

# MEDIATING EFFECTS OF PSYCHOLOGICAL CAPITAL AND BURNOUT SYNDROME ON THE RELATIONSHIP BETWEEN BUDGETARY PARTICIPATION AND MANAGEMENT PERFORMANCE

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## Abstract

**Objective:** This study aimed to evaluate the mediating effects of Psychological Capital and Burnout Syndrome in the relationship between Budget Participation and Management Performance.

**Method:** A descriptive survey was developed with a quantitative approach to the data. The sample analyzed corresponds to 203 managers with budgetary responsibility for the largest companies in Brazil, occupying positions of controllers, controllership managers and cost managers. Data analysis was performed using descriptive statistics, factor analysis, structural equation modeling, as well as additional analysis using linear regression.

**Results:** The results show that in environments with greater budgetary participation, individuals tend to develop their psychological capital better, becoming more optimistic, hopeful, resilient and self-effective, mitigating the negative effects of the burnout syndrome and, consequently, leveraging their management performance. As for the comparison of responses of managers who held controllership or cost positions, the only significant difference was the burnout syndrome. This result may indicate that controllers tend to be more flexible when faced with a failure in budget control and may suffer less from the negative effects of the work environment, that generate tensions that can result in burnout syndrome.

**Contributions:** As a general contribution, demonstrating the influence of budgetary participation on the cognitions and performance of individuals in organizations, as well as the informational roles of the budget and the influence of the budgetary configuration adopted by companies on human behavior at work.

**Keywords:** Budgetary Participation; Psychological Capital; Burnout Syndrome; Management Performance.

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## 1 INTRODUÇÃO

**B**udgetary participation and management performance are considered prominent themes in the behavioral approach to management accounting (Birnberg et al., 2007; Derrfuss, 2016; Lunardi et al., 2020). Zonatto and Lavarda (2013) argue that budget participation not only improves the manager's performance in budget processes, but also contributes to an improvement in the organization's management processes as a whole. It is believed that budgetary participation makes managers better understand the organization's objectives, negotiate more resources, and enable improvements in the work environment, which, in turn, can positively impact the management performance of these individuals.

There are several ways to define and measure an organization's management performance. However, the management performance at the individual level, it is about the effectiveness in which the individual, in this case, manager of the company, performs his work in the organizational environment (Zonatto, 2014), including in the management processes. Like budgetary participation, management performance can be explained by cognitive social factors, defined by Bandura (1977) as interactionist. According to the perspective of social cognitive theory, there is not a single factor that determines an individual's performance, but rather a set of cognitive and personal, behavioral and environmental factors, which interact with each other and determine human actions in the work environment (Bandura, 1977).

Some research using theories and approaches arising from psychology in accounting has provided opportunities for conducting several studies, which seek to assess the effects of management control tools, such as the use of the budget and budgetary participation on the individual's cognitions at work (Birnberg et al., 2007; Derrfuss, 2016; Lunardi et al., 2020). However, few studies have evaluated the psychological capital of managers in the budget context.

Psychological capital can be defined as the individual's positive psychological state, which is mainly characterized by four elements, namely, self-efficacy; optimism; hope and resilience (Luthans et al., 2004). According to Zonatto (2014) and Nascimento (2017), psychological capital is related to important behaviors, attitudes and the management performance of the individual, thus, employees not only reproduce behaviors, but also have a self-referential system that enables them to make decisions and choose patterns of responses to the events to which they are subjected, including in the work environment.

However, a cognitive factor that can affect individuals and their performance at work is not just psychological capital. Psychologist Herbert Freudenberger, in 1974, gave life to the discussion about the burnout syndrome, which, from the 1980s onwards, began to be characterized as a multidimensional syndrome. This syndrome can affect any professional who detains in their day-to-day various forms of pressure, demands, tensions, among other attributes that tend to repress people, which triggers physical and psychological symptoms, such as emotional exhaustion, depersonalization and low personal fulfillment (Maslach et al., 2001). Therefore, it is understood that the burnout syndrome has serious consequences involving professional life, and, therefore, it is essential to alleviate these problems in the work environment (Moreno et al., 2011).

Regarding the behavioral literature in the accounting area or organizational psychology, there was no evidence of previous studies investigating the mediating interactional effects of psychological capital and the burnout syndrome in the relationship between budgetary participation and management performance, a theoretical gap that encourages the realization of this study. The organizational environment is a context of social interaction, as well as the budgetary context, in which individuals interact in the search for resources, the definition of objectives and goals, and the establishment of premises

for performance evaluation (Zonatto et al., 2019). Thus, it tends to produce cognitive effects, which can influence the performance of managers.

The importance of verifying the mediation of psychological capital and burnout syndrome in the same study is highlighted, as, according to Nascimento (2017), it is known that psychological capital can be enhanced by budgetary participation, improving the performance of individuals at work. Although, these effects were not seen together with a negative variable, which represents the tensions present in the work environment, which in some way can impact the attitudes and behaviors of individuals at work, as in the case of this research, the investigation of intervening effects of burnout syndrome.

The opportunity to assess such relationships can demonstrate whether budgetary participation is also able to mitigate stressful effects, such as burnout syndrome, in order to improve the performance of individuals, or show whether the syndrome can be attenuate only in managers with a certain level of psychological capital.

