THE INFLUENCE OF TELEWORKING ON PERFORMANCE AND EMPLOYEES' COUNTERPRODUCTIVE BEHAVIOUR

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Abstract

The new social context brought about by the COVID-19 pandemic has generated significant changes in the work of employees. Social distancing and isolation have imposed the adoption of teleworking in most cases. Teleworking existed before the COVID-19 pandemic, and was considered a facilitator of job flexibility, thus increasing employees' autonomy in their work.

This paper aims to identify how teleworking, through its dimensions (teleworking autonomy and interaction reduction) influences self-regulatory capacity, professional isolation, task performance, contextual performance, and counterproductive work behaviours. The data were collected from 641 respondents, namely Romanian employees, who operated by teleworking. The theoretical model and relation between the constructs were tested with the aid of structural equation modelling in SmartPLS. The interaction reduction in the context of teleworking significantly, positively, and strongly influences professional isolation, and to a lesser extent, but significantly nonetheless, counterproductive work behaviour and employee self-regulatory capacity.

The research originality lies in expanding the theoretical contributions regarding teleworking theory by proposing a new teleworking scale based on teleworking autonomy and interaction reduction. It also contributes to the development of Self-regulatory Theory and Social Exchange Theory. From a managerial perspective, it highlights the importance of the dimensions of teleworking for the employer, as well as the effects of teleworking on task performance and contextual performance in the COVID-19 pandemic, offering helpful solutions to employers in the identification of viable solutions for the improvement of employee outcomes, and for the reduction of counterproductive work behaviour.

Keywords: Teleworking, teleworking scale, teleworking autonomy, interaction reduction, job performance, task performance, contextual performance, counterproductive work behaviour, professional isolation, self-regulatory capacity, Self-regulatory Theory, Social Exchange Theory, COVID-19.

JEL Classification: J24, J28, J81, L25, M12

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Introduction

While the crisis generated by COVID-19 propagates globally (WHO, 2021), organizations are reducing activities carried out in traditional office workspaces and encouraging employees to carry out their work from home (Belzunegui-Eraso and Erro-Garcés, 2020). Academic research suggests that swift technological processes would facilitate teleworking for white collar workers (Pratt, 1984). Technological progress has indeed facilitated the adoption of teleworking for many economic domains, and for increasingly more categories of employees and types of companies (Mayo, et al., 2016).

Before the COVID-19 pandemic, teleworking was widely adopted in the European Union in domains such as information and communication services and knowledge-intensive business services (Milasi, et al., 2021), areas where teleworking has remained an optimal solution during the pandemic (EU, 2020). During the COVID-19 pandemic, not only private companies but also public institutions have adopted teleworking, predominantly in the fields of education, financial services, and public administration (Milasi, et al., 2021). In its first manifestations, teleworking was understood to be an advantageous work arrangement, given its task performing flexibility (Pratt, 1984), and was previously studied mainly from the perspective of the hours during which the employee could carry out his activity remotely (Golden, et al., 2008; Delanoëje, et al., 2019; de Vries, et al., 2019) and less in terms of its specific characteristics. Previous academic research underlines the importance of the beneficial and disadvantageous characteristics of teleworking, with potential implications for work outcomes (Baruch, 2002; Mayo, et al., 2016; Delanoëje and Verbruggen, 2019; Delanoëje, et al., 2019; Vries, et al., 2019). This paper addresses the research gap by analysing and statistically testing the implications of teleworking and its two-dimensional characteristics on professional isolation, job performance and counterproductive behaviours. It also highlights the link between teleworking and employees' self-regulatory locomotion, which has not been studied previously.

The aim of the research is to analyse the impact of teleworking, in the context of the COVID-19 pandemic, on job performance and counterproductive work behaviours. In conducting this research, it was necessary to elaborate, based on the literature (Delanoëje, et al., 2019), on a teleworking scale founded on its benefits and characteristics, and to identify the direct relations between teleworking dimensions and job performance, along with counterproductive work behaviour (Koopmans, et al., 2013; Nemțeanu and Dabija, 2021). It was also necessary to identify indirect relations through mediating constructs, such as employee self-regulatory capacity (Allen, et al., 2003) and professional isolation (Golden, et al., 2008).

The paper consists of an introduction, followed by a literature review, hypothesis, and conceptual model development. The third section presents the research context, methodology, and design (operationalisation and validation of the research instrument, sample structure, validating the conceptual model). Results are then presented and discussed, highlighting the originality of the paper. The final section presents the theoretical and managerial implications, followed by limitations and future research perspectives.

1. Literature review

1.1. Teleworking

Work performed outside the traditional office workspace has been approached by means of its manifestations, namely teleworking (Mayo, et al., 2016; Delanoëje and Verbruggen,

2019; Delanoeije, et al., 2019; de Vries, et al., 2019) or remote working (Golden and Gajendran, 2019; Golden and Eddlestone, 2020). Only companies from the service sector of telecommunications or the design and development of IT products have traditionally offered employees the option of partial or integral teleworking (Mayo, et al., 2016). However, Spring 2020 engendered an unpredictable factor, namely the current COVID-19 pandemic, which forced organizations from most sectors to change their traditional paradigm and resort to teleworking (Belzunegui-Eraso and Erro-Garcés, 2020). The adoption of teleworking within other sectors (Baert, et al., 2020) was imposed to abide with social distancing norms between employees in various industries. Predominantly within the service sector, but also in the production sectors, administrative personnel have migrated towards teleworking (Belzunegui-Eraso and Erro-Garcés, 2020).

