; ITT $\times$ POP $\rightarrow$ ISO = -0.297.

Source: Authors, based on conditional effects estimated in PLS-SEM.

4.6. Explanatory power and robustness

The model explains 55.2% of the variance of perceived social isolation ($R^2 = 0.552$) and 58.0% of the variance of job satisfaction ($R^2 = 0.580$). The Q^2 values are positive for both endogenous variables, confirming the predictive relevance of the model. Robustness analyses also show that the central results remain consistent when telework intensity is captured through alternative measures (number of days teleworked per week and proportion of hours worked remotely).

5. Discussion

The results first show that telework intensity increases perceived social isolation. This finding confirms that organizational distance does not refer solely to spatial separation; it also modifies the conditions of relational, informational and symbolic connection of the employee to their organization, which is consistent with recent work on isolation in telework (Figueiredo et al., 2025; Toscano & Zappalà, 2020).

Next, perceived social isolation appears as a central determinant of job satisfaction. This result helps to understand why the effects of telework appear so contrasting in the literature. Telework does not produce homogeneous effects in itself; its consequences depend on the psychosocial mechanisms it activates. Perceived social isolation thus appears as the main channel through which exposure to telework translates into attitudinal consequences.

A particularly noteworthy result lies in the non-significant direct effect of telework intensity on job satisfaction ($\beta = 0.016$; $p = 0.744$), which contrasts with a substantial body of literature

reporting either positive direct effects through flexibility and autonomy (Gajendran & Harrison, 2007; Allen et al., 2015) or negative direct effects through work-life conflict (Bailey & Kurland, 2002). Three complementary interpretations may be advanced. First, this result provides empirical support for a complete mediation: telework intensity does not affect satisfaction in itself, but only through the psychosocial mechanisms it activates – here, perceived social isolation. The competing positive and negative direct effects documented in the prior literature may therefore reflect specifications that omit the mediating mechanism, producing apparent direct effects that vanish once the mediator is properly modeled. Second, the average level of telework intensity in our sample (2.54 days per week, 51.45% of working hours) corresponds to hybrid arrangements rather than full remote work, a configuration in which the flexibility benefits and the isolation costs of telework may approximately offset each other at the direct-effect level. Third, the contextual specificity of the Moroccan setting may amplify the channeling role of isolation: in a managerial culture historically organized around in-person interactions and informal information flows, the loss of these relational and informational resources may carry a heavier weight than the autonomy gains conventionally associated with telework. The complete mediation observed here therefore constitutes a theoretical contribution in itself, suggesting that subsequent research should systematically include relational mediators before drawing conclusions about direct effects.

Finally, perceived organizational performance plays a protective role. The moderation result shows that the organizational environment is not a mere backdrop. It acts as a resource capable of attenuating the transformation of telework intensity into perceived social isolation. This conclusion extends the work that emphasizes the importance of organizational support, culture and technical resources in the quality of the telework experience (Auton & Sturman, 2024; Oleksa-Marewska & Tokar, 2023; Zvireliene et al., 2025).

From a theoretical standpoint, these results reinforce and refine the Job Demands-Resources model in three respects. First, they confirm the buffering hypothesis of the JD-R model (Bakker & Demerouti, 2007) in the specific case of telework: organizational resources do not only have a direct positive effect on satisfaction, they also weaken the impact of demands on strain mechanisms. Second, they contribute to the literature on resource bundles by showing that a tridimensional resource configuration (managerial, structural, technical) operates as a coherent protective higher-order construct, in line with recent calls for more integrated conceptualizations of organizational resources (Bakker & Demerouti, 2017). Third, the results are consistent with Conservation of Resources theory (Hobfoll, 1989, 2001): the mediated chain of effects observed here can be interpreted as a resource-loss spiral – telework depletes relational, informational and symbolic resources captured by isolation, which in turn deteriorates the affective evaluation of work – while organizational resources counteract this loss spiral. This interpretation invites further research to articulate JD-R and COR more systematically in the study of remote work.