In this context, the research opportunity that emerges refers to the analysis of such relationships under an integrated perspective. Thus, this research seeks to answer the following question: What are the mediating effects of psychological capital and burnout syndrome in the relationship between budgetary participation and management performance? At the same time, the objective of the study is to evaluate the mediating effects of psychological capital and burnout syndrome in the relationship between budgetary participation and management performance of managers with budgetary responsibility.

The main contributions of this investigation revolve around the expansion of the literature, as well as helping organizations and managers to understand the effects of the adopted budget configuration, as well as the informative roles of the budget and its effects at the individual level. Likewise, it reveals in which conditions psychological capital and burnout syndrome affect the relationship between the adopted budget configuration and management performance, allowing a self-assessment of budget management processes and the roles of managers in conducting this process.

## 2 RESEARCH LITERATURE AND HYPOTHESES REVIEW

In the literature, organizational theorists present evidence of a positive relationship between budgetary participation and the management performance of individuals (Milani, 1975; Covalleski et al., 2007; Derfuss, 2016). One of the reasons that budgetary participation exerts a positive effect on an individual's management performance is that of motivational and cognitive mechanisms (Shields & Shields, 1998; Birnberg et al., 2007; Covalleski et al., 2007; Zonatto, 2014). According to Shields and Shields (1998) and Wentzel (2002), motivation and involvement in processes increase managers' confidence, sense of control, and their commitment to organizational decisions, which consequently results in an improvement in the management performance as a whole, not just budget processes.

According to Wentzel (2002) and Chong et al. (2005), involving individuals in budgeting activities improves managers' understanding of how the budget is distributed in the organization, which consequently leads the company to plan its operations more effectively, due to the communication between senior management and subordinate managers. Therefore, budgetary participation processes act as enhancing elements of management performance (Zonatto et al., 2019).

Ni et al. (2009) also highlight that budgetary participation improves the managerial cognition of managers which, in turn, can increase their performance. With budgetary participation, managers are able to share relevant information about the work so that their performance can increase (Ni et al., 2009). Given the above, a positive relationship between budgetary participation and the management

performance of individuals is suggested, which is highlighted in the first hypothesis, H1: budgetary participation positively influences the management performance of individuals.

However, although the direct relationship between budgetary participation and management performance has been a widely investigated issue in the literature, the results found are still dubious (Derfuss, 2016; Dani et al., 2017). According to Milani (1975), Yuen (2007) and Dani et al. (2017), there is no simple relationship between budgetary participation and management performance, which brings the need for further studies involving other variables capable of explaining this phenomenon.

A possible explanation for the conflicting results found in the literature refers to the complexity of individual cognitive responses. Bandura (1977) explains that individuals have a self-referential system that allows them to judge information perceived in the environment and make their own decisions. Thus, social cognitive theory advocates that cognitive and personal, behavioral and environmental factors interact with each other and determine human action and development. However, this joint influence does not occur in the same way in every context and may differ from individual to individual.

In the budget context, according to Jermias and Yigit (2013), budget participation in addition to improving management performance also influences individuals' cognitive effects, raising their levels of satisfaction and self-efficacy, as managers understand that they are being treated as valuable partners in the decision-making process (Jermias & Yigit, 2013). This occurs from informational effects arising from the processes of budgetary participation and information sharing, which allow the improvement of management processes (Lunardi et al., 2020).

Venkatesh and Blaskovich (2012) highlight that when managers participate in the organization's budgeting process, they begin to exert influence on specific goals that are challenging, but achievable. Budgetary participation makes individuals interact with their superiors at work and experience mastery of new tasks, which, according to Bandura (1977), are important for a sense of effectiveness. Thus, it is expected that budgetary participation can enhance the positive elements of psychological capital, such as self-efficacy.

Likewise, a participatory work environment allows managers to set goals, towards which they can direct their focus and willpower, which has been effective in developing higher levels of hope in these individuals (Luthans et al., 2004). Thus, it is believed that budgetary participation can influence the development of higher levels of hope, as individuals feel in control of their work, as well as involved with the organization's present and future.

According to Covaleski et al. (2007), organizations adopt the budgetary participation process to provide an optimistic and encouraging work environment for individuals involved in this process. Budgetary participation is conducive to the development of managers' optimism in the workplace (Venkatesh & Blaskovich, 2012). In view of this, it is expected that higher levels of budgetary participation will enhance the optimism of managers with budgetary responsibility. Zonatto and Lavarda (2013) also highlight that budgetary participation in several organizations directs their managers' thinking towards positive results, despite the difficulties encountered in this process, which can influence the levels of resilience of these individuals.

Nation and worldwide, studies retrieved in the literature have shown a positive influence of budgetary participation on psychological capital (Venkatesh & Blaskovich, 2012; Nascimento, 2017; Degenhart, 2019). Furthermore, studies such as by Latham et al. (1994), Heath and Brown (2007), Ni et al. (2009), Macinati et al. (2016) and Yuliansyah and Khan (2017), demonstrate that budgetary participation has a positive impact on self-efficacy, which in this research is treated as one of the dimensions of psychological capital.

Since Bandura (1977) defines self-efficacy as an individual's belief in their ability to perform work-related tasks, it is understood that budgetary participation increases individuals' cognition (Yuliansyah & Khan, 2017), being relevant to development and increasing the level of psychological capital of managers (Venkatesh & Blaskovich, 2012).