Teleworking has its advantages and disadvantages (Sardeshmukh, et al., 2012; Delanoeije, et al., 2019; de Vries, et al., 2019). The option to work remotely may contribute to increased work autonomy, satisfying employees (Baruch, 2002), and generating an increase in performance (Golden and Gajendran, 2019). Enhanced autonomy in the planning of activities (Gajendran and Harrison, 2007) leaves employees with more time to spend with their families (Dima, et al., 2019). In this manner, employees can strike a favourable work-life balance (Greer and Payne, 2014). Independence in task completion, and flexibility in allocating time for work (Gajendran and Harison, 2007) converge in what can be called teleworking autonomy.

Teleworking entails reduced interaction with co-workers and supervisors due to physical distancing (Golden, et al., 2008). When working from offices, employees constantly interact in their breaks, during meetings and work activities by means of formal and informal information exchanges. Through teleworking, this interaction is drastically reduced (Sardeshmukh, et al., 2012). The practice of teleworking over extended periods of time may generate unwanted effects on an individual level, such as professional isolation (Golden, et al., 2008), pressure from family or from supervisors regarding task completion (Delanoeije and Verbruggen, 2019), conflict in work-family relations (Delanoeije, et al., 2019) and increased stress (Song and Gao, 2020). These individual implications are reflected in work outcomes and implicitly in employee performance (Golden, et al., 2008; Golden and Gajendran, 2019), in organizational commitment and turnover intention (Gajendran and Harrison, 2007; Golden, et al., 2008). Considering the implications of teleworking on work relations with co-workers and supervisors, a second dimension of teleworking is developed, namely interaction reduction.

1.2. Employee self-regulatory capacity

Lo Destro et al. (2016) highlight the importance of employee self-regulatory capacity regarding job performance, but the way that self-regulatory capacity determines organizational results in teleworking contexts has not been previously studied. Teleworking represents the preferred means of work which lends itself best to autonomy (Baruch, 2002); while employee self-regulatory capacity is based precisely on satisfaction of the need for autonomy (Niemiec, et al., 2010). According to the Self-regulatory Theory, employee satisfaction is determined by the need for autonomy and competence, which is of critical importance for maintaining and increasing inner motivation, a decisive vector for the proactive worker. Employee submission to organizational measures which favour internalization, and which concur with autonomous self-regulation leads to the

consolidation of positive behaviours and performance, physical health, mental health, and positive outcomes (Niemiec, et al., 2010).

By studying employee behaviours, Kruglanski et al. (2000) describe the dimensions of self-regulatory capacity, namely evaluation and locomotion (or mobilization). Evaluation consists of employees' critical approach of their options which contribute to the achievement of their assumed objectives, while locomotion consists of employee movement or evolution from one stage to another, using their own psychological resources for the maintenance of such an endeavour. This process is regarded as employee psychological self-regulatory capacity (Kruglanski, et al., 2007). There are certain differences between evaluation and locomotion regarding influence on job performance – locomotion has a more significant and prominent impact on simple and complex tasks, boosting individual performance when faced with complex tasks (Lo Destro, et al., 2016). By its autonomous nature, teleworking entails the development of self-regulatory behaviour (Allen, et al., 2003; de Vries, et al., 2019). Therefore, we postulate that:

H₁: Teleworking autonomy influences employee self-regulatory capacity.

The tendency manifested by employees with high self-regulatory locomotion is to express their ideas freely, to propose solutions to complex tasks (Li, et al., 2016), and to obtain increased performance, etc. (Lo Destro, et al., 2016). Teleworking entails significant interaction reduction with supervisors and co-workers, considerably diminishing communication with them (Song and Gao, 2020; Morilla-Luchena, et al., 2021). The reduction in communicating, voicing opinions and/or turning ideas into action will negatively influence proactive employees, along with those having increased locomotion with regards to task completion (Li, et al., 2016). Therefore, we consider that:

H₂: Interaction reduction of teleworking determines employee self-regulatory capacity.

1.3. Professional isolation

Teleworking is a means of conducting work which favours the professional isolation of employees (Golden, et al., 2008; Vega, et al., 2015; Song and Gao, 2020). Professional isolation is developed by employees when interpersonal relations are lacking or significantly reduced to an unsatisfactory level, and when there is emotional stress in executing their work (Aizenberg and Oplatka, 2019). Applied to the study of professional isolation, Social Exchange Theory highlights the importance of organizational support from supervisors and co-workers through difficult circumstances to reduce counterproductive work behaviours (Kashif and Johl, 2020; Nemțeanu and Dabija, 2021), and increase job satisfaction and performance (Wikhamn and Hall, 2012). Within relational exchanges, individuals conduct a subjective cost-benefit analysis, making decisions considering the aspects which favour them best (Kashif and Johl, 2020). When employees experience professional isolation and implicitly feel that there are no more opportunities for growth (Aizenberg and Oplatka, 2019) and/or for peer support (Song and Gao, 2020), they are prone to diminish their involvement in social exchanges, with positive results for the welfare of the organization (Zainun, et al., 2020).

