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# *Decision-making rights, facilitating perception of performance indicators, and psychological empowerment: a quasi-experimental field study with call center operators*

## *Direitos de decisão, percepção facilitadora de indicadores de desempenho e empoderamento psicológico: quase-experimento de campo com operadores de* call center

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Keywords
Decision-making rights.
Facilitating perception.
Performance indicators.
Psychological empowerment.
Call center.

## Abstract

This study reports on a quasi-experimental field study that examined individual benefits of delegating decision-making rights to call center operators. The experimental group consisted of 25 operators from an after-sales call center, who had their decision-making rights extended; for comparison purposes, we selected 20 operators from another call center of the same company as the control group, who did not change their decision rights. Compared to the control group, the experimental group showed an increase in the facilitating perception of performance indicators and psychological empowerment. In addition, part of the benefit of greater psychological empowerment caused by the higher level of decision-making rights is explained by the higher facilitating perception of performance indicators. The main practical implication of these results is that organizations seeking to increase their employees' sense of psychological empowerment can use management controls as an effective mechanism for this purpose.

*Palavras-chave*
*Direitos de decisão.*
*Percepção facilitadora.*
*Indicadores de desempenho.*
*Empoderamento psicológico.*
Call center.

## *Resumo*

*Este estudo conduz um quase-experimento de campo para examinar benefícios individuais da delegação de direitos de decisão para operadores de* call center. *O grupo experimental foi composto por 25 operadores de um* call center *de pós-venda que tiveram ampliado seus direitos de decisão; para fins de comparabilidade, foram selecionados como grupo de controle 20 operadores de outro* call center *da própria empresa que não sofreram alterações em seus direitos de decisão. Relativamente ao grupo de controle, o grupo experimental apresentou aumento de percepção facilitadora dos indicadores de desempenho e de empoderamento psicológico. Adicionalmente, parte do benefício de maior empoderamento psicológico causado por maior nível de direitos de decisão é explicado pela maior percepção facilitadora dos indicadores de desempenho. A principal implicação prática destes resultados é que organizações interessadas em ampliar o sentimento de empoderamento psicológico de seus colaboradores podem encontrar nos controles gerenciais um mecanismo efetivo para essa finalidade.*

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## Practical Implications:

Call center companies are important because of their influence on customer satisfaction and organizational performance. Therefore, the results of this study have practical relevance by showing that granting a higher level of decision-making rights to call center operators results in an increase of their psychological empowerment. In addition, an increase in the facilitating perception of performance indicators contributes to this effect.



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## 1 INTRODUCTION

Decision-making rights are an essential component of management control systems (Melumad & Reichelstein, 1987; Bouwens & Kroos, 2019). Organizations can decide to assign different levels of decision rights to employees, involving distinct levels of autonomy (Mookherjee, 2006; Bouwens & de Kok, 2021). The main advantage of assigning decision-making rights is that organizations can take advantage of the specialized knowledge of their employees, who tend to feel more empowered, resulting in more timely and agile decisions (Brickley et al., 2015). However, delegation of decision rights can be harmful by reducing top executives' decision control (Melumad & Reichelstein, 1987). Despite the importance of delegating decision-making rights, there is little empirical evidence to date (Bouwens & Kroos, 2019), especially in terms of highlighting the individual benefits of delegation. The general purpose of this study is to check if delegating decision-making rights results in individual benefits for call center operators.

Call centers act as communication channels, facilitating dialogue with customers and developing customer service and after-sales assistance (Zülzke, 1990; Sheth et al., 2001). Call center companies are relevant for their influence on customer satisfaction and performance; therefore, understanding the factors that contribute to their operational effectiveness is important for improving organizational results. Their effectiveness in ensuring customer satisfaction and organizational performance requires higher levels of psychological empowerment (Deery & Kinnie, 2002; Proença & Rodrigues, 2021). In general, higher levels of decision-making rights are expected to increase psychological empowerment (Conger & Kanungo, 1988; Brickley et al., 2015). The first specific goal of this study was to check if greater psychological empowerment represents an individual benefit of delegating decision rights to call center operators.

