

Control and motivation in task performance of public servants at home office in the face of the COVID-19 pandemic

Performance of public servants at home office

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Abstract

Purpose – The purpose of the article is to analyze the influence of output control, autonomous motivation and controlled motivation on task performance of public servants at home office owing to the COVID-19 pandemic.

Design/methodology/approach – A survey was conducted based on the perception of 236 public servants, and structural equation modeling (SEM) technique was used for data analysis.

Findings – Both autonomous motivation and output control are positively and significantly related to task performance.

Research limitations/implications – The present study expands the literature with information about individual performance and management control, which can be related to the control, motivation and task performance of public servants at home office in a pandemic context.

Practical implications – The results could offer a basis for understanding how managers can deal with the challenges while at home office. They can also provide managers with information that they can use to build management strategies to foster the performance of public servants at home office.

Social implications – Home office can decrease commuting to a central workplace, alleviate traffic problems and reduce car pollution. It also allows for business continuity in the face of storms and pandemics.

Originality/value – Most studies about home office, COVID-19 and task performance have addressed personal, professional and organizational characteristics. However, little is known about the analysis of combinations of the following constructs: output control, autonomous and controlled motivations, and how both affect task performance of public servants.

Keywords Output control, Autonomous and controlled motivation, Task performance, Home office, COVID-19

Paper type Research paper

1. Introduction

The COVID-19 pandemic has caused great turmoil throughout the world. Although it is epidemiological in nature, its impact has extended beyond the health domain (Sotola, Pillay, & Gebreselassie, 2021). To prevent the spread of the virus, as a result of the thousands of confirmed cases worldwide, national and international health authorities have adopted a variety of strategies (Peci, Avellaneda, & Suzuki, 2021) and recommended the



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implementation of social distancing policies to contain the spread of the virus that causes the disease (Cunha, Domingos, Rocha, & Torres, 2021; Tabari, Amini, Moghadami, & Moosavi, 2020; World Health Organization, 2020).

After this recommendation, organizations increasingly adhered to home office since organizational workplaces may lead to large gatherings of people (Nexo Jornal Ltda, 2020). After this preventive measure was adopted, there have been changes to working time, e.g. workers perform their activities at home and work outside of working hours, i.e. they work either more or fewer hours than stated in their contract (Stirpe & Zárraga-Oberty, 2017).

For that matter, both public and private organizations have implemented home office arrangements to stop the spread of COVID-19 (Oliveira, Abranches, & Lana, 2020) and have been successful in allowing employees to balance their personal life and work activities, thus increasing the well-being of the organization (Richardson & McKenna, 2014).

At home office, job performance is important for both employees – in terms of psychological and tangible incentives – and for the organization as a whole (Sonntag & Frese, 2002), so that the latter can continue to pursue its purpose. The literature has recognized that human behavior is one of the determining factors for performance (Widener, 2007). In this context, behaviors related to autonomous motivation and controlled motivation have become a recurrent topic in business magazines.

Autonomous motivation indicates a state of nonregulation in which there is no intention or motivation to perform a behavior (Ryan & Deci, 2000). In turn, controlled motivation involves behavior resulting from perceived pressure to act in such way (Rigby & Ryan, 2018).

Task performance indicates how effectively individuals perform activities that contribute to the technical core of the organization (Borman & Motowidlo, 1993) regarding quantity, precision and quality of work performed, operational efficiency, ability to meet delivery deadlines, productivity, work planning among other aspects.

However, literature on home office brings a consensus that managers are challenged by not being able to follow the actions of workers with regard to task performance, placing more emphasis on production controls (Felstead, Jewson, & Walters, 2005; Kurland & Egan, 1999), and this assumption is in line with control theory.

Control theory is concerned with the processes used by organizations to ensure that employee actions are aligned with objectives (Snell, 1992), but it also suggests that, when direct monitoring of employees is impossible, production controls will gain importance (Eisenhardt, 1985; Snell, 1992), that is, managers will emphasize goals, performance indicators, results and employee management.

In the practice-oriented literature, different authors have claimed that autonomous motivation is linked to several positive outcomes, such as employee engagement, employee productivity and task performance (Pink, 2011). Both controlled motivation and autonomous motivation are highly volatile, but they differ primarily in the fact that autonomous motivation is based on interest and pleasure, i.e. people adopt these behaviors because they are considered engaging or even fun, whereas controlled motivations are based on a sense of *value*; people consider activities to be valuable, even if they are not enjoyable (Slemp, Field, & Cho, 2020).

From this reflection, the question is what is the influence of output control of autonomous motivation and controlled motivation in task performance of public servants at home office when facing COVID-19?

This question is the guiding principle of this study, whose objective is to analyze the influence of output control, autonomous motivation and controlled motivation on task performance of public servants at home office in the face of COVID-19. The analysis will be made based on the perception of public servants and intends to contribute to the field in three separate ways.

The first contribution is to offer potential information that is required to improve both professional autonomy and managerial control in home office activities, as well as discuss

how this information can indicate informational demands and benefits of control in the interaction among managers, employees and organizations. It also aims to provide a parameter of how motivations are related to professional performance and managerial control, by integrating previous research studies addressing the connections among home office, control, performance and motivation.