Work autonomy is often associated with individualism and with certain acts of employee isolationism, manifested through decision-making. Autonomous work engenders the best effects when employees can collaborate with third parties. Sometimes employees are

intentionally or unintentionally put into the position of working individually, which leads to unwanted isolation (Vangrieken, et al., 2017). Locational autonomy specific to types of remote working/teleworking can produce increased employee satisfaction, but also a sense of isolation (De Spiegelaere, et al., 2016). Based on these arguments, we propose the hypothesis:

H3: Teleworking autonomy influences professional isolation.

One of the main disadvantages of teleworking consists of reduced social interaction (Baruch, 2002). Beyond actual tasks, the interaction with co-workers and/or supervisor constitutes the main predictors of employee development (Lal and Dwivedi, 2008), while the lack of interaction generates employees' sense of professional isolation (Aizenberg and Oplatka, 2019). Therefore, we consider that:

H4: Interaction reduction in the teleworking context influences professional isolation.

1.4. Task performance

Job performance defines scalable actions as employee behaviour with outcomes which contribute positively to organizational aims (Viswesvaran, et al., 2005), and is often understood as an ensemble of behaviours and actions relevant for the achievement of organizational aims (Koopmans, et al., 2014). Job performance is addressed in organizational research (Koopmans, et al., 2014), and delineates two specific dimensions, namely task performance and contextual performance (Motowidlo and Van Scotter, 1994). Task performance entails behaviours ranging from workplace to workplace, stemming from an employee's assumed role, and included in the job description (Aguinis, 2013). Depending on the employee's position, measuring task performance may be done through technical knowledge and work productivity (Koopmans, et al., 2014). Task performance in the context of teleworking is an important topic, as it generates stress due to the use of digital tools, workplace requirements and responsibilities, and professional isolation (Golden, et al., 2008). Task performance is positively associated with work autonomy (Pulfrey, et al., 2013), and is thus valued by employees (Baruch, 2002). Employee satisfaction regarding autonomy boosts task performance and the sense of organizational belonging (De Spiegelaere, et al., 2016). A high level of autonomy, of satisfaction with acquired competences and workplace relationships positively mediates the link between supervisor support and employee performance (Chiniara and Bentein, 2016). So, we consider that:

H5: Teleworking autonomy influences task performance.

Employees who partake in increased social interaction with co-workers/supervisors tend to display greater expectations concerning future performance evaluations, being more open to receiving assistance from their colleagues (Lin and Kwantes, 2015). Teleworking may produce positive effects on employee satisfaction because employees spend more time with the family and perceive an increased autonomy and/or flexibility in their task completion. When working remotely entails carrying out activities for longer than 2.5 days per week, employee relationships with co-workers are strongly and negatively impacted (Gajendran and Harrison, 2007). Therefore, we estimate that:

H6: Interaction reduction influences task performance.

Locomotion as a dimension of employee self-regulatory capacity significantly influences job performance; thus, it is sufficient, even in the absence of evaluation, for optimal performance in the realization of simple tasks (Pierro, et al., 2018). When employees benefit from knowledge in solving complex tasks, those who boast a high level of self-regulatory locomotion obtain greater outcomes (Lo Destro, et al., 2016). Therefore, we consider that:

H7: Self-regulatory locomotion influences task performance.

The decisions of an organization's management affect employee perceptions on teleworking attractivity, and on professional isolation. The main challenges of teleworking with regards to employee performance are the following: maintaining synergy between them, replicating informal learning, and creating opportunities for interpersonal relationships (Morilla-Luchena, et al., 2021). Teleworking diminishes interpersonal interactions, thus affecting the opportunities for professional growth, and enhancing the sense of employee isolation (Golden and Eddleston, 2020). At the same time, it favours professional isolation, exerting a negative impact on job performance and a positive one on turnover intention (Aizenberg and Oplatka, 2019). Therefore, we postulate that:

H8: Professional isolation influences task performance.

1.5. Contextual performance

Contextual performance constitutes a dimension of employees' individual performance (Koopmans, et al., 2013; 2014) and, together with task performance, plays a similar role in terms of importance to attaining organizational success (de Boer, et al., 2015). Contextual performance refers to employee behaviours that do not directly influence task completion but are beneficial to overall productivity (Motowidlo and Van Scotter, 1994). This is manifested through employees' intention to take on new tasks only after the previous tasks have been accomplished, through employees' interest in updating their own knowledge, contributing to creative solutions to different problems, and through active participation in organizational meetings (Koopmans, et al., 2013; 2014). Contextual performance favours the balancing of the organizational, social, and psychological work environment, whereas task performance is linked to the technical aspect of the work done. Therefore, contextual performance is manifested on a discretionary basis, because of employee self-control (de Boer, et al., 2015).