Venkatesh and Blaskovich (2012) specifically studied the dimensions of psychological capital in the budgetary context. The evidence found attests that budgetary participation is positively related to the psychological capital of individuals. Similarly, Nascimento (2017) and Degenhart (2019) sought to verify the relationships between budgetary participation, psychological capital and other behavioral variables.

The results of Degenhart (2019), Nascimento (2017), as well as those of Venkatesh and Blaskovich (2012), reveal that higher levels of budgetary participation enhance the positive elements of psychological capital. According to the authors, the fact that these individuals feel included in the decision-making process makes them enhance their self-efficacy, hope, resilience and optimism in the work environment.

It is also highlighted that the psychological capital of managers involved in budgeting processes can influence their performance. Evidence from previous studies conducted in the areas of organizational management and psychology indicates the existence of a positive relationship between psychological capital and work performance (Liu, 2013; Alessandri et al., 2015; Rabenu et al., 2017; Alessandri et al., 2018; Degenhart 2019).

This is because when they feel able to face situations in the work environment, these individuals start to converge efforts to reach the established goals and targets, which positively reflects on their performance. In this context, the second research hypothesis states that: H2: psychological capital positively mediates the relationship between budgetary participation and individuals' management performance.

It is known that budgetary participation is encouraged for several reasons, including the increase in the individual's performance in the workplace (Milani, 1975; Zonatto, 2014; Lunardi et al., 2020). However, it is important to emphasize that the organizational environment of large companies also involves great responsibilities and a high level of pressure on their managers, which can also trigger negative effects on individuals, such as the burnout syndrome .

Burnout syndrome came to be characterized as a multidimensional syndrome, also known as a chronicity of occupational stress (Maslach et al., 2001), and it can be experienced by any professional who has various forms of pressure in their daily lives, demands, tensions and can lead the individual to lose their work capacity (Singh et al., 1994). In this sense, burnout syndrome can also lead to a reduction in the management performance of individuals. Evidence found in the literature has suggested that budgeting processes also present stressful situations that affect management performance ( Zonatto et al., 2019 ).

In the literature, there is still no evidence on the effects of budgetary participation in burnout syndrome, however, it can be considered a chronicity of occupational stress (Maslach et al., 2001). In this context, the study by Zonatto and Lavarda (2013) stands out, who claim that budgetary participation can contribute to the reduction of existing conflicts within the organization, as well as the reduction of occupational stress. Zonatto et al. (2019) explain that the possibility of interaction that occurs during the budgetary participation process reduces organizational tensions, reducing levels of stress at work.

Since the organizational environment exerts a high level of demand and stress on its managers, it appears that when they are part of the budget process, they tend to feel more involved in the company's decision-making, more committed and motivated, which it can reduce adverse effects such as occupational stress (Zonatto & Lavarda, 2013). Thus, it is believed that in an environment with greater budgetary participation, managers will have lower levels of burnout syndrome and, consequently, will have better management performance.

In this context, the third research hypothesis was elaborated, which seeks to assess the mediating effects of the burnout syndrome in the relationship between budgetary participation and the management performance of managers participating in this research. Hence comes H3: burnout syndrome negatively mediates the relationship between budgetary participation and individuals' management performance.

As well as budgetary participation, the literature has also provided evidence that cognitive elements present in the organizational environment, such as psychological capital, can mitigate the potential negative effects of burnout syndrome. As mentioned in H2, the development of the dimensions of psychological capital, self-efficacy, hope, resilience and optimism positively influence the management performance of individuals, as well as their motivation, flexibility, commitment and engagement at work (Stajkovic, 2006).

In this condition, psychological capital can act as a variable capable of attenuating the negative effects of work tensions, since more self-confident, optimistic and resilient individuals tend to show greater hope for achieving established goals and targets, even when experiencing situations of tension at work.

Since the positive effects of psychological capital and burnout syndrome are two opposing constructs, it is believed that managers who have a certain level of psychological capital can better deal with occupational pressure, tension and stress, which leaves them less exposed to the negative effects of burnout syndrome. Thus, it is expected that, in an environment of budgetary participation, individuals will perceive their influence in the organization and feel more self-confident, resilient, optimistic and hopeful in reaching the established goals, which will contribute to the development of their psychological capital and may mitigate any negative effects of burnout syndrome. Thus H4 was elaborated: psychological capital negatively influences the burnout syndrome.

In short, this research seeks to infer variables arising from a behavioral aspect, in particular, related to the cognitive social approach (Bandura, 1977), which may influence the performance of managers with budgetary responsibility in the largest companies (in terms of revenue) that operate in the country. Figure 1 presents the theoretical analysis model that guides the research.