The delegation of decision-making rights can also bring individual benefits in the way employees perceive and use management controls to carry out their tasks (Abernethy & Vagnoni, 2004). Specifically, the facilitating perception of managerial controls is associated with greater flexibility and autonomy in the decision-making process (Adler & Borys, 1994; Ahrens & Chapman, 2004, Oyadomari et al., 2018). In this research, facilitating perception is associated with the indicators (quantity and average service time) used to monitor the performance of call center operators. Therefore, the second specific goal of this study was to check if delegating decision-making rights to call center operators results in a greater facilitating perception of performance indicators. Finally, psychological empowerment is associated with facilitation processes that contribute to decision-making (Meyerson & Dewettinck, 2012). Facilitating perception of performance indicators seems to result in greater psychological empowerment (Beuren et al., 2020). Hence, the third specific goal of the study was to check if the facilitating perception of performance indicators mediates the effect of delegating decision-making rights on the psychological empowerment of call center operators.

To test the study hypotheses, we carried out a quasi-experimental field study with call center operators at an insurance company. In that context, part of the operators had their decision-making rights extended (experimental group), while another part kept them unchanged (control group). Psychological empowerment and the facilitating use of performance indicators were measured from Mahama and Cheng's study (2003). The results indicate that psychological empowerment is greater for operators whose level of decision-making rights was increased compared to the control group. In addition, the facilitating perception of performance indicators is greater for operators with higher rather than lower levels of decision-making rights. Finally, there is an indirect effect of delegating decision rights on psychological empowerment, so that a higher level of facilitating perception partly explains the benefit of a higher level of decision-making rights.

The results contribute to the literature on the effects of centralization versus decentralization of the decision-making process. Previous studies showed benefits of delegating decision rights (Bouwens & Kroos, 2019; Bouwens & de Kok, 2021). This study advances by showing that delegating decision-making rights also brings individual benefits - higher facilitating perception of performance indicators and psychological empowerment. In addition, the study goes beyond Mahama and Cheng (2013), who showed the importance of facilitating perception for empowerment, by demonstrating the role of delegating decision-making rights as an antecedent of a higher facilitating perception of managerial controls, and hence, of psychological empowerment. These results are important, since a greater facilitating perception of managerial controls and greater psychological empowerment precede various organizational benefits, such as innovation, job satisfaction, and performance (Chapman & Kihn, 2009; Bernd & Beuren, 2022; Mathew & Nair, 2022).

Furthermore, our results contribute to those responsible for organizational design. Organizations increasingly recognize the importance of psychological empowerment of their employees for organizational success (Lee et al., 2018; Madan et al., 2021). In order to foster a higher level of empowerment, organizations should adjust the levels of decision rights' delegation throughout the organizational hierarchy.

## 2 THEORETICAL FRAMEWORK

### 2.1 Decision-making rights

Management control systems encourage employees to make decisions that are consistent with organizational goals (Merchant & Van Der Stede, 2007; Malmi & Brown, 2008). Among its components is the delegation of decision-making rights, which, together with performance evaluation and reward systems, offer incentives to employees for greater goal congruence (Melumad & Reichelstein, 1987; Brickley et al., 2015). With the separation between control and management, owners and top executives are distant from the decision-making process, thus having less specific information, for example, about customers and market conditions (Bouwens & Kroos, 2019). Hence, firms must define the level of centralization versus decentralization, and the corresponding level of decision-making autonomy to be granted to areas and employees along the organizational hierarchy (Mookherjee, 2006, 2009).