Autonomy is positively associated with contextual performance, thus mediating the relation between authentic leadership which empowers its subordinates and their outcomes (Malik, 2018). Autonomy is addressed as the degree of freedom an employee has in making decisions to achieve their main goals or objectives; the opportunity to obtain increased autonomy results from their work environment. In the case of teleworking, the work environment facilitates employee autonomy, with increased flexibility in task completion (Gajendran and Harison, 2007). Higher control over one's work contributes to boosting contextual performance (de Boer, et al., 2015). Based on these arguments, we propose the hypothesis:

H9: Teleworking autonomy influences contextual performance.

As teleworking favours the reduction of interaction with co-workers and/or supervisors (Belzunegui-Eraso and Erro-Garcés, 2020), job performance is harmed (Golden, et al., 2008). Although teleworking eliminates the downside of commuting to and from the workplace, the relationship with co-workers, who are no longer working from the same space, is affected. Co-workers can interact synchronously only when they are connected to technological means of communication (Greer and Payne, 2014). In this manner, teleworking reduces employee ability to interact informally or converse face-to-face, thus diminishing the chances of identifying viable solutions to existing problems (Madsen, 2003). Reducing the interaction between employees engaged in teleworking has direct implications on the quality of communication within an organization (Gajendran and Harrison, 2007). Therefore, we propose the hypothesis:

H₁₀: Interaction reduction influences contextual performance.

Self-regulatory capacity is considered a predictor of contextual performance (Malik, 2018). On an emotional level, self-regulatory capacity plays a mediating role between employees' emotional intelligence and their task performance (Wu, et al., 2014). When there is pressure within an organization concerning changes in the work environment due to changes in objectives, it tends to embrace interconnected structures that are more flexible and less hierarchical to maintain performance. If the work mode changes, self-regulatory capacity becomes critical for maintaining contextual performance (Jawahar, et al., 2008). Teleworking entails a change of work environment, with varied implications concerning task completion and time management (Gajendran and Harison, 2007; Lazaroiu et al., 2020). Therefore, we propose the hypothesis:

H₁₁: Self-regulatory capacity influences contextual performance.

When teleworking becomes the best solution within an organization, professional isolation becomes the new reality for employees (Golden, et al., 2008). Because teleworking favours interaction reduction with co-workers and supervisors (Morilla-Luchena, et al., 2021), this is reflected in a lack of communication and in a changing of attitude regarding work, namely that employees will be less involved in activities, and their contextual performance will decrease (Greer and Payne, 2014). Therefore, we hypothesize:

H₁₂: Professional isolation influences contextual performance.

1.6. Counterproductive work behaviour

Counterproductive work behaviour can be shown by employees through attitudes or actions which have a negative impact on the welfare of an organization (Motowidlo and Van Scotter, 1994). Employees may complain to their co-workers or third parties regarding problems encountered in task completion, exaggerating their difficulty, and focusing predominantly on the negative aspects of received responsibilities (Koopmans, et al., 2013; 2014). When work atmosphere generates stress, in addition to leadership having a negative attitude towards the employee, increased autonomy explicitly determines the way employees relate to organizational outcomes, diminishing counterproductive work behaviour (Yael and Sheaffer, 2019; Nemțeanu and Dabija, 2021). Therefore, we consider that:

H₁₃: Work autonomy influences counterproductive work behaviour.

Although counterproductive work behaviour is associated with negative interactions towards co-workers, in teleworking situations, the decrease in productivity is met with new forms of manifestation, lack of support from supervisors thus increasing counterproductive work behaviours (Matta, et al., 2014). Therefore, we consider that:

H₁₄: Interaction reduction influences counterproductive work behaviour.

Employee self-regulatory capacity is understood as the way counterproductive work behaviours are reduced (Matta, et al., 2014). Individuals subject to stress-generating situations, who believe in their capacity to manage given tasks display a weaker predisposition to counterproductive work behaviours (Fida, et al., 2015). Therefore, we propose:

H₁₅: Self-regulatory capacity influences counterproductive work behaviour.

Teleworking as a form of implementing organizational activities often favours employee professional isolation (Vega, et al., 2015), which has significant implications concerning the development of counterproductive work behaviour (Malik, 2018). Professional isolation is considered an important predictor of counterproductive work behaviour (Kashif and Johl, 2020; Malik, 2018), which allows us to consider that:

H₁₆: Professional isolation influences counterproductive work behaviour.

Based on the literature, we propose a research model (Figure no. 1) which exhibits the influence of teleworking dimensions (autonomy and interaction reduction) on task performance, contextual performance, and counterproductive work behaviour. At the same time, it considers the mediating role of self-regulatory locomotion (Lo Destro, et al., 2016; Pierro, et al., 2018) and professional isolation (Vega, et al., 2015; Kashif and Johl, 2020).

Figure no. 1. Research model

2. Research methodology

The COVID-19 pandemic has radically changed everyone's lives, creating a new reality in terms of human resource management (Belzunegui-Eraso and Erro-Garcés, 2020). Due to the need for physical distancing to spread the reach of the virus, many organizations and institutions have resorted to teleworking (Morilla-Luchena, et al., 2021). The aim of this

research is to analyse the implications of teleworking on task performance, contextual performance, and counterproductive work behaviours among employees in the context of COVID-19. The reasoning behind the research stems from the inexistence of an effective teleworking scale, but also because teleworking contributes to an increase in positive work outcomes. The exploratory research was based on the method of inquiry and was implemented with the help of an online questionnaire operationalized according to the literature (Kruglanski, et al., 2000; Goden, et al., 2008; Koopmans, et al., 2013).