The second contribution is to show that most studies on home office and COVID-19 have focused on telework experiences, future perspectives, personal and professional characteristics (Baert, Lippens, Moens, Weytjens, & Sterkens, 2020), use of mobile technologies, complementary control system, employee autonomy and management control (Porter & Van den Hooff, 2020). On the other hand, prepandemic studies on task performance investigated role conflict, role ambiguity, emotional quotient (Amilin, 2017), performance measurement system, psychological empowerment, job satisfaction (Souza & Beuren, 2018), goal orientation, task complexity (Sanusi, Iskandar, Monroe, & Saleh, 2018), internal communication and engagement of public servants (Castanha, Beuren, & Gasparetto, 2020). Therefore, little is known about the analyses and combinations of the constructs: output control, autonomous and controlled motivations, and how last two reflect on the task performance of public servants in the context of home office in the face of the COVID-19 pandemic.

Last but not least, the third contribution is to test the hypotheses – using the findings from this research – that managers will prioritize output controls by allowing their employees to home office, when dealing with unfamiliar and adverse circumstances. If this is the case, the study will provide a foundation for deeper understanding of how managers deal with the challenges of managing workers at “home office” amid a pandemic crisis.

2. Theoretical background

2.1 Control mechanisms and home office

Performance targets are unclear and management techniques used in the private sector are often seen as inappropriate for the public sector (Boyne, 2002). However, at present, control mechanisms have gained importance in public institutions as these are supposed to work properly to make institutional governance more effective. These mechanisms are implemented with the aim of increasing efficiency, effectiveness and resource savings, reducing the risk of asset value loss and, consequently, ensuring the reliability of financial statements and compliance with current laws and regulations; in summary, they must be supported at the highest institutional level (Peña, 2014).

Control is the process of aligning the actions of employees with the interests of the organization and, when the company defines its strategic objectives, it must inevitably achieve them, with estimation and application of control mechanisms (Anthony & Govindarajan, 2007; Snell, 1992), called managerial controls (Merchant & Van der Stede, 2012) or organizational controls (Flamholtz, 1996).

In Ouchi's understanding (1979), control mechanisms are defined in formal or informal terms, and such definition includes the ways in which employees interact with one another. These control mechanisms enable various functions/activities to be carried out, including the coordination of tasks and activities in different parts of the organization (Vélez, Sánchez, & Álvarez-Dardet, 2008), and they can also influence the behavior of individuals to help them align with the organization's objectives (Lorange & Scott, 1974; Otley, 1999; Ferreira & Otley, 2009; Tessier & Otley, 2012; Langevin & Mendoza, 2013; Chenhall & Moers, 2015; Young, Du, Dworkis, & Olsen, 2016).

In this case, public organizations may apply various categories of controls, depending on their management needs, especially to define and assign tasks, providing public managers with various possibilities or mechanisms to control task performance of public servants, thus

making positive interventions towards their performance. Goal setting provides guidance for the team to perform their tasks (McDonough, 2000), thus helping them to increase commitment (Davila, 2000) and to reduce conflicting interpretations about the expected results (Zhang & Doll, 2001), which enables the execution of the organization's strategic objectives.

However, the direction of work must be flexible enough to provide space for creative problem-solving and local autonomy. In addition, strategic objectives encourage employees to undertake challenging tasks (Sundbo, 1996), especially nonroutine ones, and specific goals are established for achievement of high performance (Campbell & Furrer, 1995). Complex nonroutine tasks, including those remotely performed by public servants, pose a challenge to goal setting because performance is difficult to measure accurately (Latham & Yukl, 1975).

In this sense, high expectations are placed on team leaders, who are responsible for managing operations, leading the team, and using their ability to influence the surrounding organization. The team, in turn, must have a diverse composition in terms of cross-functional experience, attitudes and motivation for success, as well as a sufficient knowledge base to complete their work satisfactorily (Snell, 1992).

For Merchant (1982), output control is the practical manifestation of production control that links individuals to the performance of assigned tasks. According to Groen, van Triest, Coers and Wtenweerde (2018), a particular level of output control means that managers realize they have high involvement and feel responsible for achieving their goal, since performance review measures are not arbitrary. In the present study, task performance is measured using a subjective instrument that shows the perception of individual performance on the tasks of the public servants under analysis. This is the first hypothesis:

- H1.* Output control positively and significantly influences task performance of the home office worker.

Task performance can be defined as how effectively individuals perform activities that contribute to the technical core of the organization, either directly or indirectly (Borman & Motowidlo, 1993). Some research studies have been conducted to investigate the relationship between management control and employee autonomy and between the pandemic context and home office (Porter & Van den Hooff, 2020; Baert *et al.*, 2022). However, the relationship among output control, home office and task performance was not analyzed.

Porter and Van den Hooff (2020) conducted a study to understand the possibilities (and restrictions) of complementary control that arise in the use of mobile technologies by employees and managers. The studies started from a qualitative case study of the implementation and use of a mobile sales force automation tool in a multinational company. Three informational resources for control were identified, and an underlying analysis was made on how these resources were updated to improve managerial control and employee autonomy.

Baert *et al.* (2022) examined employee perceptions of various aspects in the context of the pandemic, as well as the distinction between short-term and long-term home office during the COVID-19 crisis. According to the authors, the results indicate a positive value for home office and videoconferencing. Nonetheless, the respondent employees showed some insecurity regarding this modality: they argued that if it is actually implemented, opportunities for promotion may be reduced and their ties to colleagues and employers may be weakened.

2.2 Motivations and task performance in home office

Autonomous and controlled motivations vary with respect to their fundamental regulatory processes and their concomitant experiences, generating behaviors that can be characterized by the extent to which they are autonomous or controlled (Deci & Ryan, 1985; Koestner, Otis, Powers, Pelletier, & Gagnon, 2008). Autonomous motivation is expressed in the interests and

personal values of each public servant, in the sense that these human resources endorse the importance or value of their work, and they perform their duty with intrinsic pleasure, satisfaction and desire (Fernet, Guay, Senécal, & Austin, 2012).

