

Organizational bonds and the moderating effect of sociodemographic and occupational variables of public servants

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1. Introduction

In a large and diverse organization, such as the Brazilian Federal Revenue (RFB in Portuguese), it is important to understand in more detail the organizational bonds of its servants, analyzing which personal and occupational characteristics can impact the development of these bonds. RFB is a heterogeneous public organization, including a variety of areas of activity and diverse profiles of workers. In addition to presenting a strong cultural diversity, as it is present throughout the country, from Brazil's main financial capital to distant border points. All these peculiarities make this organization very rich, but also very challenging for understanding the employee's relationship with the organization and the implementation of people management policies and practices.

From this knowledge, it is possible to draw up strategies aimed at a certain target audience. For example, will a worker who has more time in service or holds a management position be more attached to the organization than his colleague in the same team with less time in service and no management position? And does the fact of being the head of a team make management practices that stimulate organizational attachment have more impact on this worker?

In this sense, understanding the composition of worker's organizational bonds and contextual factors can help the elaboration of strategies for developing and strengthening bonds, encouraging the existence of bonds with positive impacts for individuals and the organization (Rodrigues & Alvares, 2020).

Although the organizational commitment bond has been the subject of frequent research in the area of organizational behavior in recent decades (Pinho, Oliveira, & Silva, 2020), the investigation of the entrenchment bond still needs greater emphasis. Entrenchment is a relatively recent concept compared to commitment and it is important to understand this phenomenon for the organization. In addition, studies that deepen the relationship between these bonds are still incipient (Rodrigues & Alvares, 2020; Tomazzoni et al., 2020).

In some studies (Milhome & Rowe, 2018; Vital, Paiva, & Pereira, 2020), organizational entrenchment (OE) showed a positive and significant correlation with organizational commitment. These studies demonstrate that the investment of the worker and the organization, in terms of time and/or money for adaptation and good performance of their duties (dimension of adjustment to social position), contribute positively to the development of commitment. Thus, organizational practices and strategies aimed at increasing levels of entrenchment could have repercussions on higher levels of commitment. Considering this relationship, the investigation of the moderating role of sociodemographic and occupational variables in the relationship between these two organizational bonds can guide the proposition of bond management practices more focused on a given worker profile.

In Brazilian context, there are few studies that have worked with moderating variables related to organizational commitment, which reveals that the study on the main moderators of the development and maintenance of this bond is still little explored in the national literature (Pinho et al., 2020). We identified the study by Fernandes, Siqueira, and Vieira (2014) that evaluated the moderating role of leadership in the relationship between organizational support and affective commitment and the study by Silva, Mendes, Beuren, Lunkes and Kruger (2022) that investigated the moderating effect of procedural justice on the relationship between reward systems and affective commitment. However, no study on the moderating effect of sociodemographic and occupational variables on the relationship

between organizational bonds was identified.

In this scenario, the research problem emerges: What are the possible moderating relationships of sociodemographic and occupational variables between organizational bonds? In view of the gaps presented, this study proposes to analyze the organizational bonds (commitment and entrenchment) of RFB employees based on their sociodemographic and occupational characteristics, in addition to verify the moderating effect of these variables on the relationship between the dimensions of entrenchment and organizational commitment among employees of the RFB. By understanding which sociodemographic and occupational characteristics have an impact on the relationship between these bonds, it is possible to develop more refined and better adjusted people management practices for certain workers.

2. Organizational commitment and entrenchment: concepts and empirical evidence

For this study, unidimensional organizational commitment was assumed, characterized by the willingness to exert considerable effort for the benefit of the organization and a strong desire to remain in it (Mowday, Porter, & Steers, 1982). Klein and Park (2016) argue that the unidimensional approach provides a more concise definition with clear boundaries of the other constructs. And it is conceptualized as a unique type of psychological attachment, eliminating the need for auxiliary mindsets.

According to Bastos and Aguiar (2015), organizational commitment (OC) is defined as a strong bond between the worker and the organization, demonstrated by extra commitment exerted for the sake of work, the existence of common beliefs, values and goals and the strong desire to remain in the organization. In other words, this concept is essentially linked to the affective basis, which relates to the feeling of pride in belonging and involvement with the organization.

The concept of organizational entrenchment was proposed by Rodrigues and Bastos (2011) with the aim of increasing the clarity of the concept of organizational bonds, highlighting it from the broad concept of commitment. This construct was defined as a bond of permanence in the organization based on need. The entrenched worker presents an instrumental bond of permanence in the organization, in which he analyzes the possible losses resulting from his departure, such as financial benefits, stability, investments already made and other losses, thus concluding to continue in the organization (Pinho, Bastos, & Rowe, 2015; Rodrigues & Bastos, 2011).

Despite the conceptual proximity between instrumental commitment and entrenchment, considering that they are both based on the need to remain in the organization, Rodrigues and Bastos (2011) demonstrate that OE is not restricted to the lack of alternatives and expectations in the organization, it also includes the perception of having benefits and stability, and the emotional costs of leaving, such as the loss of interpersonal relationships.