Romania is one of the many countries that decided to implement a state of emergency due to high coronavirus contagion. This has led to the adoption of teleworking, temporary leave, and employee definitive dismissals (Turnea, et al., 2020). The questionnaire was applied between June 2020 and January 2021, and respondents were informed about the confidentiality of results. Out of over 700 completed questionnaires, only 641 had no missing data, and were thus used in the analysis. Respondents were employed in foreign private companies (40.24%), domestic private companies (31.81%) and public institutions (27.92) and were teleworking during the period of the state of emergency (Table no. 1). The questionnaire contained items from Appendix 1. Respondents had to fill in the questionnaire using a 5-point Likert scale (strong disagreement/agreement).

From the 641 full-time employees, 245 (38.2%) were males and 396 (61.8%) females. Most respondents were employed in foreign private companies (24.02% women and 16.22% men). The majority were over 26 years old (57.76%) with 26.36% working in foreign private firms, 17.94% in domestic private companies and 13.26% in public institutions. 150 individuals (23.4%) had a high school degree, and 491 (76.6%) had a higher education degree. 95 respondents (14.8%) earned under 1356 RON, 271 (42.3%) between 1,347 and 3,182 RON (33.9%), 217 (33.9%) between 3,183 and 6,364, and 58 (9%) over 6,364 RON.

Table no. 1. Sample structure

	Foreign private company		Domestic private company		Public institution		Total	
	n	%	n	%	n	%	n	%
Women	154	24.02	113	17.62	129	20.12	396	61.78
Man	104	16.22	91	14.19	50	7.8	245	38.22
Over 41 years	20	3.90	43	6.70	49	7.64	117	18.25
26-40 years	64	9.98	46	7.17	45	7.02	155	24.18
Under 26 years	169	26.36	115	17.94	85	13.26	369	57.56

Model 1 was calculated with the help of structural equation analysis, using smallest partial squares method in the SmartPLS3.0 software, in a two-step approach. Firstly, the measurement of the model was evaluated to determine the reliability and validity of the operationalized scales (Table no. 1). Secondly, the relations between the latent constructs were validated. Furthermore, a confirmatory factor analysis was conducted, which evaluated the validity and reliability of the external model. The results (see Appendix) highlight the existence of internal consistency corresponding to the model from Figure no. 1 – item loadings exceeded 0.7; Cronbach Alpha's is higher than 0.7; all average variance extracted values are below (AVE)>0.5; and composite reliability values are greater than 0.7 (Hair, et al., 2010; Henseler and Sarstedt, 2013).

3. Results and discussion

According to the Fornell-Larcker procedure (1981), for each latent variable AVE's value is higher than the correlation coefficient between the competent and all distinct variables (table no. 2). We tested the interitem collinearity with variance inflation factor (VIF). VIF values ranged between 1.704-2.612, therefore the threshold of 3.3 is fulfilled (Diamantopoulos and Siguaw, 2006). The VIFs of the inner model were tested, the highest value is 2.084 (PSI→CPF), which indicates that there is no multicollinearity problem. For hypothesis testing, the bootstrap procedure was applied to assess the relationship between the latent variables. Based on t-statistics, 12 of the 16 hypothesizes were accepted (Table no. 3).

Table no. 2. Discriminant validity analyses

Construct	CPF	CWB	IAR	PSI	SRL	TPF	TWA
CPF	0.788						
CWB	-0.121	0.856					
IAR	-0.005	0.296	0.777				
PSI	-0.011	0.213	0.712	0.778			
SRL	0.582	-0.240	0.037	0.077	0.784		
TPF	0.652	-0.162	0.001	-0.022	0.577	0.824	
TWA	0.070	0.144	-0.236	-0.262	0.100	0.061	0.919

Note: CPF: Contextual performance perform; CWB: Counterproductive work behaviour; IAR: Interaction reduction; PSI: Professional isolation; SRL: Self-regulatory locomotion; TPF: Task performance; TWA: Teleworking autonomy.

Table no. 3. The path coefficients of the structural equation model

Paths	Path Coefficients	Standard Deviation	T-Value	P-Value	Hypotheses
TWA→SRL	0.115	0.050	2.321	0.010**	H₁ -Supported
IAR→SRL	0.064	0.046	1.396	0.081*	H₂ -Partially Supported
TWA→PSI	-0.099	0.032	3.107	0.001***	H₃ -Supported
IAR→PSI	0.689	0.023	30.424	0.000***	H₄ -Supported
TWA→TPF	-0.014	0.036	0.382	0.351 ^{n.s.}	H₅ -Not Supported
IAR→TPF	0.052	0.044	1.178	0.119 ^{n.s.}	H₆ -Not Supported
SRL→TPF	0.585	0.036	16.269	0.000***	H₇ -Supported
PSI→TPF	-0.107	0.046	2.335	0.010**	H₈ -Supported
TWA→CPF	-0.003	0.037	0.077	0.469 ^{n.s.}	H₉ -Not Supported
IAR→CPF	0.027	0.050	0.544	0.293 ^{n.s.}	H₁₀ -Not Supported
SRL→CPF	0.587	0.034	17.462	0.000***	H₁₁ -Supported
PSI→CPF	-0.076	0.051	1.488	0.068*	H₁₂ -Partially Supported
TWA→CWB	0.268	0.038	6.966	0.000***	H₁₃ -Supported
IAR→CWB	0.310	0.051	6.140	0.000***	H₁₄ -Supported
SRL→CWB	-0.285	0.037	7.773	0.000***	H₁₅ -Supported
PSI→CWB	0.085	0.052	1.637	0.051*	H₁₆ -Partially Supported