From a contextual standpoint, the magnitude and structure of the effects observed here deserve a culturally informed interpretation. The Moroccan organizational landscape is characterized by a strong reliance on in-person interactions, an oral and informal circulation of organizational information, and managerial cultures that historically value visibility and physical presence as proxies for engagement (Boussebaa, 2021). In this configuration, the transition to hybrid telework removes precisely the channels through which relational, informational and symbolic resources are normally conveyed, which may explain the strong effect of telework intensity on perceived social isolation observed in our data ($\beta = 0.624$). Conversely, the substantial moderating effect of perceived organizational performance (β interaction = -0.298) suggests that Moroccan organizations that have invested in formalized managerial practices, explicit role expectations and reliable digital infrastructures succeed in mitigating these psychosocial costs. The unevenness of the digital maturity across Moroccan organizations (CGEM, 2022) thus

constitutes both a methodological asset – it provides between-organization variance to detect the moderating effect – and a managerial concern, as it implies that the benefits of telework are unequally distributed across organizations.

Overall, the study shows that the effects of telework on job satisfaction are socially mediated and organizationally conditioned.

6. Theoretical and practical contributions

6.1. Theoretical contributions

The theoretical contributions of this study can be formulated as four differentiated propositions that go beyond a mere reiteration of the introductory claims.

First, the study provides empirical evidence that the effect of telework intensity on job satisfaction is fully mediated by perceived social isolation in the Moroccan context. This complete mediation result refines the JD-R model by suggesting that, in contexts characterized by presence-oriented managerial cultures, the relational resource depletion induced by remote work is the dominant pathway through which telework affects attitudinal outcomes – more so than the autonomy or flexibility gains typically emphasized in Western settings.

Second, the study contributes to the theoretical literature on organizational resources by showing that perceived organizational performance, conceptualized as a tridimensional higher-order resource (managerial, structural and digital), operates as a coherent protective configuration in the demand-strain process. This finding supports the call to move beyond single-resource analyses toward resource bundles that capture the interrelated nature of organizational support (Bakker & Demerouti, 2017).

Third, by demonstrating that the indirect effect of telework intensity on satisfaction is significantly weaker – but not neutralized – when organizational resources are high, the study qualifies the buffering hypothesis of the JD-R model. Even in resource-rich environments, telework intensity exerts a residual indirect effect on satisfaction through isolation, suggesting that organizational resources attenuate but do not eliminate the psychosocial costs of remote work.

Fourth, the study extends the international literature on telework to the Moroccan context, which has remained underrepresented in empirical research. By documenting magnitudes and patterns of effects in a North African setting characterized by specific cultural and organizational features, it provides a comparative anchor against which results from Western contexts can be assessed, contributing to the broader debate on the cultural contingency of telework outcomes.

6.2. Practical contributions

The empirical results suggest practical recommendations that should be differentiated according to the level of organizational resources available, in line with the conditional indirect effects identified in the analysis.

In organizations characterized by *low perceived organizational performance* – where the indirect effect of telework intensity on satisfaction reaches $\beta = -0.333$ –, managerial interventions are most urgently required. Priority should be given to structuring managerial practices (regular check-ins, explicit recognition routines, formalization of remote feedback), clarifying role expectations and procedural rules, and upgrading digital infrastructures to ensure reliable access to information and visibility. In these contexts, organizations may consider limiting telework intensity until organizational resources are sufficiently strengthened, as the protective conditions for sustainable remote work are not yet in place.

In organizations characterized by *medium perceived organizational performance* (β indirect = -0.225), the recommendation is to consolidate existing managerial and digital resources and to address specific weaknesses identified through internal diagnostic assessments. The conditional indirect effect at this level remains substantively meaningful and suggests that telework arrangements are not yet self-sustaining without managerial attention.

In organizations characterized by *high perceived organizational performance* (β indirect = -0.118), the residual but non-zero indirect effect indicates that even resource-rich environments cannot fully neutralize the psychosocial costs of telework. The recommendation here is to maintain the existing resource configuration, monitor employees' perceptions over time and develop fine-grained interventions targeting specific dimensions of isolation (relational, informational, symbolic).

More broadly, these results invite organizations to move beyond a purely quantitative approach to remote work – measured by the number of days teleworked – and to invest jointly in managerial support, in the clarity of the organizational framework and in the reliability of digital infrastructures. The buffering effect of these three dimensions is most likely to be obtained when they are deployed as a coherent bundle rather than in isolation.

7. Limitations and research perspectives

This study presents several limitations. The cross-sectional design limits the strength of causal inference. The use of self-reported data implies that the results mainly concern perceptions. Non-probabilistic sampling invites favoring analytical generalization rather than strictly populational generalization. Finally, the model retained, although coherent and fruitful, does not exhaust all the possible mediators and moderators of the effects of telework.