In this context, three dimensions of OE were proposed by Rodrigues and Bastos (2015), named: adjustments to social position (ASP), related to the efforts undertaken by the worker and the organization to adapt to the job and the costs related to the already established interpersonal relationships that would be lost if he left the organization; impersonal bureaucratic arrangements (IBA), in which financial gains, stability and other financial benefits discourage the worker from leaving the organization; and limitations of alternatives (LA), in which the worker perceives employability restrictions in the labor market outside the organization.

It is important to highlight that as the unidimensional approach to commitment and the construct of entrenchment have only been in the literature for a shorter time and as such does not have the same empirical basis available, this article also used the most frequent literature, which involves the tridimensional commitment (affective, instrumental, and normative dimensions).

Regarding the investigations of organizational bonds in the context of public sector, Oliveira and Honório (2020) developed a study with public servants of operational, administrative and management positions, in which higher levels of affective commitment were identified, compared to the normative and instrumental dimensions, with no significant difference between the last two. Other studies attest to the predominance of the affective-based bond in public servants (Balsan, Bastos, Costa, Schleder, & Balsan, 2021; Oliveira, Costa, Bouzada, & Salles, 2018).

The research developed by Silva, Paiva, and Lima (2019) revealed that public servants of a federal educational institution prioritize stability and financial independence, presenting higher levels of the IBA dimension of entrenchment, which is related to financial gains and stability. In fact, a career in the public sector presents these characteristics as one of its greatest attractions. Rodrigues and Bastos (2013) identified higher levels of commitment than entrenchment in a study with public servants from different organizations. In addition, it showed that the higher the educational level of the worker, the lower the level of commitment and the higher the level of entrenchment.

Somavilla, Santos, Costa, Guse, and Santos (2020) researched technical-administrative staff of a public higher education institution and identified a positive relationship between affective commitment and the variables age and education. Regarding entrenchment, the variables length of service and salary showed a positive relationship. Other empirical evidence associates personal characteristics, such as gender, with OC levels, revealing that women tend to be more committed when they perceived opportunities for growth and development, while men consider remuneration, power, autonomy, and pride (Silva & Honório, 2011).

Some studies associate organizational bonds with management positions. Rocha and Honório (2015) showed that these workers were more affectively linked, presenting greater identification and sense of belonging. Thus, Oliveira and Costa (2015) identified that a gratified function has a positive relationship with affective and normative commitment.

Considering the literature presented, the following hypotheses were formulated:

H1a: RFB employees are more committed than entrenched.

H1b: Employees occupying management positions have higher levels of commitment than employees who do not occupy management positions.

To better understand the results of this research, it is important to contextualize its unit of analysis. RFB carries out its activities throughout the national territory through an organizational structure that includes centralized units, headquartered in Brasilia, and decentralized units geographically distributed and organized in 10 fiscal regions.

The RFB is an integral body of the Ministry of Finance and is responsible for the administration of taxes under the competence of the Union, including social security and foreign trade taxes. The responsibilities of RFB are extensive, complex, and diverse, such as: repression of smuggling and embezzlement; formulation of economic-fiscal information policies; interaction with citizens through various service channels, in person or virtually; support for the formulation of tax and customs policy; administration of internal taxes and foreign trade; among many other competencies included in the Internal Regulations of the RFB (Ordinance n. 298 (2020)).

To carry out organizational objectives and duties, the RFB's staff is made up of approximately 22 thousand employees, of which 16,818 are public servants, distributed among 7,441 tax auditors, 5,951 tax analysts and 3,426 administrative technicians, according to information consulted in Support System for Administrative Activities of the Federal Revenue of Brazil (SA3) in November 2023.

Tax auditors and tax analysts are part of the RFB's audit career, according to Law No. 10,593 (2002). To enter these positions, the public tender requires a degree. For technical-

administrative staff, no higher education is required and there is no specific career within the RFB. Therefore, they are usually the least educated employees.

Somavilla et al. (2020), when investigating technical-administrative employees of a higher education institution, identified that the level of education is positively related to the levels of OE. In the context of the RFB, technical-administrative staff have lower salaries, which may be associated with a lower level of commitment, according to the results found by Somavilla et al. (2020). The remuneration, if unsatisfactory, can be perceived as easily replaced, which would influence lower OE.

Given the particularities of technical-administrative staff, such as not belonging to an RFB career, less autonomy to perform their duties and lower remuneration, it is expected that they will be less committed.

Therefore, the following hypothesis is proposed:

H1c: Employees occupying the technical-administrative position have lower levels of commitment and entrenchment.

As for tax analysts and tax auditors, both are members of the RFB's audit career and have higher education levels. There are also many duties common to both positions. Given these characteristics, the following hypothesis was formulated:

H1d: There are no significant distinctions between the levels of organizational bonds for those occupying RFB's audit career: tax analyst and tax auditor.

As explained in the introduction, no studies were identified on moderation of sociodemographic and occupational variables between organizational bonds. This research was made in the databases (SCIELO, SPELL, Rpot and Portal de Periódicos CAPES) using the keywords *organizational bonds*, *moderation analysis*, *sociodemographic and occupational variables*, *organizational commitment*, and *organizational entrenchment*. Specifically, few studies on moderation were identified involving organizational bonds and other variables: OC and the moderating role of leadership types (Fernandes et al., 2014); perceived organizational support (Kim, Eisenberger, & Baik); and procedural justice (Silva et al., 2022).