The main advantage of assigning decision-making rights lies in the use of employees' specific knowledge, leading to more agile and timely decisions (Mookherjee, 2006). In addition, delegating decision rights can ensure that top executives focus on strategic decisions, besides being a form of training and motivation for employees (Brickley et al., 2015). Previous studies show the benefits for the decision process of delegating decision-making rights, such as lending and pricing decisions (Bouwens & Kroos, 2019; Kräkel & Schöttner, 2022). It also involves challenges, including higher communication and coordination costs in transferring information up the hierarchy, resulting in potential incentive problems (Brickley et al., 2015). Firms can benefit from centralized structures, and therefore, from lower levels of decision rights (Bouwens & de Kok, 2021). Hence, if the net effect of a higher level of decision rights is positive or negative seems to depend on the organizational context (Aghion & Tirole, 1997).

Despite the importance of decision rights for the congruence of interests, few empirical studies have examined their effects on decision-making (Bouwens & Kroos, 2019). This study contributes to filling this gap by empirically examining the individual benefits of delegating decision-making rights, in a context involving call center operators. In particular, it examines the effects of delegating decision rights on psychological empowerment and facilitating perception of performance indicators.

### 2.2 Decision-making rights and psychological empowerment

Psychological empowerment represents a state associated with intrinsic motivation for doing tasks, resulting from positive experiences during their execution, which lead to greater motivation and satisfaction (Thomas & Velthouse, 1990). There are many benefits of greater empowerment, like higher satisfaction and less stress at work, in addition to a greater sense of self-effectiveness (Spreitzer et al., 1997). For the organization, greater empowerment can result in increased customer perception of service quality (Gazooli et al., 2010) and organizational performance (Baird et al., 2018; Lewis et al., 2019).

Several organizational factors can affect psychological empowerment, especially job enrichment and the level of employees' participation in the decision-making process (Conger & Kanungo, 1988). Bureaucratic organizational structures that reduce employees' autonomy and decision-making rights tend to decrease the feeling of empowerment. On the other hand, creating spaces that allow employees to participate in the decision-making process, such as delegating greater right of decision, tends to favor empowerment (Block, 1987; Neilsen, 1986).

Therefore, delegating decision-making rights is expected to increase psychological empowerment (Conger & Kanungo, 1988; Brickley et al., 2015). This expectation seems particularly valid in a call center, where operators need to be agile and provide timely responses to solve customer demands. Hence, our first hypothesis regards the effect of delegating decision-making rights on the level of psychological empowerment of call center operators.

$H_1$. The level of psychological empowerment is greater when the level of decision rights is higher, rather than lower.

### 2.3 Decision-making rights and facilitating perception of performance indicators

Delegating decision-making rights can also improve the way employees notice and use managerial controls to perform tasks (Abernethy & Vagnoni, 2004). Managerial controls can be perceived as coercive or facilitating (Adler & Borys, 1996). Previous studies have increasingly adopted this classification and its specific benefits (Ahrens & Chapman, 2004; Mundy, 2010; Beuren & Santos, 2019; Mucci et al., 2021).

Coercive perception suggests that managerial controls restrict employees' efforts and push expected behaviors, while facilitating perception indicates that such controls help and enable employees to do their tasks (Jordan & Messner, 2012). Thus, it is expected that greater delegation of decision-making rights, representing greater decision autonomy (Mookherjee, 2006, 2009), is associated with the perception that managerial controls help and qualify employees for their tasks, instead of restricting behaviors, which would be the opposite of greater decision autonomy.

This study focused on the facilitating perception of the indicators used by superiors to evaluate the performance of call center operators. The indicators used for this purpose include days missed, days late, time connected to the systems, number of calls, and average response time. Therefore, we expected that call center operators would notice a facilitating, rather than coercive, use of these indicators with a higher level of delegation of decision rights.