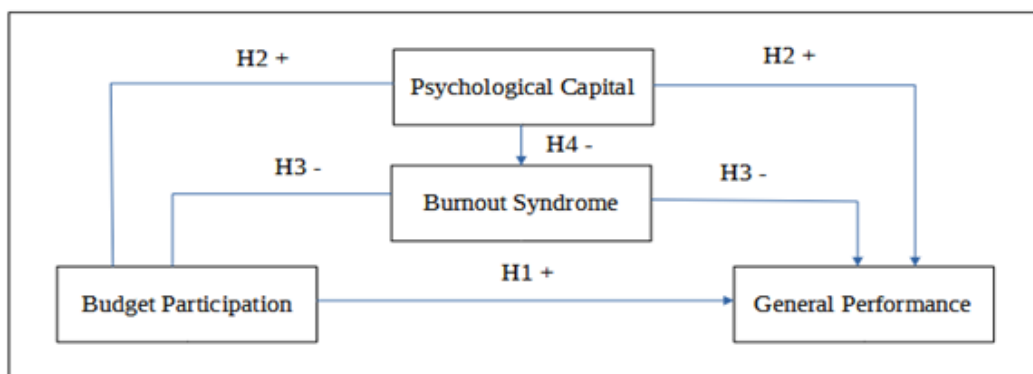


Figure 1. Theoretical Analysis Model  
Source: Prepared by the authors.

Furthermore, the methodological procedures adopted to carry out the research are presented.

### 3 METHODOLOGY

As seen above, the purpose of this research aims to assess the mediating effects of psychological capital and burnout syndrome in the relationship between budgetary participation and management performance, a descriptive survey was carried out, with data collection carried out through a survey and data analysis with a quantitative approach.

To carry out this research, a set of ethical procedures were adopted, in order to ensure the guest's right to choose whether or not to participate in the research. Thus, with the adoption of such procedures, research is now governed by the general principles relating to: (i) informed consent; (ii) the concern not to harm the entity and the people who work for it; and, (iii) the guarantee to maintain the anonymity of the individuals and the entity.

At the time of data collection, a series of procedures were adopted to ensure the confidentiality of research participants and the companies to which they belong, namely: a) The manager will participate in the research voluntarily and only if he so wishes; b) The participant will be free to interrupt or withdraw from the research at any time, with no need for prior explanation; c) The questionnaire applied will not ask for any personal identification of the person or company in which the manager works; d) Only the researchers involved will have access to the completed questionnaires; e) By voluntarily answering and sending the data collection instrument, the participant agrees that the research results are published in scientific publications; and, f) Any questions regarding the questionnaire can be clarified with the researchers responsible for sending the questionnaire and preparing the research.

The sample of this research consists of professionals with budgetary responsibility from the 1000 largest companies in Brazil, according to Exame magazine 2016. In a survey conducted on LinkedIn, professionals with such characteristics were identified, in jobs such as: controllers, managers controllership and cost managers. Upon acceptance of the invitation sent to these managers, the Google Forms link with the survey questionnaire was sent.

The period for carrying out the data collection took place from January to August 2018. Before the end of the survey, a reminder was sent to all managers, requesting a response to the questionnaire, in case they had not already done so. Therefore, the analyzed sample is characterized as non-probabilistic, intentional, obtained by accessibility and had the participation of 203 managers with budgetary responsibility.

This sample was chosen because the controller/controllership manager is conceived as a strategic person within organizations, as he is the professional who has excellence in the information generated by accounting, specifically with regard to the budget process (Siqueira & Soltelinho, 2001). Likewise, cost managers are also closely linked to the company's budget, which makes it appropriate to use these positions in a survey involving the budget context at the national level.

In order to achieve the objective proposed in this research, the questionnaire was divided into 4 blocks, as shown in Table 1, which summarizes the research construct.

Table 1. Research construct

Variables	Dimensions	Definition	Authors
Budget Participation (PO)	- Budget Participation	It refers to the involvement and influence that an individual has in the organization's budgeting process.	Milani (1975)
Management Performance (DG)	- Management performance	It is the effectiveness of the individual, in this case, the company manager, to perform his work in the organizational environment, involving both budget activities and monitoring of the work team, development of reports, analysis of processes and achievement of results.	Mahoney et al. (1963), in the version adapted by Zonatto (2014)
Psychological Capital (CP)	- Self-efficacy - Optimism - Hope - Resilience	It is the individual's mental state, such as self-efficacy, optimism, hope and resilience in the decisions taken by managers in the workplace.	Luthans et al. (2007)
Burnout Syndrome (SB)	- Emotional Exhaustion - Reduction of Personal Fulfillment - Depersonalization	It refers to the state of stress, emotional exhaustion, reduced personal fulfillment and depersonalization of managers involved in the budget process.	Singh et al. (1994)

Source: The authors.

The construct presented is formed by the dimensions Budgetary Participation (six indicators), Management Performance (9 indicators), Psychological Capital (24 indicators) and Burnout Syndrome (24 indicators). The related assertions were constructed using a 7-point Likert scale. In the Budget Participa-



tion and Burnout Syndrome dimensions, option 1 is characterized by "I totally disagree" and 7 "I totally agree". In the Management performance dimension, option 1 points to "Performance below average" and 7, "Performance above average", and for the Psychological Capital dimension a 6-point Likert scale was used, 1 being "I totally disagree" and 6, "I totally agree".

Data collection instruments with their original validated scales were used. The psychological capital construct is the version of the research instrument by Luthans et al. (2007), which was published and made available by Mind Garden Inc. on the website <www.mindgarden.com>. To use this instrument, it is initially necessary to access the website and request authorization to use it, which was allowed, but the alteration of the instrument or the disclosure of the issues in full is not authorized. This research instrument has been widely used by researchers in the field of organizational psychology and by scholars in the field of management accounting (Venkatesh & Blaskovich, 2012; Nascimento, 2017; Degenhart, 2019).