These studies used sociodemographic variables as control variables and concluded that they play a lesser role in the development of bonds than the others, such as those related to work. Thus, it is expected that the variables related to the occupational context, such as length of service, career and whether a managerial position is held, will have greater interference in the relationship between the dimensions of OE and OC. Therefore, the following hypothesis were developed to test the moderation of sociodemographic and occupational variables between OC and OE, considering that the predictive effect of the dimensions of OE found in this study was significant in OC ($R^2 = 0.17$):

H2a: The impact of the ASP dimension of OE on OC is significantly influenced by length of service, career, and management position.

H2b: The impact of the IBA dimension of OE on OC is significantly influenced by length of service, career, and management position.

H2c: The impact of the LA dimension of OE on OC is significantly influenced by length of service, career, and management position.

3. Method

The survey was conducted among RFB servants (tax auditors, tax analysts and administrative technicians). An online questionnaire was applied, made available on the RFB intranet and sent through the institution's corporate e-mail box to all civil servants. A total of 1,126 valid responses were obtained. Most participants were male (65.54%), married or in a stable union (74.42%), completed higher education (45.02%) or specialization (42.63%), tax auditor (53.29%) and did not hold a management position (66.70%). On average, they are 49.5 years old (from 26 to 75) and have worked for 18 years at the RFB (from 2 to 45).

The questionnaire was structured in two parts: the first, to measure the level of bonds, including the scales: organizational commitment composed of 12 items and unidimensional (Bastos & Aguiar, 2015) and organizational entrenchment of 18 items and three dimensions – IBA, ASP and LA (Rodrigues & Bastos, 2015). The scales are six-points Likert type, ranging from “strongly disagree” to “strongly agree”.

The second part investigated personal and occupational data: age, gender, marital status, number of children and dependents, education, length of service, occupant of management position, career, area of activity and administrative unit. Respondents were informed that their anonymity would be guaranteed, and that the data would be used only for academic purposes, and they consented.

Descripted-explanatory and quantitative research was used to achieve the objective. Psychometric properties of the instruments were analyzed with confirmatory factor analysis (CFA), evaluation of the invariance of the parameters of the items according to the positions of the participants and multiple indicators multiple causes (MIMIC) modeling for age and length of service. All scales showed satisfactory psychometric characteristics, with good indicators of fit to the sample, internal consistency, and composite reliability. [Scale of organizational commitment: $\chi^2(44) = 361,16$; $\chi^2/gl = 8,20$; RMSEA = 0,080 (0,072 – 0,08); CFI = 0,992; TLI = 0,987; (α) = 0,94; composite reliability = 0,96 | Scale of organizational entrenchment: $\chi^2(119) = 920,19$; $\chi^2/gl = 7,73$; RMSEA = 0,07 (0,073 – 0,082); CFI = 0,960; TLI = 0,949; internal consistency (α) (ASP = 0,81; IBA = 0,79; LA = 0,86); composite reliability (ASP = 0,88; IBA = 0,77; LA = 0,86)]. Multigroup analyses indicate that the scales present invariance of parameters regarding positions, age, and length of service.

Data analysis included the application of descriptive techniques, such as means, centrality and dispersion trends, chi-square association tests, mean comparison analyses (t-test and ANOVA), linear regression and multinomial logistic regression, using the SPSS program (version 22). In addition, moderation analysis was performed using Macro Process V3.5 (Igartua & Hayes, 2021). Mplus (version 7.2) was used to performed, with 1000 resamplings and 95% confidence intervals (BCa), aiming to correct for deviations from sample normality (Haukoos & Lewis, 2005).

4. Presentation and discussion of results

Initially, the psychometric properties of the data collection instruments used were verified, followed by the analysis of the organizational bonds of RFB employees based on their sociodemographic and occupational characteristics and the moderating effect of these variables on the relationship between organizational entrenchment and commitment.

4.1 Psychometric properties of the instruments

Seeking to evaluate the psychometric properties of the measures used in this study, confirmatory factor analysis (CFA) was used, evaluation of the invariance of item parameters depending on the participants' career and multiple indicators multiple causes (MIMIC) modeling for age and length of service.

The CFA result for the organizational commitment scale indicates that it is valid for the context of this research [$\chi^2(44) = 361,16$; $\chi^2/gl = 8,20$; RMSEA = 0,080 (0,072 – 0,08); CFI = 0,992; TLI = 0,987], with internal consistency (α) of 0,94, composite reliability of 0,96, as well as adjustment to the sample. Furthermore, statistical analyzes demonstrated that the scale was invariant between careers and was not affected by age or length of service.

The organizational entrenchment scale presented satisfactory psychometric characteristics, with good indicators of adjustment to the sample [$\chi^2(119) = 920,19$; $\chi^2/gl = 7,73$; RMSEA = 0,07 (0,073 – 0,082); CFI = 0,960; TLI = 0,949], and satisfactory values of

internal consistency (ASP = 0.81; IBA = 0.79; LA = 0.86) and composite reliability (ASP = 0.88; IBA = 0.77; LA = 0.86). In the same way as the previous scale, multigroup analyzes indicate that it is invariant depending on career, age, and length of service.

