

Forum: Practical Perspectives

Influences of technical support and management controls on the performance of teleworking tasks

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This study looked at the influence of action and results management controls on the relationship between technical support for teleworking and task performance and goal congruence. The data was collected through a single-entity survey of 468 civil servants from a unit of Justice and analyzed using structural equations. The findings show that technical support for teleworking positively influences action and results controls, task performance, and goal congruence. It was found that action controls positively influence task performance and goal congruence, while outcome controls only directly or through mediation influence goal congruence. It appears that results controls do not affect task performance because they need to be revised to align them with the teleworking context or, alternatively, that civil servants do not need this type of control to perform well.


Keywords: teleworking; action controls; result controls.

Influências do suporte técnico e dos controles gerenciais no desempenho de tarefas no teletrabalho

Este estudo verificou as influências dos controles gerenciais de ação e de resultado na relação entre suporte técnico ao teletrabalho, desempenho de tarefas e congruência de objetivos. Os dados foram coletados por meio de uma *survey single entity*, com 468 servidores de um órgão de Justiça, e analisados por meio de equações estruturais. Os achados mostram que o suporte técnico ao teletrabalho influencia positivamente os controles de ação e de resultado, o desempenho de tarefas e a congruência de objetivos. Evidenciou-se também que os controles de ação interferem positivamente no desempenho de tarefas e na congruência de objetivos, enquanto os controles de resultado influem, de forma direta ou por mediação, apenas na congruência de objetivos. Depreende-se que, os controles de resultado não afetam o desempenho de tarefas, pois precisam de revisão para alinhamento ao contexto de teletrabalho ou, alternativamente, que os servidores não precisam desse tipo de controle para apresentar bons desempenhos.

Palavras-chave: teletrabalho; controles de ação; controles de resultado.

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Influencias del soporte técnico y los controles de gestión en el desempeño de las tareas de teletrabajo

Este estudio analizó la influencia de los controles de gestión de acciones y resultados en la relación entre el apoyo técnico al teletrabajo, el desempeño de tareas y la congruencia de objetivos. Los datos se recogieron mediante una encuesta a 468 funcionarios de un órgano judicial y se analizaron mediante ecuaciones estructurales. Los resultados muestran que el apoyo técnico al teletrabajo influye positivamente en los controles de acción y de resultados, en el desempeño de tareas y en la congruencia de objetivos. También se evidenció que los controles de acción influyen positivamente en el desempeño de tareas y en la congruencia de objetivos, mientras que los controles de resultados solo influyen directamente o a través de la mediación en la congruencia de objetivos. Se infiere que los controles de resultados no afectan al desempeño de tareas porque necesitan ser revisados para adecuarlos al contexto del teletrabajo o, alternativamente, que los funcionarios no necesitan este tipo de control para presentar buen desempeño.

Palabras clave: teletrabajo; controles de acción; controles de resultados.

1. INTRODUCTION

Teleworking consists in performing professional activities remotely, through Information and Communication Technologies (ICTs), so that the results of work are obtained in a different location than the employer organization's headquarters (Santos et al., 2022). Thus, teleworking imposes on the employer the burden of controlling work hours and productivity, as the employee is not under the face-to-face supervision of their superiors.

Thus, it is the organization's responsibility to use mechanisms to encourage individuals to achieve goals and the necessary alignment to the organizational strategies (Santos, 2010). Therefore, management needs to use control that allows the organization to direct and monitor individual performance in order to obtain the best organizational performance (Anthony & Govindarajan, 2007). Thus, in order for employees' behavior to add value to a business, it is essential that employees receive motivation to achieve the organizational goals, i.e., that there is congruence between the goals of individuals and those of the organization.

In this context, it is important to investigate whether the technical support offered to teleworkers affects both task performance and goal congruence and whether this relationship is influenced by the presence of management controls, such as action and result controls. We emphasize these two types of control because the former aims to ensure that individuals perform permitted actions and/or prevent undesired ones, and the latter consists in checking the achieved results compared to the planned ones (Merchant & Van der Stede, 2017).