Note: * $p < 0.1$; ** $p < 0.01$; *** $p < 0.001$; ^{n.s.} not significant relation; TWA: Teleworking autonomy; IAR: Interaction reduction; SRL: Self-regulatory locomotion; PSI: Professional isolation; TPF: Task performance; CPF: Contextual performance perform; CWB: Counterproductive work behaviour.

For the **H₁** hypothesis, the results ($\beta=0.115$; T-value=2.321; $p<0.01$) indicate a positive and significant effect between teleworking autonomy and self-regulatory locomotion, which confirms previous results regarding the link between these concepts (Allen, et al., 2003), so that **H₁** can be accepted. **H₂** is based on the supposition that interaction reduction influences self-regulatory locomotion. The results ($\beta=0.064$; T-value=1.396; $p<0.1$) illustrate that between these dimensions there is a weak and positive link which allows the partial support of **H₂**. This explains the behaviour of employees who must manage work tasks without benefitting from the same level of informal support from co-workers and who must mobilize internal resources in the shape of self-regulatory locomotion to accomplish assumed tasks (Kruglanski, et al., 2000; Pierro, et al., 2018). Work autonomy highlights a weak and negative impact on professional autonomy ($\beta=-0.099$; T-value=3.107; $p<0.001$), which allows the validation of **H₃** hypothesis. Work autonomy is perceived as an advantage from an employee perspective because they benefit from a pleasant work-life balance; professional isolation is counterbalanced by the flexibility of this work mode (Baruch, 2002; de Vries, et al., 2019). Interaction reduction has a strong and positive impact on professional isolation ($\beta=0.689$; T-value=30.424; $p<0.001$), thus allowing the acceptance of **H₄**. The result is in alignment with de Vries et al. (2019), who conclude that reduced interaction due to teleworking leads to professional isolation. Due to reduced interaction with supervisors or co-workers, employees feel limited in their own development, isolated from growth opportunities and continuous training (Aizenberg and Oplatka, 2019).

The results ($\beta=-0.014$; T-value=0.382; $p=0.351$) indicate the fact that teleworking autonomy has no significant impact on task performance, so that hypothesis **H₅** is rejected. This counteracts the conclusions stated by Pulfrey et al. (2013) and Chiniara and Bentein (2016), who consider that autonomy constitutes a predictor of job performance. In the context of teleworking, the results differ: teleworking does not contribute to enhancing task performance. Interaction reduction has no significant influence on task performance ($\beta=0.052$; T-value=1.178; $p=0.119$), which rejects **H₆**. This result differs from the conclusions provided by the literature (Lin and Kwantes, 2015), which illustrate a strong link between employee interaction with co-workers and supervisors and task performance. During the pandemic, the effects of teleworking are different. The results ($\beta=0.585$; T-value=16.269; $p<0.001$) indicate a strong influence of self-regulatory locomotion on task performance, so that **H₇** is supported. Professional isolation exerts a significant negative influence on task performance ($\beta=-0.107$; T-value=2.335; $p<0.01$), thus facilitating the validation of **H₈**. We consider that the dimensions of teleworking do not directly affect task performance. The self-regulatory capacity is thus determined by autonomy and contributes to the enhancement of task performance (Lo Destro, et al., 2016). The negative effects of professional isolation agree with Golden et al. (2008).

Teleworking autonomy ($\beta=-0.003$; T-value=0.077; $p=0.469$) and interaction reduction ($\beta=0.027$; T-value=0.544; $p=0.293$) have no significant influence on contextual performance; therefore, hypotheses **H₉** and **H₁₀** are rejected. Contextual performance is positively and significantly influenced by self-regulatory locomotion ($\beta=0.587$; T-value=17.462; $p<0.01$), **H₁₁** thus being accepted. Wu et al. (2014) and Malik (2018) reached a similar conclusion, namely that through self-regulatory locomotion, employees can mobilize from one psychological state to another to achieve their goals, thus obtaining increased contextual performance. Contextual performance is negatively and significantly determined by professional isolation ($\beta=-0.076$; T-value=1.488; $p<0.1$), which supports **H₁₂**. Professional isolation, as a negative effect of teleworking, has been described by de Vries et

al. (2019) and Greer and Payne (2014), who confirm the negative effects of the employee's state on contextual performance. Although these two dimensions of teleworking represent a new context, the literature (Golden and Gajendran, 2019) considers them predictors of performance. Because of the pandemic, their role is insignificant, probably due to respondents' slightly different perceptions on what working remotely means.