4.2 Organizational bonds and sociodemographic and occupational characteristics

A descriptive and correlation analysis of the data obtained in this study was carried out to verify the distributions of the participants' mean scores according to the constructs measured.

Table 1.

Distribution of variable means for the sample and Spearman's ρ correlation matrix.

Variables	Means (SD)	Correlation coefficients		
		1	2	3
1 Organizational Commitment	4,22 (1,10)	-		
2 Entrenchment – ASP	3,11 (1,15)	0,24**	-	
3 Entrenchment – IBA	4,06 (1,08)	-0,02	0,52**	-
4 Entrenchment – LA	3,05 (1,23)	-0,12**	0,50**	0,54**

Note: ** $p < 0,0001$; SD – standard deviation.

Source: Survey data

The averages of organizational bonds demonstrated that RFB public servants are more committed than entrenched, providing empirical support for accepting H1a. Some research found a predominance of affective bonds in public organizations (Balsan, Costa, Lopes, Santos, Balsan, & Bastos, 2020; Balsan et al. 2021; Pereira & Lopes, 2019) and specifically in a certain fiscal region of the RFB (Oliveira et al., 2014). In relation to organizational entrenchment, the IBA dimension obtained the highest average, indicating that RFB employees consider that financial stability and the benefits achieved would be the main losses if they left the organization (Rodrigues & Bastos, 2013). It is known that one of the main attractions of public service is the right to stability, considering the country's unstable economic situation (Rodrigues et al., 2020).

Aiming to identify differences in relation to sociodemographic variables, a series of means comparison tests were carried out. It was sought to assess whether participants who occupied a management position were different from others in relation to the variables analyzed. In Table 2 it is possible to observe the result of the Student's t test and the means for each group. The results point to statistically significant differences for organizational commitment ($t = 7.21$; $p < 0.0001$), with a higher average for those who occupy a management position. The results point to accepting H1b.

Those occupying management positions tend to play a team moderator role, which is why they are more involved with organizational objectives and activities. This aspect tends to bring them closer to the organization, enabling greater sharing of values and objectives, as well as greater identification and commitment to the organization. Such characteristics are associated with the profile of emotionally committed workers (Bastos & Aguiar, 2015).

In relation to organizational entrenchment, the factors ASP ($t = 1.62$; $p = 0.11$) and IBA ($t = -0.76$; $p = 0.44$) do not present statistically significant differences between the two groups. On the other hand, the LA factor ($t = -2.27$; $p = 0.03$) presents statistically significant differences, with a lower mean for participants with management positions. This result may corroborate the idea that employees who occupy management positions accumulate managerial skills throughout their experience in the position, which makes them perceive themselves as more qualified for the job market, expanding the possibilities of relocation outside the organization, being able to go beyond its operational capabilities.

Table 2

Averages of organizational bonds depending on management position in the organization.

Variables	With management position	Without management position	T
	Mean (SD)	Mean (SD)	
Organizational Commitment	4,52 (0,94)	4,06 (1,14)	7,21**
Entrenchment – ASP	3,19 (1,09)	3,08 (1,17)	1,62
Entrenchment – IBA	4,02 (1,05)	4,07 (1,09)	-0,76
Entrenchment – LA	2,94 (1,16)	3,11 (1,26)	-2,27*

Note: * $p < 0,05$; ** $p < 0,0001$; SD – standard deviation.

Source: Survey data

Continuing the analysis, based on the participants' careers, an ANOVA was carried out and the result points to statistically significant differences for all tested variables. In Table 3 it is possible to observe the averages depending on the career and the result. In relation to organizational commitment [$F(2, 1123) = 7.63$; $p < 0.0001$], the Bonferroni post hoc test identified statistically significant differences between tax auditors and administrative technicians ($p < 0.0001$) and between tax analysts and administrative technicians ($p < 0.0001$), the last group being the one with the lowest average.

Table 3.

Distribution and comparison of the averages of the variables in the participants' careers.

Variables	Tax auditor	Tax analysts	Administrative	F
	Mean (SD)	Mean (SD)	Mean (SD)	
Organizational Commitment	4,25 (1,03)	4,30 (1,08)	3,92 (1,31)	7,63*
Entrenchment – ASP	3,28 (1,13)	3,12 (1,10)	2,50 (1,10)	32,31**
Entrenchment – IBA	4,22 (0,98)	4,16 (0,96)	3,23 (1,30)	63,80**
Entrenchment – LA	3,05 (1,21)	3,25 (1,20)	2,61 (1,26)	16,17**

Note: * $p < 0,05$; ** $p < 0,0001$; SD – standard deviation.

Source: Survey data

Focusing on the results referring to the technical-administrative staff, lower OC

averages were identified for this category (3,92), which brings empirical support to H1c. It is possible to think that the fact that they do not carry out the RFB's core activities and are not part of a specific career within the body may result in the failure to fully develop a sense of belonging, influencing the perception that they do not fully share the same values and objectives of the organization, since they identify less with the body than their colleagues tax auditors and tax analysts.