Given the above, this study attempts to answer: what influence do management action and result controls have on the relationship between technical support to teleworking, goal congruence, and task performance? Based on a survey with 468 responses, it was observed that technical support to telework positively influences action and result controls, task performance, and goal congruence. In addition, action controls positively influence task performance and goal congruence, while result controls influence, whether directly or by mediation, only goal congruence.

This study provided contributions from an empirical and a theoretical perspective. From the empirical perspective, it collaborated with public managers so they might pay attention to technical support, considering aspects beyond technology, such as staff training, the security of processes and activities, and the accessibility and transparency of activities in order to provide efficient services that are aligned with the needs of society and can influence employees' task performance and goal congruence. From a theoretical perspective, it helped to identify the types and configurations of management control that result in higher organizational and employee performance (Santos

et al., 2022). This also helps to ensure that operations occur as planned, whether through face-to-face work or teleworking.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

2.1. Teleworking and result and action controls

For teleworking to be effective, it is essential to adopt best management practices, such as creating an appropriate working environment and providing appropriate technology. In addition, it is necessary to provide telecommunication support, implement procedures to evaluate performance, provide training, and monitor employees' work performance (Santos et al., 2022). More than providing efficiency, agility, and information access for executing activities, the use of ICTs should act as a support for teleworkers. Thus, technical support for teleworking, understood as assistance for troubleshooting connectivity, hardware, and software problems, among others (West, 2017), is very important.

In this context, the implementation of management control can ensure the integrity of the organization's internal processes and sensitive information. Such control derives from predefined procedures, which include a range of activities directed for managers to exert influence on their subordinates, as well as aiming at adherence to strategies (Merchant & Van der Stede, 2017; Santos et al., 2022), and comprising several activities, such as planning, coordination, communication, evaluation, and decision making, which act on individual behavior (Anthony & Govindarajan, 2007).

Merchant and Van der Stede (2017) propose four types of management control (result, action, personal, and cultural), but in this study, we will highlight only action and result controls.

Action controls act directly on employee behavior, through supervision and guidance, restricting unwanted actions and ensuring the behavior that is expected for the benefit of the organization (Merchant & Van der Stede, 2017; Santos et al., 2022). Result controls are drivers of employee behavior, and they aim to boost employee motivation and efficiency through incentives and rewards for good results, or to cause punishments for lack of compliance with organizational objectives (Merchant & Van der Stede, 2017). These two controls allow the organization to monitor employee performance so that good results derive from actions and processes according to corporate objectives (Borman & Motowidlo, 1997).

Based on the above, the following hypothesis is proposed:

H₁: Technical support for teleworking positively influences an organization's (a) action controls and (b) result controls.

2.2. Teleworking, task performance, and goal congruence

In the context of teleworking, it is essential to have adequate planning of tasks, practices, processes, and communication, considering the integration with the organizational culture, as well as the technological and support structure provided (Oliveira & Pantoja, 2021). In this conjuncture, control is exercised through the individualized engagement that comes from work flexibility (Alves, 2008), which encompasses aspects in which the individual is considered the source of their own productivity, affecting their performance in executing tasks and the congruence of their goals with those of the organization.

Task performance includes behaviors necessary for the execution of the responsibilities assigned to the employee, which are agreed to in the description of the organizational roles. It involves the direct involvement of the worker in practical activities in the process of obtaining results for the organization (Borman & Motowidlo, 1997). In turn, goal congruence refers to the adjustment between the goals of individuals and those of the organization, with a direct impact on the attitudes and behavior of employees, which reveals a positive relationship with satisfaction and commitment, as well as the reduction of intentions to leave the organization (Supeli & Creed, 2014), in addition to associating assertive goals with the individual's performance.

Anthony and Govindarajan (2007) argue that the congruence between personal and organizational goals is achieved when the actions taken by individuals are in conformity with their own interests and the interests of the organization. Hence the importance of incentives to individuals, in order for them to act according to the inclinations and goals established by the organization, assuming that they have knowledge of these goals and organizational performance criteria (Anthony & Govindarajan, 2007). Therefore, we believe that task performance positively influences goal congruence, while both are influenced by technical support.

Thus, the following hypotheses are proposed:

H₂: Task performance positively influences goal congruence between an individual and their organization.

H₃: Technical support for teleworking positively influences (a) task performance and (b) goal congruence between an individual and their organization.