In general, four aspects are essential to define if a control is perceived as facilitating - repair, internal transparency, global transparency, and flexibility (Adler & Borys, 1996; Jordan & Messner, 2012). In this study, repair suggests that operators notice that performance indicators were created to help them work more efficiently. As for internal transparency, operators notice that indicators were created to give greater visibility to their work. Regarding global transparency, operators notice that indicators were created to allow them understand organization's processes. Finally, flexibility indicates that operators perceive that performance indicators increase their flexibility in carrying out their work. In brief, we expected that when a higher level of decision-making rights is present, call center operators would perceive the use of performance indicators to facilitate identifying solutions to solve problems brought up by customers in time, rather than restricting behavior and forcing decisions.

Therefore, we developed the second hypothesis of the study expecting that delegating decision-making rights to call center operators would result in an increase of the facilitating perception of performance indicators, regarding, for example, greater flexibility (Adler & Borys, 1994; Ahrens & Chapman, 2004).

$H_2$. Facilitating perception of performance indicators is greater when the level of decision-making rights is higher, rather than lower.

Finally, we examined if the facilitating perception of performance indicators could explain the positive effects of delegating decision-making rights on psychological empowerment. Empowerment is associated with facilitation processes that favor decision-making (Meyerson & Dewettinck, 2012). By allowing employees notice that the use of performance indicators facilitates their actions without unduly restricting them (Jordan & Messner, 2012), the facilitating perception of performance indicators can result in greater psychological empowerment (Beuren et al., 2020). Therefore, the facilitating perception of performance indicators was expected to mediate the effect of delegating decision-making rights on psychological empowerment.

$H_3$. The facilitating perception of performance indicators mediates the effect of delegating decision-making rights on psychological empowerment.

## 3 METHODOLOGY

### 3.1 The company and its call center

To test the hypotheses, we carried out a quasi-experimental field study with call center operators at an insurance company, with the fictitious name of Conceito Seguros. It is an American multinational firm, operating in Brazil for over 100 years, with issued premiums around R$ 5.8 billion in 2022. Aiming to increase customer satisfaction with a more timely and agile service, Conceito Seguros began a project in October 2019, to review the decision-making rights of part of its call center. The company expected that this increase in customer satisfaction would stem from the greater psychological empowerment of operators who were given higher levels of decision autonomy.

Customer service at the call center is done in three ways: by chat, with 13 employees; by opening a call, with 12 employees; and by telephone, with 65 employees. The team also includes a customer service supervisor, who reports to an operations manager. Telephone assistance, which represents the largest number of contacts, was not included initially in the project, as the company sought to measure the impacts of the project on a smaller and more controlled group, with remote contact with the client, before expanding to the whole call center.

### 3.2 Manipulation of decision-making rights

Regarding the provided services, when a customer contacted the call center, his/her request could be answered on up to three different levels, whose separation and scheduling were done by using rules predefined by the immediate superior, based on the complexity and impact of the demand. Levels one and two, which were simpler and had less organizational impact, were handled by the call center itself, through chat and opening of calls, while the third level, more complex and with a greater impact, was handled by the company's treasury. Around 70% of the customers were served at the first level, and the others at the second and third levels.

The change in delegating decision-making rights, and therefore the manipulation of the independent variable, occurred by transferring to the first level of service part of the decision-making rights previously handled by the second and third levels, as well as transferring to the second level part of the decision rights of the third level (Table 1).

**Table 1.** Transfer of decision-making rights.

| Activity | Responsibility level | |
|---|---|---|
| | Before | After |
| Reinstatement of the policy, at the request of the insured and the broker, when there is already the acceptable inspection opinion. | 1 | 1 |
| Write-off of pending and already located installments, at the request of the insured and the broker. | 2 | 1 |
| Reprogramming of skipped installment. | 2 | 1 |
| Reprogramming of installment with inspection under analysis, at the request of the insured and the broker. | 2 | 1 |
| Return of unduly paid installments, at the request of the insured and the broker. | 2 | 1 |
| Reprogramming of an installment with a claim, in cases of authorized repairs. | 2 | 1 |
| Locating undue debt. | 3 | 1 |
| Check issued inquiry. | 3 | 1 |
| Change of charging method. | 3 | 1 |
| Reprogramming of installment, exempting interest for late payment. | 3 | 1 |
| Reversal and return of automatically written-off installment. | 3 | 2 |
| Return of first installment paid and not automatically linked in the policy. | 3 | 2 |
| Reinstatement of policy for cancellations requested by the insured. | 3 | 2 |
| Access to the payment receipts folder. | 3 | 2 |