Regarding organizational entrenchment, for the ASP factor [$F(2, 1123) = 32.31; p < 0.0001$] the differences are located between tax auditors and administrative technicians ($p < 0.0001$), as well as between tax analysts and administrative technicians ($p < 0.0001$), with administrative being the group with the lowest averages. It is worth noting that all careers have an ASP level below the midpoint of 3.5. Regarding the IBA factor [$F(2, 1123) = 63.8; p < 0.0001$], the differences are also between tax auditors and administrative technicians ($p < 0.0001$), as well as between tax analysts and administrative technicians ($p < 0.0001$), considering the administrative technicians' group with the lowest average (3.23). These results bring empirical support to partially confirm H1d in relation to the similarity of the bonds' pattern between auditors and analysts.

Finally, in relation to the LA factor [$F(2, 1123) = 16.17; p < 0.0001$], statistically significant differences are identified between tax auditors and tax analysts ($p = 0.04$), between tax auditors and administrative technicians ($p < 0.0001$), as well as between tax analysts and administrative technicians ($p < 0.0001$), with the lowest average being that of administrative technicians, followed by the group of tax auditors. It is important to point out that, in LA, as well as ASP, all careers have a level below the midpoint (3.5).

As expected, the administrative technicians also presented lower levels in all OE dimensions (ASP 2,50; IBA 3,23; LA 2,61), confirming H1c. Therefore, they were less trapped by financial stability and financial gains. This result can be explained by the salary difference that exists among careers, with the technical-administrative being the one with the lowest salary. Hence, this would probably not be the factor that would keep them in the organization. This is in line with the result regarding the lowest levels of LA, as they realize that leaving the organization would not result in financial losses (IBA dimension) and that they would not be wasting investments and efforts to adapt to the current work (ASP dimension), it is concluded that the civil servant occupying the administrative position at the RFB realizes that it is possible to find work opportunities outside the organization (LA dimension).

On the other hand, Silva, Paiva and Lima (2019) identified that technical-administrative employees demonstrated a greater perception of LA than professors at a public university and relate this finding to the fact that administrative technicians do not feel able to relocate to the employment market due to the need for greater investment in qualifications.

A possible explanation for why employees in the audit career (auditors and analysts) presented higher levels of LA, despite their significant difference, partially refuting H1d, could be because they feel that they are part of such a professional profile specific to the organization that they would not be easily fitted into other jobs in the market or, even, they believe that their current role, status and remuneration would not be easily achieved in another organization, considering the current economic crisis in Brazil. The private sector, for example, generally provides remuneration at a value below that of the federal public sector. Therefore, they may have the perception that they are not employable outside the RFB environment.

4.3 Sociodemographic and occupational moderations

Initially, in order to evaluate the predictive effects of entrenchment on commitment, multiple linear regression analysis was performed, as shown on Table 4. OC is predicted by the three factors of OE [$F(3, 1122) = 79,55; p < 0,001; R^2 = 0,17$], showing a positive relationship

only with ASP dimension.

Table 4.

Multiple linear regression

Dependent variable	F	R ²	Predictors	β
Organizational Commitment	79,55*	0,17	Adjustments to social position - ASP	0,48**
			Impersonal bureaucratic arrangements – IBA	-0,07*
			Limitation of alternatives – LA	-0,32**

Source: Survey data

Moderation analysis were performed individually for each of the three predictors. And moderation plots were drawn for statically significant combinations.

The relationship between the ASP and OC factors was moderated by gender, management position, career, age, and length of service. As for the LA factor, moderation was identified only for length of service. Moderation was found when the variable representing the interaction (W) between the predictor variable (X) and the moderator was statistically significant. Table 5 shows the results of this analysis.

Table 5.

Moderation of sociodemographic variables between OE and OC

Independent variable	Moderator (interaction)	b	T	ΔR ²
Adjustments to social position – ASP	Gender	-0,38	-2,04*	0,004
	ASP * gender (W)	0,14	2,41*	
	Management position	0,84	4,26**	0,003
	ASP * management position (W)	-0,13	-2,18*	
	Career (W1)	-0,16	-0,76	0,009
	Career (W2)	-0,88	-3,62*	
	ASP * career (W1)	0,08	1,26	
	ASP * career (W2)	0,28	3,34*	0,004
	Age	0,05	4,88**	
	ASP * Age (W)	-0,01	-2,39*	
Length of service	0,03	3,42*		
ASP * Length of service (W)	-0,01	-2,00*	0,003	
Impersonal bureaucratic arrangements - IBA	Gender	-0,62	-2,37*	0,004
	IBA * gender (W)	0,15	2,31*	
	Management position	0,26	0,96	0,000
	IBA * management position (W)	0,05	0,80	
	Career (W1)	-0,20	-0,61	0,008
	Career (W2)	-1,24	-4,12**	
	IBA * career (W1)	0,06	0,79	
	IBA * career (W2)	0,25	3,12*	0,007
	Age	0,07	5,30**	
	IBA * Age (W)	-0,01	-3,04*	
Length of service	0,07	5,40**		
IBA * Length of service (W)	-0,01	-3,98**	0,013	
Limitation of alternatives - LA	Gender	-0,16	-0,91	0,000
	LA * gender (W)	0,04	0,63	

Management	0,42	2,28*	0,000
LA * management position (W)	0,01	0,15	
Career (W1)	-0,07	-0,36	0,003
Career (W2)	-0,79	-3,48**	
LA * career (W1)	0,05	0,84	
LA * career (W2)	0,15	1,94	
Age	0,03	3,14*	0,000
LA * Age (W)	0,00	0,34	
Length of service	0,04	4,29**	0,003
LA * Length of service (W)	-0,01	-2,08*	

Note: * $p < 0,05$; ** $p < 0,0001$; X – predictor variable; W – interaction occurs between predictor variable and moderator variable; W1 – comparison between tax analysts and other positions; W2 – comparison between administrative technicians and other positions; ΔR^2 effect of moderation on the explained variance of the dependent variable.