Sheldon and Elliot (1998) postulate that autonomous motivation consists of two psychological submotivations: intrinsic motivation and identified motivation. The former comes from a person's own interests, that is, from an individual's intrinsic interest (Deci & Ryan, 1985, 2000); the latter comes from a person's deepest beliefs and superordinate values. If individuals can relate to the importance of a behavior and believe that it benefits them in terms of achieving a goal, they feel motivated (Sheldon & Elliot, 1998; Deci & Ryan, 1985).

The behavioral approach emphasizes the human and social process by which an organization achieves its goals (Ansari, 1977). This managerial perception comes as a starting point for the approach used in this research paper when analyzing the individual task performance of public servants.

Based on the reported research, the second research hypothesis has been formulated:

H2. Autonomous motivation positively and significantly influences task performance of the home office worker.

In the literature, one occasionally finds distinct allusions to an individual's job performance. Despite recognizing the nuances concerning the different allusions, in this study the scope is referred to as task performance. According to Johari and Yahya (2016), the concern with performance at task level is important in the case of public servants as they play a fundamental role in providing public services that are adequate to society and to the achievement of objectives in institutions (Vasilieva, Rubtcova, Kaisarova, Kaisarov, & Pavlenkov, 2015).

Controlled motivation, unlike autonomous motivation, represents a state of being in the company, in which employees are compelled, by external or internal pressures, to perform tasks assigned to them (Koestner *et al.*, 2008). There are two types of controlled motivation: external and introjected.

The former is marked by environmental contingencies, such as monetary incentives and rewards, and its starting point is the involvement of employees in their activity with a view to achieving a positive result. It is often connected to external rewards such as money and praise, and avoidance of sanctions, e.g. punishment (Deci & Ryan, 1985; Sheldon & Elliot, 1998). The externally motivated individual is instrumentally motivated to achieve separate results rather than being inherent to the behavior itself.

Conversely, introjected motivation is related to the promotion of self-esteem and resistance to feelings of anxiety and guilt (Deci & Ryan, 1985). Higgins (1997) highlighted that it is connected to the so-called "self-regulation", an integrating element of the regulatory focus theory. According to Deci and Ryan (1985), individuals behave not consonant to external rewards and punishments by other people but to the way they believe others want them to behave. The third hypothesis has been formulated based on this parameter:

H3. Controlled motivation positively and significantly influences task performance of the home office worker.

Performance is represented in this study by its technical aspect (task and/or management) (Mahama & Cheng, 2013); it does not include broader social and psychological behaviors, such as personal initiative, proactivity and organizational citizenship behaviors, referred to in literature as contextual performance (Motowidlo & Van Scotter, 1994).

In the context of home office, Al-Sakkaf and Stilley (2019) conducted a study to find out what can be learned about virtual teams when they are viewed through the lens of existing performance management theories. In conclusion, the authors scored the importance of understanding work environment challenges and managerial tactics to overcome them.

In the same vein, [Na-Nan and Sanamthong \(2019\)](#) argued that the performance of workers' tasks is an important indicator that reflects the output of their work, as well as the work of departments and organizations, meeting the range of management expectations with regard to the effective performance of the organization, in which all employees fully realize their potential and deliver the expected quantity and quality. Expectation in task performance is a factor that requires high annual investment.

Higher effectiveness and organizational performance in the pandemic context, in addition to the previous elements, can be achieved by setting performance goals (daily, weekly and/or monthly) within the scope of public organizations, in line with the institution's strategic plan, and by designing customized work plans for each worker since the beginning of implementation of remote work. By means of remote work, employees had the opportunity to perform their jobs and tasks from home ([Caillier, 2012](#)). [Figure 1](#) shows the theoretical design of this research.

With the formulation of the three hypotheses, we seek to verify to what extent the emphasis on output controls, autonomous motivation and controlled motivation act in the task performance of servers in home office.

3. Research methodology

3.1 Population and sample

The sample is composed of employees of Brazilian public sector organizations at the federal and state levels. The sample was randomly selected, and we adopted a structured questionnaire composed of 26 questions divided into 7 sections as research instrument. In addition, the participants signed an Informed Consent Form, and their demographic profile was determined.

3.1.1 Sample size estimation. The minimum sample size was estimated using the software G*Power 3.1.9 (<http://www.gpower.hhu.de/en.html>) ([Faul, Erdfelder, Buchner, & Lang, 2009](#)). Effect size (f^2) was used for such calculation. [Cohen \(1988\)](#) and [Hair, Hult, Ringle and Sarstedt \(2014\)](#) recommend using a power of 0.80 and f^2 median of 0.15; the task performance construct receives three arrows (three predictors), and it is what determines the minimum sample to be used.

In the present study, total sample size was based on a minimum of 77 responses; however, a consistent model would require twice or three times as many responses, i.e. 154 or 231.

To compose this sample, a total of 1,800 questionnaires were distributed. Out of this set, 267 questionnaires were returned, 10 were incomplete and 21 from public servants who had not been granted permission to work from home were excluded. There was then a total of 236 valid questionnaires, a consistent sample, as it had more than three times the number of responses for a minimum sample.