Before implementing the project, the company had mapped 14 main activities done by call center or treasury operators, of which only one (7.1%) was carried out by level one service, while five (35.7%) and eight (57.1%) activities were carried out by levels two and three, respectively. With the expansion of decision-making rights and no changes in the activities, ten (71.4%) of them are now done at level one, while the remaining four activities (28.6%) are now carried out by level two, with no activity left for level three.

We emphasize that one of the co-authors of this study participated actively in the entire intervention process at Conceito Seguros, together with the operations director. This involvement ranged from designing the intervention, choosing the control and experimental groups, to discussing and reviewing the activities and responsibilities that would result in implementing the expansion of decision rights of the chosen call center, and measuring the benefits. The other co-authors were indirectly involved in the intervention by visiting the company and contacting the operations director to provide more information on the experimental procedure that would be implemented.

### 3.3 Participants

The experimental group, which had its decision-making rights extended, included 25 operators from the after-sales call center, exclusively for collection-related calls, by chat and call opening. As a control group, 20 operators were selected from another call center of the firm, also in the after-sales area and dealing with claims, whose decision-making rights were not changed. The control group served as a counterfactual to achieve greater internal validity of the results. The two groups are not located in the same physical workspace. In general, the tasks done by the two groups are similar.

As participants were not randomly assigned to the experimental conditions, this study is classified as a quasi-experimental field study (Lourenço, 2019); that is, there is a variable that is manipulated between the experimental and control groups - decision rights - and participants are professionals acting in their original work environment.

The expansion of decision-making rights, as well as the detailed presentation of calculation procedures and the relevance of performance indicators in conducting the daily activities of the experimental group, were implemented between October 14 and 18, 2019 (Figure 1). Between October 2019 and July 2020, no action was taken or measurements made, only the measurements of the performance indicators were kept. After presenting the study goals to the CEO, the CFO, and the HR Director, and obtaining formal authorization from the COO, the survey form was sent to the email addresses of both groups, on August 20, 2020.

We sent them by using different access links to Formsite®, in order to separate each group of participants. Two additional messages were sent, around five and twenty days after the first sending. We received answers until September 21, 2020. In the end, 21 of the 25 operators in the experimental group responded (84% response rate), and 16 of the 20 operators in the control group (80% response rate). 78.4% of the participants are female, 91.9% are over 25 years old, 75.7% are in college or have an undergraduate degree, and 32.4% have been with Conceito Seguros between 1 and 2 years, while the others have worked at the organization for more than 2 years.

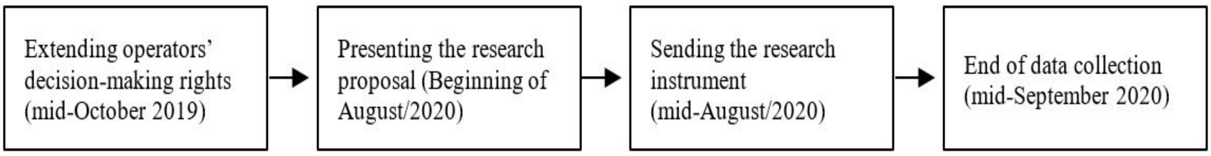


**Figure 1**. Timeline

The demographic variables differed between the experimental and control groups. For gender (t-test = -0.36; one-tailed p = 0.360) and education (t-test = 0.21; one-tailed p = 0.415), the differences were not significant. On the other hand, there were major differences for age (t-test = 2.39; one-tailed p = 0.011) and marginally significant differences for time of service (t-test = -1.46; one-tailed p = 0.077). The main results stand after including age and time of service as covariables, with the exception of the effect of delegation of decision-making rights on the facilitating perception of performance indicators. In the conclusion, this point will be revisited as part of the limitations.