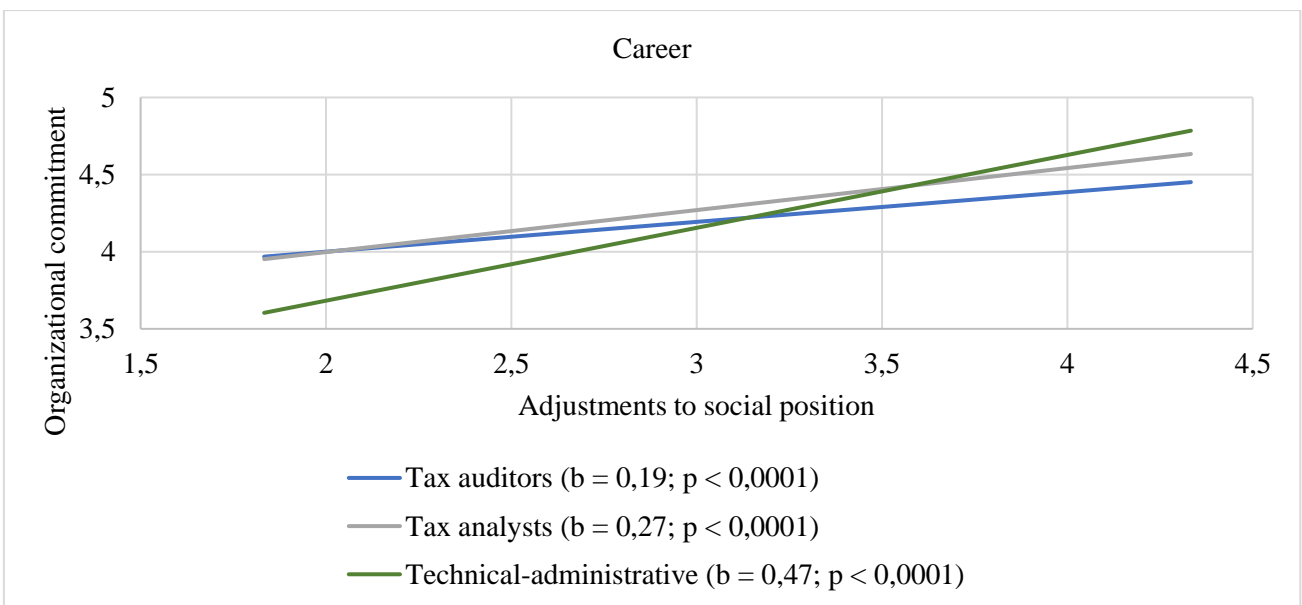
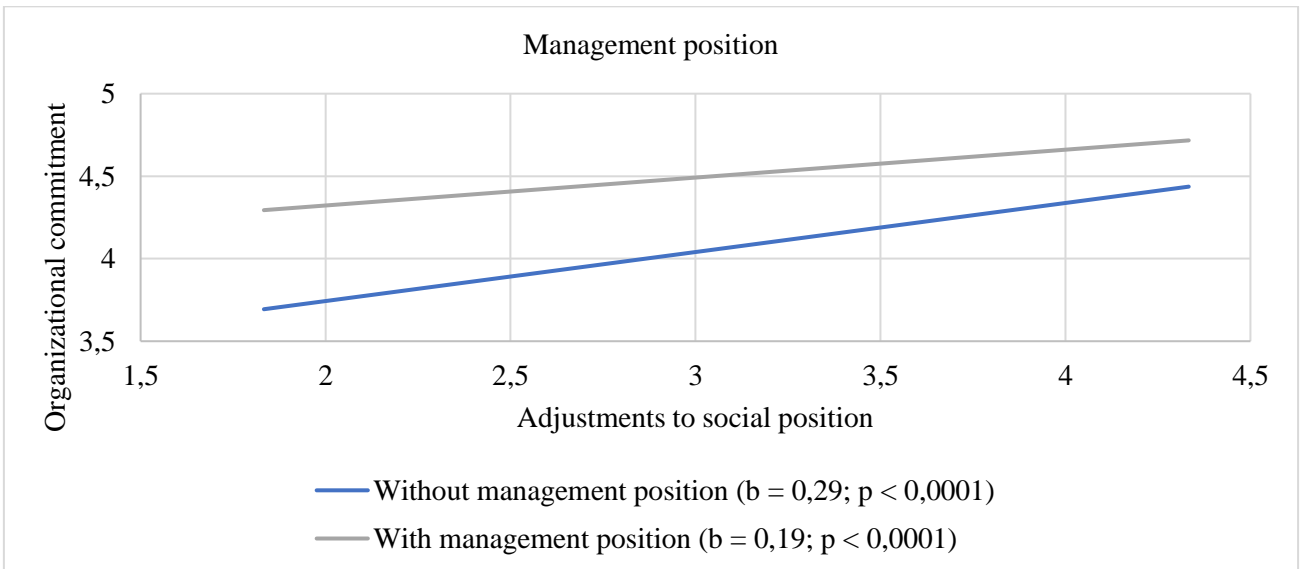
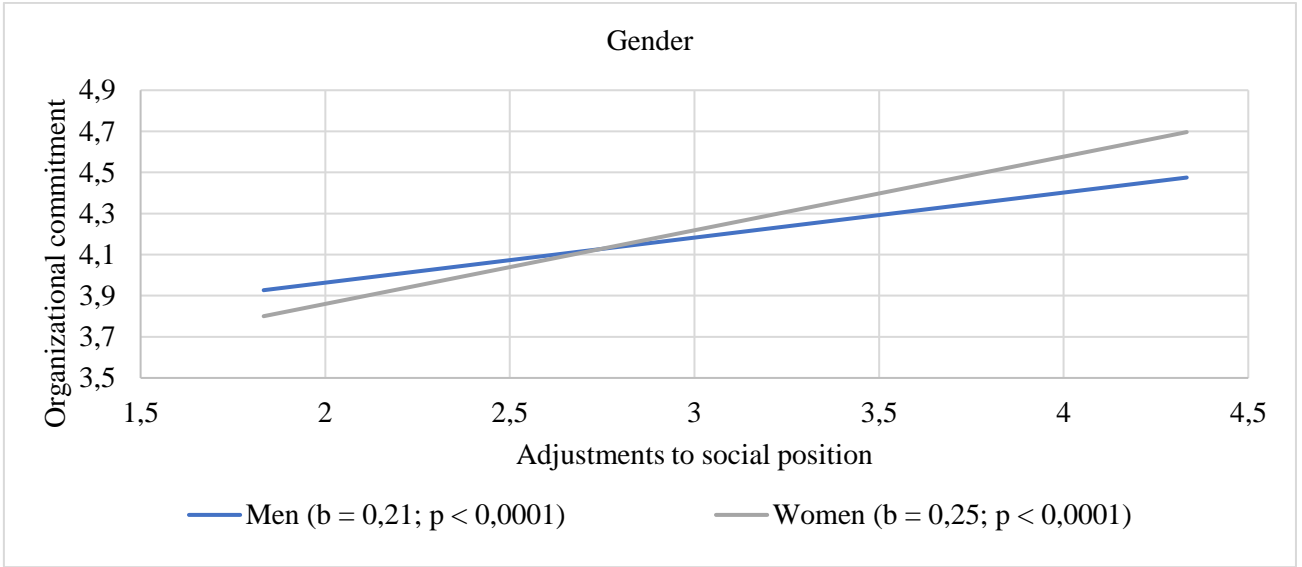
Source: Survey data