For data analysis, Confirmatory Factor Analysis (CFA) was used in order to test the reliability and validity of the measurement constructs. The reliability of the constructs was calculated separately in each dimension, analyzing the coefficients of Cronbach's Alpha (AC), Composite Reliability (CC) and Average Variance Extracted (AVE).

Then, the Structural Equation Modeling (SEM) was performed using the statistical software AMOS® 19.0. Finally, a complementary analysis was carried out, using linear regression, in which a possible effect of certain variables is investigated, such as: age, gender, position, length of time working in the company, working time in the function, time with budgetary responsibility, hierarchical level of function, level of knowledge in relation to budgeting and level of knowledge in budgeting routines and processes, to explain different results in the analyzed sample. The results found are presented below.

## 4 ANALYSIS OF RESULTS

First of all, Table 2 presents the results of the descriptive statistics of the data. Next, the results of the indicators of reliability, discriminant validity and the predictive relevance of the constructs are observed. Then, the tested structural model is shown. Finally, the linear regression results with the complementary analysis performed.

*Table 2. Descriptive statistics*

Constructs	Average	Standard deviation	Observed range	Theoretical scope
PO Budget Participation	5.74	1.64	1-7	1-7
DG Management performance	5.19	1.18	1-7	1-7
CP Psychological Capital	4.94	1.04	1-6	1-6
SB Burnout Syndrome	2.61	1.59	1-7	1-7

*Source: Survey data (2018).*

It is verified that the observed reach got the minimum and maximum values according to the theoretical reach of the questions, which demonstrates that the managers participating in the research had different answers regarding their level of budgetary participation, psychological capital, burnout syndrome and performance managerial. These results reveal that not all organizations adopt a participatory budget configuration. It is also observed that the management performance of some managers participating in the survey is self-assessed as a performance below the average performance of other managers in their organization.

These results reinforce the importance of investigating such relationships, observing the mediating effects of intervening variables in the relationship between budgetary participation and management performance (Derfuss, 2016; Dani et al., 2017), as in the case proposed for this investigation, the effects



of cognitive social factors present in the budget context. In this regard, the results shown in Table 2 provide evidence that not all managers participating in the survey believe they are resilient, hope to achieve better results in the face of adversities found in the work environment, or trust their ability to achieve better results.

They also reveal evidence that some individuals are more easily aware of the tensions in the organizational environment, which can result in decreased performance, as well as occupational health problems and even the development of burnout syndrome. These results converge with the explanation presented by Bandura (1977) in the social cognitive theory, that individuals differ in their psychobiological capacities, that explains their distinct reactions in the context of social interaction, and, in the case of this research, the effects of these variables on your performance. Table 3 presents the results of the reliability coefficients, or absence of random errors in the measurements of latent constructs.

*Table 3. Reliability indicators of measurement constructs*

Constructs	Cronbach's Alpha (AF)	Composite Reliability (CC)	Average Variance Extracted (AVE)
Minimum Expected Values =>	> 0.70	>0.50	>0.50
PO: Budgetary Participation (PO)	0.933	0.93	0.70
CP: Self-efficacy (AE)	0.881	0.89	0.57
CP: Hope (ES)	0.854	0.86	0.51
CP: Resilience (RE)	0.797	0.82	0.50
CP: Optimism (OT)	0.742	0.75	0.50
SB: Emotional Exhaustion (EE)	0.826	0.83	0.50
SB: Reduction of Personal Achievement (RD)	0.949	0.95	0.71
SB: Depersonalization (DS)	0.837	0.85	0.60
DG: Management performance (DG)	0.897	0.90	0.51

*Source: Survey data (2018).*

It is observed in Table 3 that the Cronbach's Alpha (FA) of the final measurement constructs selected for the research were higher than 0.742. Composite reliability (CC) also reached values higher than expected, whose lowest value found was 0.75. Regarding the extracted validity (AVE), all the researched constructs reached minimum values (or above) of 0.50. Thus, the results shown in Table 3 demonstrate the reliability of the measurement scales of these constructs, which allows the validation of the structural models tested in this research.

Regarding the analysis of discriminant validity, the procedures recommended by Bagozzi and Phillips (1982) were performed. Under this approach, discriminant validity must be tested in two ways, firstly from a fixed model, in which the object path and constructs are set at 1 to obtain the chi-square, and secondly by the free model, in which the analyzed parameters are not set to 1 to obtain the chi-square. The significance of the differences is what validates the measurement constructs.

Table 4 presents the results of the tests performed for the analysis of the discriminant validity of the final measurement constructs, using the criterion of Bagozzi and Phillips (1982).

Table 4. Results of the discriminant validity tests of the measurement constructs

Discriminant Validity by the criterion of Bagozzi and Phillips (1982)					
PAR		Constrained (=1)	Not constrained	Chi-Square Difference	Meaning.
Construct A	Construct B	chi square	chi square		
DUST	CP	610.583	588.954	21.629	0.0000
DUST	SB	614.879	540.024	74.855	0.0000
DUST	DG	297.045	286.942	10.103	0.0015
CP	SB	1355.131	1186.807	168.324	0.0000
CP	DG	835.256	797.567	37.689	0.0000
SB	DG	822.981	733.357	89.624	0.0000

Caption: PO. Budget Participation; CP. Psychological Capital; SB Burnout syndrome; DG. Management performance. Source: Survey data (2018).