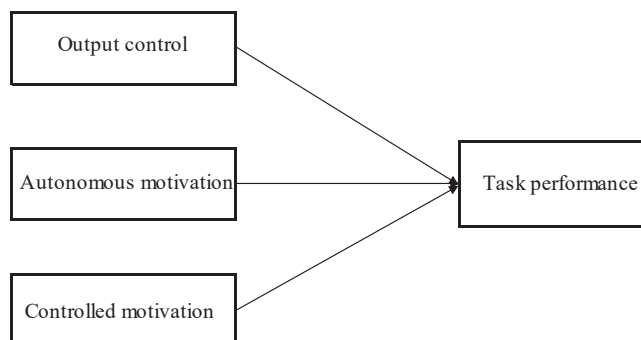


Figure 1.
Research model

To carry out face and content validation, the statements were analyzed by two researchers in the field and by two professionals to check for inconsistencies in the interpretation of each of the statements. They suggested changes to the wording of some questions. After the necessary revisions had been performed, the questionnaire was uploaded into *Google Docs* platform to be more user-friendly.

The questionnaire was sent between May and December 2020, to 1,800 public servants in the administrative sectors of Brazilian public federal and state organizations. Employees were selected based on their websites and profiles on *LinkedIn* social business network. Authors e-mailed the link to the survey instrument to the respondents via *Google Docs* as well as on *LinkedIn*.

3.2 Measurement of variables and research construct

The variables that compose the constructs were measured using a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Both [Miller \(1956\)](#) and [Wiswanathan, Sudman and Johnson \(2004\)](#) used only seven categories on the Likert scale, thus allowing the surveyed community to have a better judgment of the work developed.

[Table 1](#) shows the constructs, variables and questions of the research instrument, after adaptation from the original ones and adjustments after pretest application.

	Variables	Authors
Output control (OC)	My boss judges me especially based on my results My performance goals are previously established and written in a work plan In reviews, my boss compares my performance to pre-set goals My boss measures my effectiveness primarily with numerical scores My boss judges me by the goals I achieve, regardless of my personality If I do not achieve my objectives, I receive a lower rating My boss judges me by the goals I achieve, regardless of my capabilities	Snell (1992)
Autonomous motivation (AM)	I am enjoying working from home (home office) Working from home (home office) fulfills my career plans Working lets me achieve my life goals My job gives me moments of pleasure My job fits my personal values I have fun doing my job	Gagné et al. (2010)
Controlled motivation (CM)	My job provides me with an opportunity to earn a good salary My job gives me an excellent standard of living I perform my work on account of my earnings I must be the best at work, I must be a "winner" My reputation depends on how successful I am at work My work is my life and I do not want to fail	Gagné et al. (2010)
Task performance (TP)	I perform all the tasks that I am expected to I fulfill all essential duties I always complete all assigned tasks I participate in all activities that directly affect my performance appraisal I am always aware of the formal performance requirements of my job I always fulfill all responsibilities described in my job description I always perform all work activities that I am required to do	Williams and Anderson (1991)

Source(s): Prepared by the authors (2020)

Table 1.
Research constructs and variables

All constructs were measured using multiple items, with statements taken from previous studies. Importantly, adaptations were made to the original statements to fit them to individual and cultural levels.

3.3 Data analysis procedures

The technique that best suited this research was structural equation modeling (SEM), performed in *Smart-PLS*, to analyze the data and test the hypotheses based on partial least squares (PLS). This modeling is applied to simultaneously estimate a series of separate but interdependent multiple regression equations, by specifying the structural model (Hair *et al.*, 2014).

4. Analysis of results

4.1 Profile of respondents

To characterize the 236 respondents that compose the sample, the following personal aspects and characteristics were investigated: age (age group), schooling (education) and time working in position.

Out of the respondent sample, 37% are aged between 31–40 years, while 33% are between 41 and 50 years old; therefore, it can be inferred that they are experienced servants with solid knowledge of their professional field.

While 103 of them pursued a graduate certificate, 71 hold master’s degrees. This finding suggests that these professionals have undertaken training courses to expand their knowledge, as well as learn new skills, improve their strengths, enrich their resumé and, above all, become familiar with the most recent themes of their area of expertise. As for time working in the position, 37% have been working from 1 to 5 years; 27% from 6 to 10 years; 15% from 11 to 15 years and 21% for over 16 years.

4.2 Measurement model

Table 2 shows the four tests recommended by Hair Jr., Hult, Ringle and Sarstedt (2016), which seek to validate the measurement model (internal and composite reliabilities; convergent and discriminant validities).

As shown in Table 2, Cronbach’s alpha and composite reliability were used to assess reliability, and all constructs showed composite reliability values greater than 0.8 and Cronbach’s alpha greater than 0.70. These outcomes indicate models’ internal consistency and reliability.

Convergent validity was assessed by the average variance extracted (AVE) of each latent variable, since all AVEs are greater than 0.5 as recommended by Fornell and Larcker (1981) and Hair (2009). To test discriminant validity, the cross-loadings proposed by Chin (1998) and the criterion proposed by Fornell and Larcker (1981) were evaluated. The strength of each

Description	Composite reliability	Cronbach’s alpha	AVE	Discriminant validity			
				OS	AM	CM	TP
Output control (OC)	0.877	0.841	0.507	0.712			
Autonomous motivation (AM)	0.885	0.843	0.563	0.222	0.750		
Controlled motivation (CM)	0.831	0.722	0.557	0.218	0.207	0.747	
Task performance (TP)	0.918	0.895	0.616	0.217	0.437	0.128	0.785

Table 2. Validities of the measurement model

Source(s): Survey data (2020)

construct was verified in both tests, and there was a differential margin when constructs were compared. Results for discriminant validity showed that each AVE has greater correlation in its own construct, and they are all greater than 0.7. This confirms that the model is valid, once scales are valid in their aspects (convergent and discriminant).