2.3. Action and result controls, task performance, and goal congruence

Action controls consist of behavioral restrictions, responsibility for actions, and prior approval, which are used to motivate specific behaviors in the organization (Santos et al., 2022). They directly influence individuals' attitudes, ensuring actions recognized as beneficial (or harmful) to the organization (Merchant & Van der Stede, 2017; Santos et al., 2022). When implemented, action controls allow for the best fit between individuals and the organization and, consequently, they allow goal congruence (Merchant & Van der Stede, 2017). In addition, action controls also stimulate better performance and greater alignment between personal and organizational goals.

In light of the above, the following hypothesis is proposed:

H₄: Action controls positively influence (a) task performance and (b) goal congruence between an individual and their organization.

Result controls are used to monitor the behavior of individuals at various organizational levels, in addition to contributing to their training (Merchant & Van der Stede, 2017). Once directed to changing the behavior of individuals, encouraging their motivation and efficiency, result controls provide preventive benefits, since employees are informed of what is expected of them, and thus they feel encouraged to produce the desired results (Merchant & Van der Stede, 2017), although rewards in the public sector are limited (Santos et al., 2023). Moreover, these controls motivate employees, through behaviors that maximize their chances of recognition and reward, even without direct supervision.

Thus, the following hypothesis is proposed:

H₅: Result controls positively influence (a) task performance and (b) goal congruence between an individual and their organization.

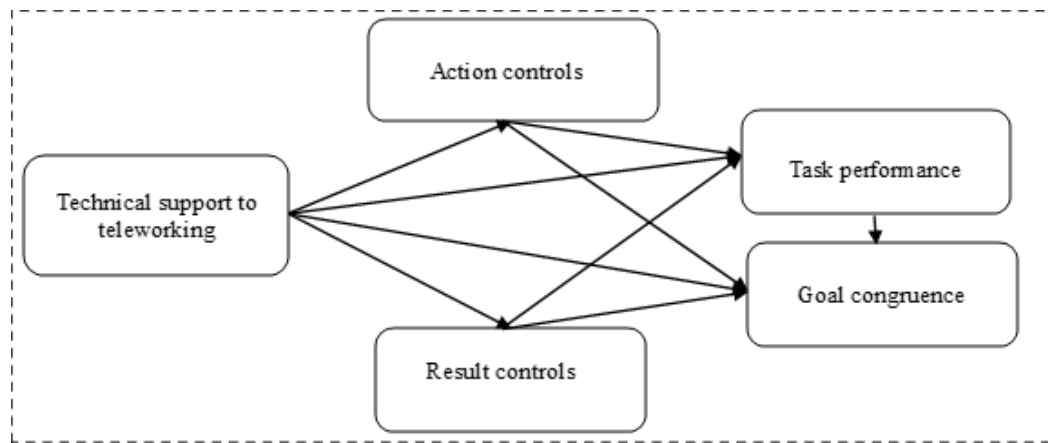
It is evident in the literature that the design and use of management systems are relevant to generate individual and organizational results, including in Brazil (Santos et al., 2022; Vesco & Beuren, 2023). Management control in the context of teleworking can optimize goal congruence (Santos et al., 2022) and task performance. Similarly, the technical support provided by the organization tends to ensure that employees perform their roles efficiently, securely, and without interruption. Thus, the following hypotheses are proposed:

H₆: Action controls mediate the relationship between technical support and teleworking and (a) task performance and (b) goal congruence of an individual and their organization.

H₇: Result controls mediate the relationship between technical support and teleworking and (a) task performance and (b) goal congruence of an individual and their organization.

The hypotheses having been described; the conceptual model is presented in Figure 1.

FIGURE 1 CONCEPTUAL MODEL



Source: Elaborated by the authors.

3. METHODOLOGY

This study was conducted through a single-entity survey by administering an electronic questionnaire that was through e-mail between February and April 2021. The survey sample consisted of 468 respondents who were public servants from a justice system body. Of these, 242 were males and 224 females; two did not respond; the mean age was 43.1 years, and on average, the participants had been with the organization for 13 years. Regarding education, 58.33% of the respondents had completed

non-degree postgraduate studies; 31.41% had an undergraduate degree; 6.41% had a master's degree or a Ph.D.; and 3.85% had completed high school or vocational studies. Finally, it should be noted that when the survey was administered, all respondents were teleworking full-time, due to the restrictions of the COVID-19 pandemic.