The relationship between ASP and OC is moderated by the five variables tested, confirming H2a. Regarding gender, the relationship between ASP and OC is more intense for women ($b = 0,25$; $p < 0,0001$), compared to men ($b = 0,21$; $p < 0,0001$), similarly the relationship is more intense for those who do not hold management positions ($b = 0,29$; $p < 0,0001$), compared to those who do ($b = 0,19$; $p < 0,0001$). Regarding the career, the relationship between ASP and OC is more intense for administrative technicians ($b = 0,47$; $p < 0,0001$), compared to tax analysts ($b = 0,27$; $p < 0,0001$) and tax auditors ($b = 0,19$; $p < 0,0001$). Figures 1 and 2 illustrate moderation for statistically significant results.

It was identified that the impact exerted by ASP on OC suffers significant and more intense interference in technical-administrative staff. Knowing that ASP has a positive predictive effect in relation to OC, if the organization wants technical-administrative staff to be more committed, it can invest in people management practices that encourage increased levels of ASP, such as investments in training and actions aimed at recognizing the employee. The same strategy can be considered for non-leaders (Balsan et al., 2020, Oliveira & Honório, 2020).

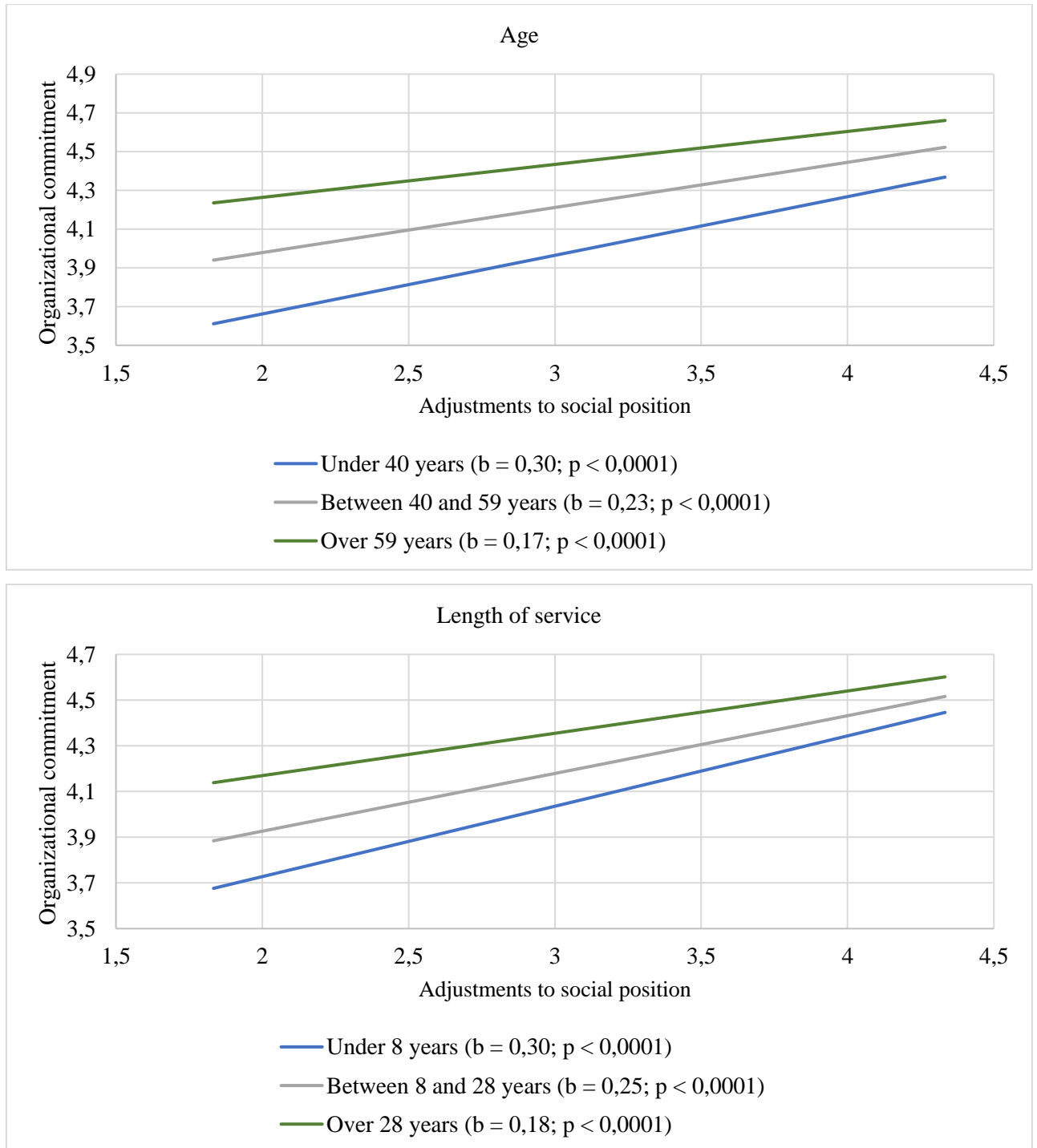
Specifically, to age and length of service (Figure 2), for a better understanding of the effects, the moderating variable was divided into three parts, adopting cut-off points according to Hayes (2017): 16% lower of the sample, 64% median and 16% higher. Thus, the moderating effect of age between ASP and OC is greater for younger participants ($b = 0,30$; $p < 0,0001$) compared to those close to the median ($b = 0,23$; $p < 0,0001$) and older ($b = 0,17$; $p < 0,0001$). The result is similar for length of service: stronger relationship for participants with less time ($b = 0,30$; $p < 0,0001$) compared to those close to the median ($b = 0,25$; $p < 0,0001$) and with more time ($b = 0,28$; $p < 0,0001$). Servants with less time in service and under 40 years of age are more sensitive to the positive relationship between ASP and OC, it can be inferred that investing in training, especially at the time of entry of the server, such as presenting training trails to be developed throughout the career, would influence higher levels of OC (Balsan et al., 2020).