Building on these limitations, four operationalizable avenues for future research can be identified. First, a *longitudinal multi-wave design* would allow researchers to test whether the resource-loss spiral postulated by COR theory unfolds over time, with telework intensity at T1 predicting perceived isolation at T2 and job satisfaction at T3. A three-wave design with three-month intervals would be appropriate to capture both short-term and consolidated effects. Second, future research could test *additional mediators* specific to telework, including technostress (Suh & Lee, 2017), work-life conflict and perceived autonomy, in order to compare their explanatory power against perceived social isolation and assess whether the dominance of relational mediators is specific to the Moroccan context. Third, the *moderating role of managerial style* (transformational, transactional, laissez-faire), sector (banking vs. IT vs. public administration) and individual telework experience could be tested through multi-group PLS-SEM analyses, building on the present sample by stratifying the data along these dimensions. Fourth, *cross-cultural comparative designs* between Morocco, other Maghreb countries (Tunisia, Algeria) and selected European or North American contexts would allow researchers to test the cultural contingency of the patterns identified here, ideally through invariance testing in CB-SEM or measurement invariance procedures for composite-based models (MICOM) in PLS-SEM.

8. Conclusion

This study set out to examine the extent to which telework intensity affects job satisfaction through perceived social isolation, and whether this mechanism is moderated by perceived organizational performance in the Moroccan context. The empirical analysis, conducted on a sample of 320 Moroccan employees using PLS-SEM, provides a clear answer to this research question: telework intensity does not affect job satisfaction directly, but does so entirely through perceived social isolation, with the strength of this indirect effect being significantly attenuated – yet not neutralized – when perceived organizational performance is high.

Beyond this empirical answer, the study suggests three propositions of broader scope. *First*, the effects of telework on workplace attitudes are not directly determined by its frequency but by the way it reconfigures the relational, informational and symbolic experience of work, which calls for a shift in research and managerial attention from the quantitative to the qualitative dimensions of remote work. *Second*, organizational resources operate as protective configurations rather than as isolated factors, which invites both researchers and practitioners to think in terms of resource bundles when designing or studying telework arrangements. *Third*, the cultural and organizational specificities of emerging contexts such as Morocco shape the magnitude and the pathways of telework effects in ways that the dominant literature, anchored in Western settings, may underestimate – which makes the further development of contextually situated empirical work a priority for the field.

For the scientific community, these findings open avenues for refining the JD-R and COR frameworks in the specific case of remote work, particularly through longitudinal and cross-cultural designs. For organizations and policymakers, they imply that the sustainability of telework cannot be taken for granted on the sole basis of its diffusion: it depends on the deliberate construction of managerial, structural and digital resources capable of compensating for the relational costs that intensified remote work inevitably generates. Limitations of the study – cross-sectional design, single-source data, non-probabilistic sampling, model parsimony – delineate the boundary conditions of these conclusions and identify the targets for the next stages of research.

References:

- (1). Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How effective is telecommuting? Assessing the status of our scientific findings. *Psychological Science in the Public Interest*, 16(2), 40–68. <https://doi.org/10.1177/1529100615593273>
- (2). Auton, J. C., & Sturman, M. C. (2024). Teleworking during the COVID-19 pandemic: The job demands and resources approach. *Current Psychology*, 43, 17321–17340. <https://doi.org/10.1007/s12144-023-04938-x>
- (3). Bailey, D. E., & Kurland, N. B. (2002). A review of telework research: Findings, new directions, and lessons for the study of modern work. *Journal of Organizational Behavior*, 23(4), 383–400. <https://doi.org/10.1002/job.144>
- (4). Bakker, A. B., & Demerouti, E. (2007). The job demands–resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- (5). Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- (6). Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, 10(2), 170–180. <https://doi.org/10.1037/1076-8998.10.2.170>
- (7). Bartel, C. A., Wrzesniewski, A., & Wiesenfeld, B. M. (2012). Knowing where you stand: Physical isolation, perceived respect, and organizational identification among virtual employees. *Organization Science*, 23(3), 743–757. <https://doi.org/10.1287/orsc.1110.0661>
- (8). Boussebaa, M. (2021). From cultural differences to cultural globalization: Towards a new research agenda in cross-cultural management studies. *Critical Perspectives on International Business*, 17(3), 381–398. <https://doi.org/10.1108/cpoib-01-2020-0003>