Through the results presented in Table 4, it is possible to analyze the distinction between the chi-square values of the fixed model and the free model, since the results found in this analysis provide evidence that the differences between these variables are statistically significant. Thus, the discriminant validity of the analysis model between these relationships can be confirmed. Therefore, the examination of the results of the structural model begins, as shown in Figure 2.

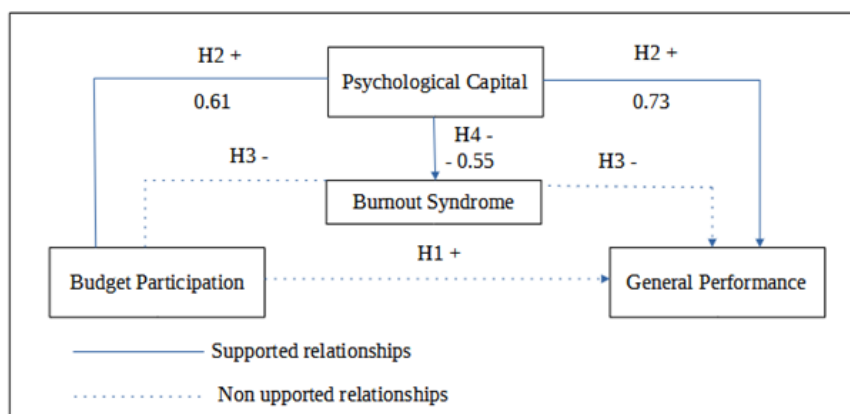


Figure 2. Tested structural model. Source: Survey data (2018).

It can be seen from the results presented in Figure 2, that budgetary participation (PO) directly influences psychological capital (CP) and indirectly influences burnout syndrome (SB) and management performance (DG), through psychological capital (CP). The path coefficients identified are: along the path between Budget Participation and Psychological Capital from  $\lambda = 0.61$  to  $P < 0.00$ , between Psychological Capital and Burnout Syndrome of  $\lambda = -0.55$   $p < 0.00$ , and between Psychological Capital and Management performance of  $\lambda = 0.73$   $p < 0.00$ . There was no direct relationship between Budget Participation and Management performance, which goes against Milani's (1975) main idea, advocated for the cognitive and informational effects of budget participation.

These results converge with the findings of recent studies developed on the topic (Zonatto et al., 2019; Lunardi et al., 2020), which reveal a condition for the effects of budgetary participation to directly impact management performance. Such effects occur when budget participation is high and capable of influencing the information sharing process, which allow the qualification of budget management processes adopted in companies, the definition of appropriate objectives and goals and the allocation of resources necessary to make viable such activities (Zonatto et al., 2019; Lunardi et al., 2020).

The results of the indirect effects of Budget Participation on Management performance converge with the findings of Venkatesh and Blaskovich (2012), Nascimento (2017) and Degenhart (2019), which indicate that budgetary participation positively influences the psychological capital of managers and

this reflects on better management performance. This evidence reinforces the evidence found in the behavioral accounting literature (Derfuss, 2016; Dani et al., 2017), that the effects of budgetary participation on the management performance of individuals at work may not be perceived directly, but through others intervening variables, as in the case investigated in this research, from the cognitive effects of psychological capacities of managers.

Thus, it is not possible to support the first research hypothesis, H1, budget participation positively influences the management performance of individuals, since the direct effects of budget participation on management performance were not confirmed in this research, only the indirect effects, through psychological capital. Therefore, H2 is confirmed, psychological capital positively mediates the relationship between budgetary participation and individuals' management performance.

Social cognitive theory defines that there is no single factor that influences human action and development. In the budgetary context, Zonatto (2014) found evidence establishing that the management performance of individuals in budgetary activities is determined by the interaction between a set of cognitive and personal, behavioral elements and the restrictions of the environment, which, when interacting, tend to influence each other mutually, determining the performance of managers with budgetary responsibility at work. These results converge with such propositions, since there was no direct relationship between budgetary participation and the performance of individuals participating in the research.

H2 findings are also in line with studies carried out in the management and psychology areas, which indicate a positive relationship between psychological capital and management performance (Liu, 2013; Alessandri et al., 2015; Rabenu et al., 2017; Alessandri et al., 2018; Degenhart, 2019). According to Alessandri et al. (2018), psychological capital enhances the attitudes of individuals at work, such as their engagement with the tasks to be performed, which positively reflects on their performance. Rabenu et al. (2017) explain that psychological capital improves the feeling of well-being of individuals at work, which also contributes to coping with stressful situations at work.

According to Bandura (1977), individuals are not irrational beings, they have a self-referential system that allows them to make judgments and make decisions. Therefore, their perceptions tend to influence the way this individual will perform their tasks at the organizational level, as well as this will reflect on their performance (Bandura, 1977). By actively participating in the budgeting processes of the organizations in which they work, these managers tend to feel part of the organization's management processes.

As a result, they may feel more valued, motivated and commit themselves more diligently to the development of their work activities. Thus, it starts from the understanding that having greater psychological capital, the manager will devote more efforts to achieving the established objectives and goals, leveraging the performance at the managerial level of their activities at work.