### 3.4 Measuring the dependent variables

Psychological empowerment was measured using Mahama and Cheng's instrument (2013), containing 12 items, for which participants indicated their degree of agreement on a 7-point Likert scale (1 - totally disagree; 7 - totally agree). Based on principal component analysis, a single factor was created, explaining 53% of the variation (Eingevalue = 6.33), capturing the level of psychological empowerment. Higher values for this variable indicate higher levels of psychological empowerment.

The facilitating perception of performance indicators was also measured with Mahama and Cheng's (2013) instrument, containing six items for which participants indicated their degree of agreement on a 7-point Likert scale (1 - totally disagree; 7 - totally agree). The instrument was adapted to emphasize performance indicators rather than costing systems, given the specific context of this research. Based on principal component analysis, a single factor was created, explaining 77% of the variation (Eingevalue = 4.63), capturing the level of facilitating perception of performance indicators. Higher values for this variable indicate higher levels of facilitating perception.

# 4 RESULT ANALYSIS

## 4.1 Manipulation check

To check for manipulation, participants answered three questions on a 7-point Likert scale (1 - totally disagree; 7 - totally agree), capturing their perception of autonomy in the decision process. The experimental group (M = 5.28) showed a significantly higher level of agreement with the sentence 'my job gives me the chance to use my initiative or personal judgment to carry it out' than the control group (M = 3.56) (t-test = -3.47; one-tailed p = 0.001). In addition, the experimental group (M = 4.62) showed a significantly higher level of agreement with the sentence 'my job allows me to make many decisions on my own' than the control group (M = 3.50) (t-test = -1.99; one-tailed p = 0.027). Finally, the experimental group (M = 5.48) showed a significantly higher level of agreement with the sentence 'my job gives me a lot of autonomy for making decisions' than the control group (M = 3.56) (t-test = -4.29; one-tailed p = 0.000). In short, the experimental group showed greater perceptions of autonomy in the decision-making process than the control group, indicating the effectiveness of manipulation.

## 4.2 Descriptive statistics

Table 2 shows the descriptive statistics for psychological empowerment and facilitating perception of performance indicators. Psychological empowerment is higher for the experimental group (M = 1.01) than for the control group (M = -1.33). Similarly, facilitating perception was higher for the experimental group (M = 0.41) than for the control group (M = -0.53). This average pattern is consistent with expectations that psychological empowerment and facilitating perception of performance indicators are greater for operators with a higher level of decision-making rights.

**Table 2.** Descriptive statistics

| Groups | Psychological empowerment | Facilitating perception |
|---|---|---|
| Control | | |
| Average | -1.33 | -0.53 |
| Std. deviation | 0.76 | 0.63 |
| Number of participants | 16 | 16 |
| Experimental | | |
| Average | 1.01 | 0.41 |
| Std. deviation | 0.30 | 0.39 |
| Number of participants | 21 | 21 |

## 4.3 Testing $H_1$ and $H_2$

$H_1$ and $H_2$ were tested through ordinary least squares regression, using robust standard errors. The first hypothesis ($H_1$) suggested that the level of psychological empowerment is greater when the level of decision rights is higher, rather than lower. Psychological empowerment is the dependent variable and the levels of decision rights - control or experimental group - the independent variable. The result indicates that psychological empowerment is significantly higher when the level of decision-making rights is higher, rather than lower (t-test = 2.87; one-tailed p = 0.004). This result supports $H_1$ and confirms previous studies (Conger & Kanungo, 1988; Brickley et al., 2015), predicting that a higher level of decision-making rights results in a higher level of psychological empowerment.