Thus, by following the assumptions suggested by Hair Jr. et al. (2016), and confirming the four components – internal and composite reliability, convergent and discriminant validities – the constructs were validated, and measurement model validity was confirmed. After data analysis, the structural model was evaluated.

4.3 Structural model

The analysis of the structural model aims at checking the relationships between the constructs and the connections according to the structure of a path diagram. Such process, according to Hair et al. (2014), confirms the adequacy of the measurement model and attests to the significance of the relationships between the study constructs. To attest to the validity of the structural model, the following items were analyzed: size and significance of path coefficients, effect sizes (f^2) or Cohen’s indicator (Hair Jr. et al., 2016), and predictive relevance (Q^2) (Hair, 2009, Hair et al., 2014, 2017) or Stone-Geisser indicator – in which the values of endogenous variables must be greater than 0 – and also Pearson’s coefficient of determination (R^2).

To analyze the intensity of the structural coefficient (β), Hair (2009) suggested that (1) $\beta < 0.35$ is low; (2) β from 0.35 to 0.6 is average and (3) $\beta > 0.6$ is high. According to Cohen (2013), the size of the effect analyzed by f^2 : (1) 0.02 is small; (2) 0.15 is average and (3) 0.35 is large. Table 3 shows the relationships between the variables indicated by the path coefficients and their significance (p -value), hypotheses and f^2 .

The Q^2 test evaluates how close the model is to what was expected by prediction. The values must be greater than zero and a perfect model would have $Q^2 = 1$ (Hair et al., 2014). The following values were found for each of the constructs: output control 0.165, autonomous motivation 0.142, controlled motivation 0.094, task performance 0.118 and $Q^2 (=1 - SSE/SSO)$; these values indicate conformity in the adjusted model. The structural model was then evaluated using (1) Pearson’s coefficient of determination (R^2), whose value was 0.206, which was considered acceptable for the model.

The results indicate that output control positively and significantly influences task performance, with ($\beta = 0.123, p < 0.05$). These indications are in line with previous discussions, in which output control was shown to be associated with task performance. Richardson and McKenna (2014) found that home office workers are more pressured to meet performance objectives.

As for the output control construct, the results also show that autonomous motivation positively and significantly influences task performance of home office workers, with ($\beta = 0.406, p < 0.00$). Deci and Ryan (1985) scored that autonomous motivation, as opposed to

Hypothesis	Paths	β	Standard deviation	T test	p-value	f^2
H1	OC → TP	0.123	0.050	2.468	0.014**	0.018
H2	AM → TP	0.406	0.062	6.596	0.000***	0.192
H3	CM → TP	0.017	0.063	0.265	0.791	0.000

Note(s): 1: OC = output control; AM = autonomous motivation; CM = controlled motivation; TP = task performance

2. *** mean 1%; ** mean 5%

Source(s): Survey data (2020)

Table 3.
Path coefficients

controlled motivation, is a personal factor for each individual, i.e. they consider the purpose of an activity rather than the financial results.

It is inferred that controlled motivation, in the present study, is not an essential element, given the findings for task performance of public servants in home office ($\beta = 0.017, p > 0.05$).

Both adjusted *R*-squared (R^2 adj.) and effect size coefficient (f^2) are used for comparing different samples to analyze the impact of an independent variable on the dependent variable. As shown in Table 3 for effect size (f^2), H1 had a small effect, H2 showed an average effect and H3 showed an effect equal to 0.00.

The *t*-statistic, when above 1.96, indicates that the model can be accepted and the results, discussed. Hypothesis H3, which tests the effect of controlled motivation on task performance, did not reach the minimum value required for its influence to be discussed, while H1 and H2 showed results above 1.96.

4.4 Discussion of results

This study analyzes – based on the perception of public servants – the influence of output control, autonomous motivation and controlled motivation on task performance of public servants working at home office while facing COVID-19 crisis. It tested the assumption that managers will place more emphasis on production controls because they are not able to directly monitor the behavior of employees who work from home. This assumption is in line with control theory, as it suggests that the limited opportunity for monitoring employee behavior can be offset by an increasing emphasis on production controls (task performance) (Groen *et al.*, 2018) and output control. It also tests the influence of motivations on task performance.

Despite the sudden onset of the COVID-19 crisis, which forced employers, especially the public sectors – the object of this study – to transition to home office without being able to prepare for it, the hypothesis about output control was significant; thus, H1 was confirmed. The study conducted by Baert *et al.* (2022) reported that, during the COVID-19 crisis, more than half of the subsample felt properly advised by managers (53.2%) about task performance. Snyder (2012) pointed out that home office generally brings lower absence rate as employees can continue working from home even when they are sick and that they experience lower levels of stress as they manage their own work schedule.

The analyses also pointed to a positive and significant influence of autonomous motivation on public servants' task performance while in home office, which confirms H2. Such findings were compared to existing research and integrated into a framework developed based on the literature review, which are in line with those found in the study by Al-Sakkaf and Stilley (2019). These authors found that the following factors are related to the performance management of public servants in home office: communication of methods, work processes, personal relationships, trust-building initiatives, engagement and capacity for organizational challenges.