This set of feelings perceived by individuals, which tend to reflect in some way in their attitudes and behavior at work, will result in the production of positive cognitive stimuli. As explained by Luthans et al. (2007), these four elements Self-efficacy (AE), Hope (ES), Resilience (RE) and Optimism (OT) that make up the psychological capital of managers, when stimulated, tend to reflect positively on how these individuals will develop their activities of work, which is why they improve their performance.

The results found demonstrate that budgetary participation alone is not able to reduce the stressful effects of the work environment, such as the burnout syndrome. This evidence diverges from the results found by Zonatto and Lavarda (2013), who found that managers involved in the budget process tend to have a reduction in their occupational stress because they feel more committed to the organization's goals. Thus, given the sample studied in this research, it appears that it was not possible to support hypothesis H3, burnout syndrome negatively mediates the relationship between budgetary participation and individuals' management performance.

These results imply a condition for this to occur. They suggest that when the effects of budgetary participation promote the psychological capital of managers, the burnout syndrome is minimized. It was found that by feeling more hopeful, self-effective, optimistic and resilient in the organizational environment, individuals improve their management performance. However, these individuals also develop skills that allow them to become less exposed to possible negative effects, such as tension and stress present in the work environment, which according to Singh et al. (1994) may, in addition to affecting their productivity, result in illness and the emergence of burnout syndrome. This result allows confirming H5, psychological capital negatively influences the burnout syndrome.

Since budgetary participation alone may not be enough to manage to mitigate the negative effects of the burnout syndrome and leverage the management performance of individuals at work, it is necessary to promote their psychological capital. When their psychological capital is enhanced by budgetary participation, as we saw in H2, these individuals become more resilient, self-effective, hopeful and optimistic, which leaves them less exposed to the negative effects of burnout syndrome (H4). This condition improves their productivity and managerial attitudes, and, consequently, improves their management performance.

Therefore, it can be inferred that under conditions of greater budgetary participation, the positive effects of psychological capital are enhanced. Thus, individuals who develop their psychological capital become less exposed to burnout syndrome, achieving better management performance in their work activities. Therefore, it is possible to respond to the general objective of the research, which consisted of analyzing the mediating effects of psychological capital and the burnout syndrome in the relationship between budgetary participation and the management performance of individuals.

After analyzing the structural model of the research, we also sought to carry out an additional analysis. Were used in these analysis certain variables such as: age, gender, position, length of time working in the company, time working in the function, time with budgetary responsibility, level hierarchical function, level of knowledge in relation to budgeting and level of knowledge in budgeting routines and processes may explain different results in the analyzed sample. Table 5 shows the results.

Table 5. Results of the complementary analysis

Dependent Variables		DUST	CP	SB	DG
Independent Variables	Age	-0,063	0,037	-0,089	0,053
	Sex	-0,023	0,000	0,087	0,033
	Office	-0,007	-0,080	0,145*	-0,018
	Working time at the company	0,039	0,125	0,049	0,078
	Working time in the function	-0,066	-0,050	0,046	-0,098
	Time with Budgetary Responsibility	0,145*	-0,018	0,067	-0,025
	Hierarchical Function Level	0,154*	0,108	-0,024	0,245*
	Level of Knowledge in relation to the Budget	0,361*	0,443*	-0,203	0,400*
	Level of Knowledge in Budget Routines and Processes	0,170*	0,031	0,070	-0,002
R <sup>2</sup>		0,558	0,305	0,098	0,297
Seg. The new		0,000	0,000	0,027	0,000

Description: PO. Budget Participation; CP. Psychological Capital; SB Burnout syndrome; ET. DG. Management performance. \* Significance at 5% level. Source: Research data.

According to the results presented in Table 5, it is observed that although 79% of the analyzed sample is male and 41% of these managers are between 31 and 40 years old, neither the Age nor the Gender of these managers influenced their level of budgetary participation, development of psychological

capital, burnout syndrome and its management performance. It is also verified that the length of work in the company or in the function performed does not influence any of the dependent variables of this model either. However, the time that this manager has budgetary responsibility is directly related to his level of budgetary participation, which demonstrates that the longer the manager has budgetary responsibility, the greater his level of participation in these processes tends to be.

Regarding the difference in positions in the sample studied, characterized by a group formed by controllers and controllership managers, and another by cost managers, it is observed that this variable is only related to the burnout syndrome. These results are similar to studies carried out in the accounting area by Dunk (1992) and Burkert et al. (2011), who argue that higher-level managers, in this case controllers and controllership managers, tend to have an easier time facing a failure in budget control than individuals who occupy lower levels, such as cost managers. Thus, it is believed that managers who occupy higher levels suffer less from negative consequences of the work environment, such as organizational pressures, occupational stress and, in this case, the burnout syndrome, as they have better emotional stability when facing possible disagreements.

Evidence found in the literature has suggested that the hierarchical level of the function favors budgetary participation and the development of knowledge related to the budget, which qualifies the budget management under the responsibility of these managers (Zonatto et al., 2019; Lunardi et al., 2020). These results were also confirmed in this research. Thus, it can be inferred that when professionals are responsible for coordinating budget routines and processes, they become more resilient, optimistic and hopeful of achieving the desired goals. On the other hand, managers with a lower hierarchical level of the function may feel more pressured to reach budgetary goals and targets, which may explain this difference in relation to the burnout syndrome .