The second hypothesis ($H_2$) suggested that the facilitating perception of performance indicators is greater when the level of decision-making rights is higher rather than lower. Facilitating perception is the dependent variable and the level of decision-making rights - control or experimental groups - is the independent variable. The result indicates that facilitating perception of performance indicators is marginally higher when the level of decision rights is higher, rather than lower (t-test = 1.27; one-tailed p = 0.105). This result provides marginal support to $H_2$ and confirms previous studies (Adler & Borys, 1994; Ahrens & Chapman, 2004), suggesting that a higher level of decision rights results in a higher level of facilitating perception of performance indicators.

### 4.4 Mediation analysis

The third hypothesis ($H_3$) suggested that the facilitating perception of performance indicators mediates the effect of delegating decision-making rights on psychological empowerment. It was expected that the positive effect of a higher level of decision rights on psychological empowerment occurred through an increase in the facilitating perception of performance indicators. To test $H_3$, we carried out a structural equation analysis, using Stata software and the analysis method of variance and covariance, with decision rights as the independent variable, the level of psychological empowerment as the mediating variable, and the facilitating perception as the dependent variable.

Figure 2 shows the main results. The quality of fit of the structural equation model was confirmed with the Tucker-Lewis indices and CFI (Comparative Fit Index) equal to 1.0, thus above the recommended value of 0.90, in addition to the standardized residual root mean square equal to 0.0, which is lower than the recommended value of 0.08 (Hooper et al., 2008). Confirming $H_1$, psychological empowerment is higher when the level of decision-making rights is higher (z-test = 3.29, one-tailed, p = 0.000, Link 1). Consistent with $H_2$, the facilitating perception of performance indicators is marginally higher when the level of decision rights is higher (z-test = 1.37, one-tailed, p = 0.085, Link 2). Furthermore, the relationship between psychological empowerment and facilitating perception is positive and significant (z-test = 7.22, one-tailed, p = 0.000, Link 3), so that the greater the psychological empowerment, the greater the facilitating perception of performance indicators.

Finally, the indirect effect of the level of decision rights on the facilitating perception was marginally significant (z-test = 1.35, one-tailed, p = 0.089). Therefore, $H_3$ was supported, indicating that higher versus lower level of decision rights increases the facilitating perception of performance indicators (Adler & Borys, 1994; Ahrens & Chapman, 2004), which, in turn, increases psychological empowerment (Beuren et al., 2020). Hence, a higher level of psychological empowerment can be achieved due to a greater facilitating perception of performance indicators, caused by the higher level of decision-making rights.