The collection instrument consisted of five constructs: Technical support for teleworking, with seven adapted questions from Haddadi and Ghafari (2012) and West (2017); task performance, with five adapted questions from Mahama and Cheng (2013) and Souza and Beuren (2018); goal congruence, with four questions adapted from Supeli and Creed (2014); the five questions for result controls and the six questions for action controls were adapted from Merchant and Van Der Stede (2017), validated by back translation procedures and two pre-tests. The constructs were answered with a five-point Likert scale that ranges from (1) I totally disagree to (5) I totally agree.

To test and analyze data, structural equation modeling was applied using SmartPLS software. This technique is recommended for the validation of relationships with estimation by partial least squares, which allows performing a series of multiple regressions simultaneously, but which are interdependent, following the structural model.

4. RESULTS AND DISCUSSION

4.1. Statistical results

The application of structural equations begins with the evaluation of the measurement model, through convergent and discriminant validity (Hair Jr. et al., 2016). In the analysis of convergent validity, the average variance extracted (AVE), composite reliability, and Cronbach's alpha were examined, with desirable values of 0.5, 0.7, and 0.7, respectively (Table 1, Panel A). Discriminant validity was examined by observing the upper loadings on the main diagonal (Fornell and Larcker matrix), as shown in Panel B (Fornell & Larcker, 1981).

TABLE 1 MODEL VALIDITIES

Panel A						
Constructs	Cronbach's Alpha	Composite Reliability	AVE	R ²	F ²	Q ²
Goal congruence	0.826	0.885	0.657	0.315	0.056	0.204
Task performance	0.885	0.921	0.744	0.421		0.314
Technical support to teleworking	0.741	0.838	0.566		0.141; 0.190; 0.199; 0.372	-
Action controls	0.858	0.904	0.702	0.164	0.022; 0.009	0.110
Result controls	0.843	0.893	0.676	0.270	0.007; 0.002	0.171
Panel B						
Variables	Goal congruence	Task performance	Technical support to teleworking	Action controls	Result controls	
Goal congruence	0.811					
Task performance	0.498	0.863				
Technical support to teleworking	0.503	0.596	0.752			
Action controls	0.432	0.416	0.407	0.838		
Result controls	0.456	0.455	0.521	0.774	0.822	

Source: Research data.

The AVE loadings are statistically significant, while the Cronbach's alpha and composite reliability indicators reached thresholds considered satisfactory, above 0.7, for all latent variables, which signals a theoretically bias-free sample (Hair Jr. et al., 2016). The model explains 42% of the public servants' task performance, according to the coefficient of determination (R²), while F² indicated a high effect of the model, according to the values suggested by Hair et al. (2016). Discriminant validity was met after excluding seven indicators, i.e., for the technical support variables (3, 5 and 6), action controls (1 and 2), result controls (3), and task performance (2).

The next step is the evaluation of the structural model performed using bootstrapping, which was processed with the generation of 3,000 different subsamples (Hair et al., 2016).

TABLE 2 STRUCTURAL RELATIONSHIPS

Structural relationship	B	t-value	p-value	Hypothesis
Technical support to teleworking -> Action controls	0.407	9.382	0.000***	H _{1a}
Technical support to teleworking -> Result controls	0.520	16.575	0.000***	H _{1b}
Task performance -> Goal congruence	0.217	4.118	0.000***	H ₂
Technical support to teleworking -> Task performance	0.413	9.348	0.000***	H _{3a}
Technical support to teleworking -> Goal congruence	0.363	6.761	0.000***	H _{3b}
Action controls -> Task performance	0.113	1.806	0.071*	H _{4a}
Action controls -> Goal congruence	0.192	2.830	0.005***	H _{4b}
Result controls -> Task performance	0.054	0.810	0.418	H _{5a}
Result controls -> Goal congruence	0.118	1.739	0.082*	H _{5b}
Technical support to teleworking -> Action controls -> Task performance	0.046	1.709	0.088*	H _{6a}
Technical support to teleworking -> Action controls -> Goal congruence	0.078	2.441	0.015**	H _{6b}
Technical support to teleworking -> Result controls -> Task performance	0.028	0.806	0.421	H _{7a}
Technical support to teleworking -> Result controls -> Goal congruence	0.061	1.747	0.081*	H _{7b}

Source: Research data.