- (9). Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of Applied Psychology*, 35(5), 307–311. <https://doi.org/10.1037/h0055617>
- (10). Confédération Générale des Entreprises du Maroc [CGEM]. (2022). *Le télétravail au Maroc : pratiques, perceptions et perspectives post-COVID-19*. Note de synthèse. Casablanca : CGEM.
- (11). Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- (12). Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507. <https://doi.org/10.1037/0021-9010.71.3.500>
- (13). Figueiredo, E., Margaça, C., & Sánchez-García, J. C. (2025). Loneliness and isolation in the era of telework: A comprehensive review of challenges for organizational success. *Healthcare*, 13(16), 1968. <https://doi.org/10.3390/healthcare13161968>
- (14). Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting: Meta-analysis of psychological mediators and individual consequences. *Journal of Applied Psychology*, 92(6), 1524–1541. <https://doi.org/10.1037/0021-9010.92.6.1524>
- (15). Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- (16). Haut-Commissariat au Plan [HCP]. (2021). *Effets du coronavirus (Covid-19) sur l'activité des entreprises – Note d'information*. Rabat : HCP. <https://www.hcp.ma>
- (17). Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- (18). Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>
- (19). Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology*, 50(3), 337–421. <https://doi.org/10.1111/1464-0597.00062>
- (20). Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83(1), 17–34. <https://doi.org/10.1037/0021-9010.83.1.17>
- (21). Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127(3), 376–407. <https://doi.org/10.1037/0033-2909.127.3.376>
- (22). Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1–10. <https://doi.org/10.4018/ijec.2015100101>
- (23). Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297–1349). Rand McNally.
- (24). Marshall, G. W., Michaels, C. E., & Mulki, J. P. (2007). Workplace isolation: Exploring the construct and its measurement. *Psychology & Marketing*, 24(3), 195–223. <https://doi.org/10.1002/mar.20158>

- (25). Nilles, J. M. (1975). Telecommunications and organizational decentralization. *IEEE Transactions on Communications*, 23(10), 1142–1147. <https://doi.org/10.1109/TCOM.1975.1092687>
- (26). Oleksa-Marewska, K., & Tokar, J. (2023). Organizational culture and job satisfaction of employees in remote work. *International Journal of Occupational Safety and Ergonomics*, 29(4), 1454–1462. <https://doi.org/10.1080/10803548.2022.2156697>
- (27). Peiró, J. M., Bravo-Duarte, F., González-Anta, B., & Todolí-Signes, A. (2024). Supervisory performance in telework: The role of job demands, resources, and satisfaction with telework. *Frontiers in Organizational Psychology*, 2, 1346585. <https://doi.org/10.3389/forgp.2024.1346585>
- (28). Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- (29). Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2015). *Partial least squares structural equation modeling in HRM research*. The International Journal of Human Resource Management, 31(12), 1617–1643. <https://doi.org/10.1080/09585192.2017.1416655>
- (30). Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 15(2), 150–163. <https://doi.org/10.2307/2391486>
- (31). Rokach, A., & Brock, H. (1998). Coping with loneliness. *The Journal of Psychology*, 132(1), 107–127. <https://doi.org/10.1080/00223989809599269>
- (32). Suh, A., & Lee, J. (2017). Understanding teleworkers' technostress and its influence on job satisfaction. *Internet Research*, 27(1), 140–159. <https://doi.org/10.1108/IntR-06-2015-0181>
- (33). Toscano, F., & Zappalà, S. (2020). Social isolation and stress as predictors of productivity perception and remote work satisfaction during the COVID-19 pandemic: The role of concern about the virus in a moderated double mediation. *Sustainability*, 12(23), 9804. <https://doi.org/10.3390/su12239804>
- (34). Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2021). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied Psychology*, 70(1), 16–59. <https://doi.org/10.1111/apps.12290>
- (35). Zöllner, K., & Sulikova, R. (2021). Teleworking and its influence on job satisfaction. *Journal of Human Resources Management Research*, 2021, 558863. <https://doi.org/10.5171/2021.558863>
- (36). Zvireliene, R., Repečkienė, A., Glinskienė, R., & Kvedaraitė, N. (2025). Job satisfaction of employees working remotely: The role of support and workplace relationships. *Administrative Sciences*, 15(2), 47. <https://doi.org/10.3390/admsci15020047>