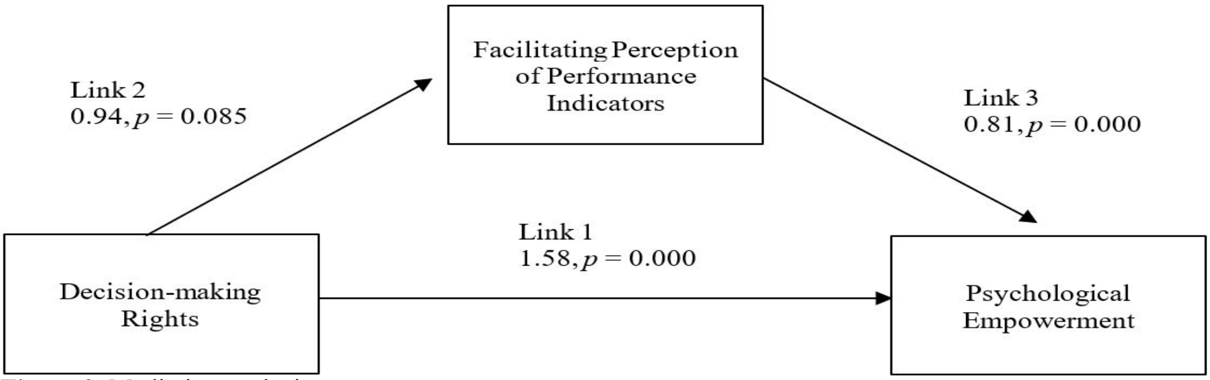


**Figure 2.** Mediation analysis

## 5 CONCLUSIONS

The results of the quasi-experimental field study conducted with call center operators show the individual benefits that a higher level of decision-making rights can bring. First, we observed that psychological empowerment was greater for operators who had their decision rights increased, compared to the control group. This result is consistent with the expectation that expanding spaces that provide employees with the opportunity to participate in the decision-making process, through the expansion of decision rights, favors the feeling of psychological empowerment (Block, 1987; Neilsen, 1986). This result is important for companies wishing to increase their employees' psychological empowerment by adjusting the organizational design.

In addition, results indicate that the facilitating perception of performance indicators is also higher for operators with higher versus lower levels of decision-making rights. These results are consistent with previous expectations that employees who have more flexibility and decision autonomy, associated with a higher level of decision-making rights, tend to increase their facilitating perception of managerial controls (Adler & Borys, 1994; Ahrens & Chapman, 2004); in particular, they tend to perceive that performance indicators are used more for the purpose of facilitating their actions than restricting them (Jordan & Messner, 2012). These results seem to strengthen the idea of adequacy between the various control mechanisms used by organizations to achieve goal congruence (Brickley et al., 2015). Especially, at least for call center operators, and confirming the organization's expectations, the expansion of decision-making rights seems to have requested a facilitating *versus* coercive perception of performance indicators from operators, aiming to increase customer satisfaction.

Finally, the results of this study show that the facilitating perception of performance indicators partly explains the benefits of greater psychological empowerment resulting from a higher level of decision-making rights. They confirm the expectation that facilitating perception of managerial controls increases psychological empowerment (Beuren et al., 2020), and acts as a mediating variable for the effect of delegating decision-making rights on psychological empowerment. The main implication of these results is that organizations aiming to extend their employees' psychological empowerment through a higher level of decision-making rights must also observe the effect that this delegation can cause on the perception of managerial controls.

The results of this study show limitations that serve as opportunities for future research. First, by conducting a quasi-experimental field study, without being able to randomize the participants for the experiment conditions, the internal validity of the results is compromised. In order to overcome this limitation, we included a control group that was as close as possible to the experimental group, to serve as a comparison parameter (counterfactual). In this case, operators in the control group were different in terms of age and time of service from the experimental group, and these differences affected the significance of the effects of delegating decision-making rights on the facilitating perception of performance indicators. For the other results, including the effect of decision rights on psychological empowerment and the mediating effect of facilitating perception, results were kept even when these demographic differences were considered. Future studies should design laboratory experiments where randomization of participants regarding experimental conditions would be possible, to validate the hypotheses and results of this study.

Second, the study focused on examining the individual benefits of a higher level of decision-making rights, but we did not observe if the organization achieved the expected benefits of greater customer satisfaction and performance as a result of this structural change. Future studies could carry out longitudinal analyses to measure the benefits to the company from changes in the level of decision-making rights. Third, due to limited access, the analyses did not include a follow-up stage with employees, in order to deepen the examined relationships. Future research could match research designs with a qualitative stage, to capture additional aspects on the individual benefits of a higher level of decision-making rights.

Finally, the number of participants was rather small, compromising the statistical power of the tests. Future studies could include a larger number of participants to increase statistical power, thus achieving greater validity of the conclusions. However, it is necessary to consider the difficulties of access to participants working in organizational environments; when this access is allowed, it brings clear benefits to the external validity of results. Therefore, despite these limitations, we consider that the study made progress by providing empirical evidence of the individual benefits resulting from an expansion of decision-making rights to call center operators.

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