Of the seven hypotheses, only H_{5a} and H_{7a} were not statistically significant. These results do not allow validation of the propositions that result controls have a direct or indirect influence on task performance. The validated hypotheses show that technical support to teleworking has a positive influence on task performance and goal congruence, just as action control is an important mechanism in promoting task performance and goal congruence.

4.2. Discussion

H₁ validates technical support for teleworking as having an influence on action and result controls. The findings show that the greater the technical support for teleworking, the greater the use of action and result controls, and thus they become more viable and effective (Merchant & Van der Stede, 2017; Santos et al., 2022). In turn, H₂ confirms that task performance positively influences goal congruence between the public servants and their organization, corroborating Borman and Motowidlo (1997) as to the contribution of individuals' effectiveness through their activities to the organization and, consequently, to greater goal congruence.

H₃ proposed that technical support to teleworking influences employee task performance and goal congruence, which was statistically supported. This reveals that when individuals perceive technical support's efficiency in helping them, they present higher performance, since technical support allows the completion of activities relevant to the functioning of the organization and causes the perception

that among the goals of the organization is support to employees, bringing them closer to their goals (Anthony & Govindarajan, 2007).

H_4 and H_5 indicate that both action and result controls positively influence: (a) task performance and (b) goal congruence. For H_4 , the findings reveal that action controls positively influence both task performance and goal congruence, so as to ensure that individuals act according to the interests of the organization (Merchant & Van der Stede, 2017; Santos et al., 2022). However, statistically, it was observed that result controls did not show a relationship with task performance (H_{5a}), which can be justified by the limitation of rewards in the public sector (Santos et al., 2023).

As for H_6 and H_7 , which test the mediations, the latter was not fully supported. The evidence confirms that both task performance and goal congruence, mediated by action controls, are influenced by technical support to telework (Santos et al., 2022; Vesco & Beuren, 2023). From another perspective, the findings confirm that goal congruence, mediated by result controls, is positively influenced by technical support to teleworking (H_{7b}), but the evidence for H_{7a} does not confirm that result controls mediate the relationship between technical support and task performance, also due to the absence of financial incentives to individual performance in the Brazilian public sector, given their remuneration, which is ensured by their tenured positions (Santos et al., 2023).

5. CONCLUSIONS

This study examined the influence of action and result management controls on the relationship between technical support to teleworking and task performance and goal congruence. Among the main findings, it was observed that technical support to teleworking positively influences action and outcome controls, task performance, and goal congruence; in addition, action controls positively influence task performance and goal congruence, while result controls influence, directly or through mediation, only goal congruence. This allows us to understand that result controls do not affect respondents' task performance, due to peculiarities of the organization, of the public sector, or even characteristics of the respondents.

The findings contribute for public managers to direct their attention to the alignment of configuration and the use of management control for public servants in the context of telework, especially those controls focused on results. Additionally, it is worth noting that the technical support offered by the organization to workers influences their results, so investments in this aspect can be very positive both for employees and the organization.

Among the limitations in conducting this study, it is worth highlighting the use of a method of analysis that is quantitative only, which, in future investigations, can justify, or rather, demonstrate relationships by changing the instrument and the analysis approach to qualitative methods. In addition, future studies can replicate this research in private organizations, with a view to comparing the findings between public and private organizations. With regard specifically to the variables, a need emerges to deepen result controls for public servants, regarding how these controls are perceived or how they are implemented.

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Bruna Cristina Cordova: Methodology (Equal); Project administration (Equal); Writing - original draft (Equal); Writing - review & editing (Equal).

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Alcindo Cipriano Argolo Mendes: Conceptualization (Equal); Methodology (Equal); Project administration (Equal); Writing - original draft (Equal); Writing - review & editing (Equal).

DATA AVAILABILITY

The dataset supporting the results of this study is not publicly available.

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