Teleworking autonomy ($\beta=0.268$; T-value=6.966; $p<0.001$) and interaction reduction ($\beta=0.310$; T-value=6.140; $p<0.001$) exert a strong, positive, and significant influence on counterproductive work behaviour, which allows for the acceptance of **H₁₃** and **H₁₄**, while self-regulatory locomotion ($\beta=-0.285$; T-value=7.773; $p<0.001$) exerts a strong, negative and significant influence on counterproductive behaviour, which leads to the validation of **H₁₅**. Professional isolation ($\beta=0.085$; T-value=1.637; $p<0.1$) exerts a weak, positive and moderate influence on counterproductive work behaviour, which allows for the partial acceptance of **H₁₆**. The dimensions of teleworking enhance the counterproductive work behaviours – autonomy contributes to the increase in work performance (Chiniara and Bentein, 2016), but the stress-generating conditions favour organizational results opposed to performance, leading to counterproductive work behaviours (Yael and Sheaffer, 2019). Interaction reduction contributes to the development of counterproductive work behaviours, which has been proven by Matta et al. (2014).

Goodness-of-fit indices of the model highlight an acceptable level, the SRMR indicator with the value of $0.074<0.08$ meeting the required exigence threshold. Teleworking autonomy and interaction reduction explain 1.4% of self-regulatory locomotion variance ($R^2=0.014$) and 51.6% of professional isolation variance ($R^2=0.516$), and 33.9% of task performance variance ($R^2=0.339$) is explained by self-regulatory locomotion, teleworking autonomy, interaction reduction and professional isolation. 34.3% of contextual performance variance ($R^2=0.343$) is explained by self-regulatory locomotion, teleworking autonomy, and professional isolation, and 21.7% of counterproductive work behaviour variance ($R^2=0.217$) is explained by self-regulatory locomotion, teleworking autonomy, interaction reduction and professional isolation. (Figure no. 1).

Teleworking brings with it both advantages (Golden and Gajendran, 2019) and disadvantages (Delanoeije, et al., 2019), which, according to the obtained results, imply different effects regarding work at the office, in the presence of co-workers and supervisors, and regarding remote working in the context of the pandemic. Work autonomy in the context of the pandemic, namely working remotely, differs from the traditional context, when it contributes to the increase in job performance (Chiniara and Bentein, 2016; Malik, 2018). In the pandemic context, work autonomy exerts no influence on job performance, but contributes to the development of counterproductive work behaviours. Teleworking autonomy contributes positively to employee self-regulatory locomotion, an aspect which was signalled also by the literature (Niemic, 2010), which considers that self-regulation has, as its main aim, to fulfil the need for autonomy, and self-regulation refers to the way the employee manages his or her resources to achieve work objectives (Pierro, et al., 2018). The originality of our endeavour consists of statistical testing of the link between autonomy and self-regulatory locomotion; its effect is positive and significant. At the same time, teleworking autonomy has a negative, statistically significant influence on professional isolation. Although this relationship has never been tested in the literature, the idea that autonomy is a component of teleworking persists, and is thus perceived positively by the employee, while professional isolation is perceived negatively by the employee (De Spiegelaere, et al., 2016).

We are surprised by the fact that interaction reduction has no direct significant influence on task performance and contextual performance, especially when Golden et al. (2008) conclude that interaction reduction with the supervisor could have a significant influence on job performance, mediating ($\beta=0.21$) the relation between professional isolation and job performance. Interaction reduction with co-workers and supervisors enhances counterproductive work behaviours, especially in the form of irregular and frequent breaks in teleworking, due to the lack of interaction, or to the impact of ostracism by ignoring or isolating the employee (Kashif and Johl, 2020). The originality of our endeavour consists of the statistical testing of the relation between interaction reduction in the context of teleworking in the pandemic and self-regulatory locomotion; the results confirm that in the absence of co-worker/supervisor support, employees must be capable of mobilizing through self-regulatory locomotion to accomplish their tasks (Pierro, et al., 2012; 2018). Interaction reduction contributes to the development of the sense of professional isolation, an aspect which was also stated by Golden et al. (2008). Pierro et al. (2018) confirm the strong link between locomotion as a dimension to self-regulatory capacity and task performance and contextual performance; this link is statistically significant ($\beta=0.33$), an aspect which was addressed in our research. The analysis confirms the conclusions of Golden et al. (2008) concerning the negative influence of professional isolation on task performance and contextual performance.

Conclusions

From a theoretical perspective, this paper brings an original contribution in expanding the studies based on Self-regulatory Theory and Social Exchange Theory, to propose a new bidimensional teleworking scale consisting of teleworking autonomy and interaction reduction. It also statistically tests, within the crisis context of the pandemic, the relations between constructs (teleworking autonomy, interaction reduction, locomotion, professional isolation, task performance, contextual performance and counterproductive work behaviour) which are inexistent in the literature. From the perspective of Self-regulatory Theory, the role of employee self-regulatory locomotion is highlighted in increasing job performance and in decreasing counterproductive work behaviours in the context of teleworking. From the perspective of Social Exchange Theory, the impact of the lack of interaction and support from supervisors and/or co-workers is stressed in diminishing counterproductive work behaviours. The research highlights the mediating role of professional isolation between teleworking and counterproductive work behaviour.