For example, Deci, Connell and Ryan (1989) found that managers' understanding of their subordinates' interests and perspectives, provision of managerial training and support and noncontrolling provision of relevant feedback were positively related to employee job satisfaction, trust in the organization and other positive work-related attitudes. In other locations, a 13-month longitudinal study found that autonomous motivation gave rise to substantial organizational commitment (task performance) (Gagné & Koestner, 2002).

Bono and Judge (2003) have shown that followers of transformational leaders (managers) are more likely to experience higher levels of job satisfaction and organizational commitment, as such leaders usually encourage their followers to select autonomous rather than controlled goals in order to satisfy their basic psychological needs. In short, autonomous motivation, that is, intrinsic and identified motivation, can induce optimal performance as it accurately

reflects the values and interests of employees' true egos, which allows them to fully focus on the work activity (Roelofs, 2010).

In the present study, one finding was that controlled motivation at work alone was not significant when analyzing its influence on task performance, as it presented 0.791 *p*-value, not confirming H3.

5. Conclusion

The analysis of the research findings, based on the perception of public servants, indicated that both output control and autonomous motivation proved to be significant in explaining task performance. However, controlled motivation does not directly influence task performance.

Research on home office in public administration is relatively incipient; therefore, this study can contribute to several areas of knowledge: managerial accounting and public administration, among others.

From the point of view of postpandemic work organization, the Brazilian Federal Government modernized people management to increase the efficiency of public service delivery. Normative Instruction No. 65 was published on July 30, 2020, by influence of the Ministry of Economy and the Agency for Personnel Management and Performance. It establishes guidelines for the adoption of a new home office system in public agencies and departments through the Civil Personnel System of the Federal Administration (SIPEC). These rules came into force on September 1, 2020 (Ministério da Economia, 2020).

In the current scenario of adoption of the model of a new, postpandemic home office system, continuous research will be needed to monitor productivity, innovations, efficient use of public resources and provision of adequate services to society. Further research is also required to compare data among surveys with national government officials and foreign officials.

As a suggestion for future research, one should examine the influence of organizational support variables (e.g. cost coverage and training) and servant characteristics (e.g. gender and personality) in the workspace at home, as it has been the case of the study by Hartig, Kylin, and Johansson (2007), in which gender differences in the choice of workspace location in the home were analyzed.

Still on points for future research, some challenges could be assessed, e.g. whether facility managers and designers include/ensure that information and telecommunications technologies are adequate and appropriate, whether households have proper equipment for home office and employees are offered effective training and support and whether employees have an appropriate, safe and healthy work environment. Good organizational support can be crucial for a home office setting to become an "extension" of the corporate office (public organizations).

Furthermore, most of the existing research on *home office*, particularly regarding workplace issues, is based on cross-sectional research projects, limiting knowledge of both causality and knowledge over time. To deal with these limitations, longitudinal methodologies that cover both short and long terms are required: short periods, such as those studied by sampling studies with experiments, enable the collection of data on rapid and potentially reversible changes, whereas studies conducted over longer periods may identify slow development processes, which are less easily reversed.

These studies are necessary to better clarify not only direction but also to help determine if *home office* is a practice that can be sustained over time, or if it is a temporary arrangement (Allen, Golden, & Shockley, 2015), as is the case of the present study in the face of the COVID-19 crisis.

References

- Al-Sakkaf, H. T. Z., & Stilley, J. (2019). Developing an integrated understanding of performance management in virtual teams, Available from: <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=8986817&fileId=8986819>. Recuperado em 24/09/2020.
- 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.
- Amilin, A. (2017). The impact of role conflict and role ambiguity on accountants' performance: The moderating effect of emotional quotient, *European Research Studies Journal*, 20(2A), 237–249.
- Ansari, S. L. (1977). An integrated approach to control system design. *Accounting, Organizations and Society*, 2(2), 101–112. doi: [10.1016/0361-3682\(77\)90027-7](https://doi.org/10.1016/0361-3682(77)90027-7).
- Anthony, R. N., & Govindarajan, V. (2007). *Management Control Systems*. 12th ed., New York, NY: McGraw-Hill/Irwin Publishing House.
- Baert, S., Lippens, L., Moens, E., Weytjens, J., & Sterkens, P. (2022). The COVID-19 crisis and telework: A research survey on experiences, expectations and hopes, *The European Journal of Health Economics*, 23(4), 729–753.
- Bono, J.E., & Judge, T.A. (2003). Self-concordance at work: Toward understanding the motivational effects of transformational leaders. *Academy of Management Journal*, 46(5), 554–571.
- Borman, W. C., & Motowidlo, S. J. (1993). Expanding the criterion domain to include elements of contextual performance. in N. Schmitt, & W. C. Borman (Eds), *Personnel selection in organizations*, San Francisco: Jossey-Bass, 71–98.
- Boyne, G. A. (2002). Public and private management: What's the difference? *Journal of Management Studies*, 39(1), 97–122.
- Caillier, J. G. (2012). The impact of teleworking on work motivation in a US federal government agency. *The American Review of Public Administration*, 42(4), 461–480.
- Campbell, D. J., & Furrer, D. M. (1995). Goal setting and competition as determinants of task performance. *Journal of Organizational Behavior*, 16(4), 377–389.
- Castanha, E. T., Beuren, I. M., & Gasparetto, V. (2020). Influência da comunicação interna e do engajamento no desempenho de tarefas de servidores públicos. *Revista Internacional de Relaciones Públicas*, 10(20), 179–200.
- Chenhall, R. H., & Moers, F. (2015). The role of innovation in the evolution of management accounting and its integration into management control. *Accounting, Organizations and Society*, 47, 1–13.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research*, Mahwah, NJ: Lawrence Erlbaum Associates, 295–358.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. New York: Academic press, p. 490.
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Academic press, New York, 490.
- Cunha, M., Domingos, A., Rocha, V., & Torres, M. (2021). Quantos poderiam ter sido salvos? Efeitos do distanciamento social na COVID-19. *Revista de Administração Pública*, 55(1), 12–26.
- Davila, T. (2000). An empirical study on the drivers of management control systems' design in new product development. *Accounting, Organizations and Society*, 25(4-5), 383–409.
- Deci, E. L., & Ryan, R. M. (1985). Cognitive evaluation theory. *Intrinsic motivation and self-determination in human behavior*. Boston, MA: Springer, 43–85.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, 74(4), 580.
- Eisenhardt, K. M. (1985). Control: Organizational and economic approaches. *Management Science*, 31(2), 134–149.

- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149–1160.
- Felstead, A., Jewson, N., & Walters, S. (2005). The shifting locations of work: New statistical evidence on the spaces and places of employment. *Work, Employment and Society, 19*(2), 415–431.
- Ferreira, A., & Otle, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research, 20*(4), 263–282.
- Flamholtz, E. (1996). Effective organizational control: A framework, applications, and implications. *European Management Journal, 14*, 596–611.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.
- Fernet, C., Guay, F., Senécal, C., & Austin, S. (2012). Predicting intraindividual changes in teacher burnout: The role of perceived school environment and motivational factors. *Teaching and Teacher Education, 28*(4), 514–525.
- Gagné, M., Forest, J., Gilbert, M.H., Aubé, C., Morin, E., & Malorni, A. (2010). The motivation at work scale: Validation evidence in two languages. *Educational and Psychological Measurement, 70*(4), 628–646.
- Gagné, M., & Koestner, R. (2002). Self-determination theory as a framework for understanding organizational commitment. In *annual meeting of the Society for Industrial and Organizational Psychology*, Toronto: Canada.
- Groen, B. A., van Triest, S. P., Coers, M., & Wtenweerde, N. (2018). Managing flexible work arrangements: Teleworking and output controls. *European Management Journal, 36*(6), 727–735.
- Hair, J. F. (2009). Multivariate data analysis.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). A primer on partial least Squares structural equation modeling.
- Hair, J. F. Jr., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*, 2nd ed., Thousand Oaks, CA: Sage.
- Hartig, T., Kylin, C., & Johansson, G. (2007). The telework trade-off: Stress mitigation vs. constrained restoration. *Applied Psychology: An International Review, 56*(2), 231–253.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist, 52*(12), 1280–1300.
- Johari, J., & Yahya, K. K. (2016). Job characteristics, work involvement, and job performance of public servants. *European Journal of Training and Development, 40*(7), 554–575.
- Koestner, R., Otis, N., Powers, T. A., Pelletier, L., & Gagnon, H. (2008). Autonomous motivation, controlled motivation, and goal progress. *Journal of Personality, 76*(5), 1201–1230.
- Kurland, N. B., & Egan, T. D. (1999). Telecommuting: Justice and control in the virtual organization. *Organization Science, 10*(4), 500–513.
- Langevin, P., & Mendoza, C. (2013). How can management control system fairness reduce managers' unethical behaviours? *European Management Journal, 31*(3), 209–222.
- Latham, G. P., & Yukl, G. A. (1975). A review of research on the application of goal setting in organizations. *Academy of Management Journal, 18*(4), 824–845.
- Lorange, P., & Scott, M.M.S. (1974). Framework for management control systems. *Sloan Management Review, 16*(1), 41–56.
- Mahama, H., & Cheng, M. M. (2013). The effect of managers' enabling perceptions on costing system use, psychological empowerment, and task performance. *Behavioral Research in Accounting, 25*(1), 89–114. doi: [10.2308/bria-50333](https://doi.org/10.2308/bria-50333).
- McDonough, E. F. III (2000). Investigation of factors contributing to the success of cross-functional teams. *Journal of Product Innovation Management: An International Publication of the Product Development and Management Association, 17*(3), 221–235.