It is noteworthy that the other variables (PO, CP and DG) had no significant relationship with the position of managers. Thus, when relating the findings of the final structural model of this research, it is verified, even in different positions, the managers involved in budgetary participation potentiate their psychological capital, which consequently attenuates the burnout syndrome, which can be observed at different levels between managers, improving their management performance.

These results reveal important implications for organizational management, as they provide evidence that budget participation can produce important positive cognitive effects, which make managers involved in budget processes more resilient, suffering less from burnout problems at work. They also reveal that, under these conditions, these individuals become more likely to overcome challenging situations, as they become self-confident and persistent in the pursuit of achieving pre-established organizational goals and targets, which tends to reflect positively on their performance at the same level individual and organizational performance.

It appears that the higher the hierarchical level of the role that the manager occupies, the more this individual feels that he exerts influence on the organization's budgetary participation, which can concomitantly lead to an improvement in management performance. Shields and Shields (1998) state that managers who feel they have an influence on budgetary participation, leverage their organizational results based on elements such as management performance. This is due to the informative roles of the budget, which allow these managers to improve the development of their work activities, reflecting on the organization and development of activities under their responsibility.

Finally, it is also verified that in organizations that promote budget participation, managers tend to develop greater knowledge in relation to the budget and budget processes. Thus, individuals with greater budgetary participation and knowledge in relation to the budget, raise their levels of psychological capital, becoming more hopeful, self-effective, resilient, optimistic, and have better management

performance, qualified from their insertion in the processes organization's budgets. Therefore, budgetary participation is a condition for individuals to become more resilient to burnout problems at work.

## 5 FINAL CONSIDERATIONS

This study aimed to evaluate the mediating effects of psychological capital and burnout syndrome in the relationship between budgetary participation and management performance. In order to meet the proposed objective, a survey was carried out with 203 managers with budgetary responsibility for the thousand largest companies in Brazil, through the social network LinkedIn.

The results found show that budgetary participation directly influences psychological capital, which enhances its effects on management performance. Thus, it is observed that managers with greater psychological capital are less exposed to negative effects of the work environment, which reduces the burnout syndrome and improves individuals' management performance. These results corroborate the findings of Venkatesh and Blaskovich (2012) and Nascimento (2017) who claim that psychological capital positively mediates the relationship between budgetary participation and management performance.

Despite the sample of this research being composed of different managers, controllers, controllership managers and cost managers, it was noticed through the complementary analysis that the only variable that influences these positions differently is the burnout syndrome. These results are similar to the studies carried out by Dunk (1992) and Burkert et al. (2011), who argue that managers who occupy higher levels, such as controllers and controllership managers, tend to be more flexible when faced with a failure in budget control, and may suffer less from the negative effects of the work environment .

The evidence found in this research allows us to conclude that psychological capital positively mediates the relationship between budgetary participation and management performance, as well as attenuates the negative effects of burnout syndrome. In environments with greater budget participation, individuals tend to become more optimistic, hopeful, resilient and self-effective, being less exposed to the negative effects of burnout syndrome, such as emotional exhaustion, low personal fulfillment and depersonalization, which increases management performance. Therefore, it can be inferred that budgetary participation promotes psychological capital and managerial attitudes, resulting in better performance.

The theoretical contribution of this study is given by the fact that it analyzes not only the mediating effect of psychological capital on the relationship between budgetary participation and management performance, but also the negative effects of the burnout syndrome that can be developed in work environments with different types of pressures and tensions. Thus, the results provide evidence that the budget configuration adopted by the organization can mitigate possible negative effects of this syndrome on the performance of managers at work. This is because, from a participatory budget configuration, it becomes possible to stimulate the development of the managers' psychological capital.

The positive psychological capabilities of managers are important to influence their perceptions regarding environmental tensions and organizational pressures to achieve objectives, goals and results. Individuals who manage to act confidently, hopefully and resiliently in this context become more secure in their roles in conducting their work activities. Likewise, they become more likely to make greater efforts to achieve the expected results. Therefore, positive cognitive elements, such as psychological capital, tend to influence the attitudes and behavior of work managers, directly reflecting on their performance.

At the organizational level, it is concluded that this research contributes to the understanding of organizations and managers about the influence of budgetary participation on the cognitions and performance of individuals at work. Thus, evidence is shown of how a participatory budget configuration can affect important issues in the cognition of individuals, such as the development of psychological capital of managers, as well as the reduction of burnout syndrome and the improvement of individual management performance.

For future studies, the application of the methodology of this research in other contexts is suggested, that is, extending the instrument to other managers involved in the budget process. Thus, extending the scope of controllers, controllership managers or cost managers, it would be possible to assess whether the results of this study are maintained or show distinct effects between different organizational managers. Likewise, the observance of the effects of participation and psychological capital on attitudes and behaviors constitutes another important research opportunity.

It is also recommended to test other behavioral variables in addition to psychological capital and burnout syndrome, to verify which positive or negative effects they exert on the management performance of individuals. Finally, it is suggested the development of qualitative research, in one or more case studies, in order to further verify the behavioral effects involved in the budget context of organizations. The production of knowledge related to these themes will contribute to the formation of consolidated literature in this emerging approach, which specifically values the behavioral aspect in the budget process and its reflection in terms of individual performance.

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