Through the lens of the new bidimensional teleworking scale, the autonomy component of teleworking leads to the increase in employee self-regulatory locomotion, and to the development of counterproductive work behaviour. Professional isolation is negatively influenced by teleworking autonomy among employees; teleworking autonomy is perceived as a positive result of this work mode, allowing the flexibility of organizing one's time and conducting one's tasks in the best conditions. The second dimension proposed by teleworking, namely interaction reduction, has no impact on job performance, but it determines counterproductive work behaviours. Insufficient interaction with the supervisor contributes to the enhancement of professional isolation, favouring counterproductive behaviours. The obtained result confirms the approaches in the literature which underline the negative impact of reduced interaction on enhancing professional isolation, described as the lack of growth opportunities due to a lack of informal interaction or mentoring.

From a managerial lens, the paper clearly highlights the fact that teleworking in the context of the pandemic may generate counterproductive work behaviours, professional isolation, and a decrease in employee performance regarding assumed tasks and duties. Employers can diminish the negative impact of teleworking by counselling their employees, by offering their support on task completion, by relaxing the deadlines on completion, and through specific measures, which could involve, for instance, offering time off or encouraging employees to take recreation and socialize in private with their co-workers. Recognizing the challenges that employees are faced with early on and counteracting them constitute the most important managerial desideratum during the pandemic. Through the obtained results and literature review, the paper offers some solutions in this respect.

Among the limitations, we mention the fact that the evaluation of teleworking and its implications was done in only one country. International comparability of the impact of teleworking may differ because quarantine conditions, physical distancing and remote working conditions have been different between countries and industries since March 2020. Among future research perspectives, there could be replication of the study with the view of determining the feasibility of the proposed teleworking scale in other social and economic contexts and in different areas of activity. The complex problem of teleworking could be correlated with the impact of the conflict of work-life balance, with job satisfaction and with turnover intention.

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Appendix no. 1. Scale reliability for the used constructs

Construct	Item	Measure	Loading	α /AVE /CR
Self-regulatory, locomotion Kruglanski, et al., 2000	SLR1	When I commit to a task, I persevere until I achieve it.	0.797	0.844/
	SLR2	I achieve what I set my mind to.	0.805	0.615/
	SLR3	I feel excited just before I am about to reach a goal.	0.748	0.889
	SLR4	I enjoy actively doing things, more than just watching, and observing.	0.739	
	SLR5	I am a doer.	0.829	
Teleworking Autonomy*	TWA1	Teleworking facilitates an improvement in my performance and productivity.	0.912	0.815/
	TWA2	Teleworking satisfies my need for work autonomy.	0.925	0.844/ 0.915
Interaction reduction*	IAR1	Teleworking involves a higher level of stress specific to household environment.	0.768	0.869/
	IAR2	When I work from home my chance to influence others decreases significantly.	0.796	0.604/ 0.901
	IAR3	Teleworking engenders job insecurity.	0.734	
	IAR4	Working from home (teleworking) offers fewer career growth opportunities.	0.758	
	IAR5	Teleworking determines me to detach myself from social interaction.	0.756	
	IAR6	Teleworking contributes to my distancing from friends and acquaintances.	0.847	
Professional Isolation Golden et al. (2008)	PRI1	Teleworking makes me feel left out regarding activities, meetings, and/or opportunities that could improve my career prospects.	0.728	0.892/
	PRI2	I feel like I am missing out on learning opportunities from others.	0.778	0.606/ 0.915
	PRI3	Teleworking makes me feel alone.	0.829	
	PRI4	Teleworking makes me distance myself from others.	0.825	
	PRI5	I miss direct contact, face-to-face, with other workmates.	0.764	
	PRI6	Working from home makes me feel isolated.	0.781	
	PRI7	I miss emotional support from workmates.	0.740	
Task Performance Koopmans, et al., 2013	TPF1	I managed to plan my work so that it was done on time.	0.827	0.843/
	TPF2	My planning was optimal.	0.823	0.679/
	TPF3	I kept in mind the results that I had to achieve in my work.	0.834	0.894
	TPF4	I was able to separate main issues from side issues at work.	0.811	
Contextual Performance Koopmans, et al., 2013	CPF1	I started new tasks myself when my old ones were finished.	0.764	0.877/
	CPF2	I took on challenging work tasks, when available.	0.742	0.621/
	CPF3	I worked at keeping my job knowledge up to date.	0.833	0.907
	CPF4	I worked at keeping my job skills up to date.	0.827	
	CPF5	I came up with creative solutions to new problems.	0.803	
	CPF6	I kept looking for new challenges in my job.	0.752	
Counterproductive work behaviour Koopmans, et al., 2013	CWB1	I talked to colleagues about the negative aspects of my work.	0.828	0.818/
	CWB2	I made problems bigger than they were at work.	0.846	0.733/
	CWB3	I focused on the negative aspects of a work situation, instead of on the positive aspects.	0.892	0.891

Note: * own development; α – Cronbach Alpha > 0.7; AVE – Average Variance Extracted > 0.5; CR – Composite Reliability > 0.5 (Hair, et al., 2010; Henseler and Sarstedt, 2013)