- Merchant, K. A. (1982). The control function of management. *Sloan Management Review (Pre-1986)*, 23(4), 43.
- Merchant, K. A., & Van der Stede, W. A. (2012). *Management control systems* (harmadik ed.). Harlow: Pearson.
- Miller, G. A. (1956). The magical number seven, plus or minus two some limits on our capacity for processing information. *Psychological Review*, 101(2), 343–352.
- Ministério da Economia (2020), Governo federal define novas regras para o teletrabalho. Available from: <https://www.gov.br/economia/pt-br/assuntos/noticias/2020/julho/governo-federal-define-novas-regras-para-o-teletrabalho> (accessed 25 August 2020).
- Motowidlo, S. J., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, 79(4), 475–480. doi: 10.1037/0021-9010.79.4.475.
- Na-Nan, K., & Sanamthong, E. (2019). Self-efficacy and employee job performance: Mediating effects of perceived workplace support, motivation to transfer and transfer of training. *International Journal of Quality and Reliability Management*, 37(1), 1–17.
- Nexo Jornal Ltda (2020). Available from: <https://www.nexojornal.com.br/expresso/2020/03/11/O-home-office-como-sa%C3%ADDa-contratamina%C3%A7%C3%B5es-do-coronav%C3%ADrus> (accessed 23 August 2020).
- Oliveira, T. C., Abranches, M. V., & Lana, R. M. (2020). *Segurança alimentar no contexto da pandemia por SARS-CoV-2. Cadernos de Saúde Pública*, 36(4), 1–6.
- Otley, D. (1999). Performance management: A framework for management control systems research. *Management Accounting Research*, 10(4), 363–382.
- Ouchi, W. G. (1979). A conceptual framework for the design of organizational control mechanisms. *Management Science*, 25(9), 833–848.
- Peci, A., Avellaneda, C. N., & Suzuki, K. (2021). Respostas governamentais à pandemia da COVID-19. *Revista de Administração Pública*, 55(1), 1–11.
- Peña, F. (2014). *Propuesta de un sistema de control de gestión para las contralorías municipales del estado Carabobo*. Master's thesis.
- Pink, D. H. (2011). *Drive: The surprising truth about what motivates us*. New York, NY: Riverhead Books.
- Porter, A. J., & Van den Hooff, B. (2020). The complementarity of autonomy and control in mobile work. *European Journal of Information Systems*, 29(2), 172–189.
- Richardson, J., & McKenna, S. (2014). Reordering spatial and social relations: A case study of professional and managerial flexworkers. *British Journal of Management*, 25(4), 724–736.
- Rigby, C. S., & Ryan, R. M. (2018). Self-determination theory in human resource development: New directions and practical considerations. *Advances in Developing Human Resources*, 20(2), 133–147.
- Roelofs, A. (2010). Attention and facilitation: Converging information versus inadvertent reading in stroop task performance. *Journal of Experimental Psychology: Learning Memory and Cognition*, 36(2), 411–422.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68.
- Sanusi, Z. M., Iskandar, T. M., Monroe, G. S., & Saleh, N. M. (2018). Effects of goal orientation, self-efficacy and task complexity on the audit judgement performance of Malaysian auditors. *Accounting, Auditing and Accountability Journal*, 31(1), 75–95.
- Sheldon, K. M., & Elliot, A. J. (1998). Not all personal goals are personal: Comparing autonomous and controlled reasons as predictors of effort and attainment. *Personality and Social Psychology Bulletin*, 24(5), 546–557.
- Slemp, G. R., Field, J. G., & Cho, A. S. (2020). A meta-analysis of autonomous and controlled forms of teacher motivation. *Journal of Vocational Behavior*, 121, 103459.

-
- Snell, S. A. (1992). Control theory in strategic human resource management: The mediating effect of administrative information. *Academy of Management Journal*, 35(2), 292–327.
- Snyder, K. (2012). Enhancing telework: A guide to virtual leadership. *Public Manager*, 41(1), 11–14.
- Sonnentag, S., & Frese, M. (2002). Performance concepts and performance theory. *Psychological Management of Individual Performance*, 23(1), 3–25.
- Sotola, D. O., Pillay, P., & Gebreselassie, H. (2021). COVID-19 in Africa: A comparative analysis of early policy responses. *Revista de Administração Pública*, 55, 229–242.
- Souza, G. E. D., & Beuren, I. M. (2018). Reflexos do sistema de mensuração de desempenho habilitante na performance de tarefas e satisfação no trabalho. *Revista Contabilidade and Finanças*, 29, 194–212.
- Stirpe, L., & Zárraga-Oberty, C. (2017). Are high-performance work systems always a valuable retention tool? The roles of workforce feminization and flexible work arrangements. *European Management Journal*, 35(1), 128–136.
- Sundbo, J. (1996). The balancing of empowerment. A strategic resource-based model of organizing innovation activities in service and low-tech firms. *Technovation*, 16(8), 397–446.
- Tabari, P., Amini, M., Moghadami, M., & Moosavi, M. (2020). International public health responses to COVID-19 outbreak: A rapid review. *Iranian Journal of Medical Sciences*, 45(3), 157–169.
- Tessier, S., & Otley, D. (2012). A conceptual development of Simons' levers of Control framework. *Management Accounting Research*, 23(3), 171–185.
- Vasilieva, E., Rubtcova, M., Kaisarova, V., Kaisarov, A., & Pavenkov, O. (2015). Personal targets for public servants and their support the governance's performance conception in Russia. *International Review of Management and Marketing*, 5(4), 246–252.
- Vélez, M. L., Sánchez, J. M., & Álvarez-Dardet, C. (2008). Management control systems as inter-organizational trust builders in evolving relationships: Evidence from a longitudinal case study. *Accounting, Organizations and Society*, 33(7-8), 968–994.
- Widener, S. K. (2007). An empirical analysis of the levers of control framework. *Accounting, Organizations and Society*, 32(7), 757–788. doi: 10.1016/j.aos.2007.01.001.
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601–617.
- Wiswanathan, M., Sudman, S., & Johson, M. (2004). Maximum versus meaningful discrimination in scale response: Implications for validity of measurement of consumer perception about products. *Journal of Business Research*, 57, 08–24.
- World Health Organization (2020) Coronavirus disease (COVID-19) advice for the public: Healthy parenting. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/healthy-parenting> (accessed 23 August 2020).
- Young, S. M., Du, F., Dworkis, K. K., & Olsen, K. J. (2016). It's all about all of us: The rise of narcissism and its implications for management control system research. *Journal of Management Accounting Research*, 28(1), 39–55.
- Zhang, Q., & Doll, W. J. (2001). The fuzzy front end and success of new product development: A causal model. *European Journal of Innovation Management*, 4(2), 95–112.

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