Figure 1. Moderation: gender, management position and career of the participant between ASP and OC



Source: Survey data

Figure 2. Moderation: age and length of service between ASP and OC



Source: Survey data

As for the IBA factor, four moderators were identified: gender, career, age, and length of service, partially confirming H2b. Specifically, the relationship between IBA and OC is moderated only by women ($b = 0,09$; $p = 0,04$), while no significant effects are identified for men ($b = -0,04$; $p = 0,23$). Regarding the career, effects are highlighted for administrative technicians ($b = 0,14$; $p = 0,02$) and tax auditors ($b = -0,10$; $p = 0,02$). Considering age, effects are identified for younger ($b = 0,08$; $p = 0,02$) and older participants ($b = -0,08$; $p = 0,03$). A similar result is observed in relation to length of service, in which there is an effect for those

who have worked for less time in the organization ($b = 0,10$; $p = 0,008$) and those who have worked for longer ($b = -0,14$; $p = 0,001$).

It was found that the female gender moderates the positive relationship between ASP and OC more intensely and is the only gender that moderates the negative relationship between IBA and OC. This result corroborates Silva and Honório (2011) who point out that women's commitment is associated with the acquisition of knowledge and career development, while men's is associated with remuneration.

The relationship between LA is moderated only by length of service, in participants who have length of service close to the median ($b = -0,12$; $p < 0,0001$) and above the median ($b = -0,18$; $p < 0,0001$). This result partially confirms H2c.

In general, the moderation analyses point to moderating variables: length of service, career, and management position. Despite the statistical significance, the effect of interactions is relatively low, according to the values of ΔR^2 . However, from the results found it is possible to understand the population studied, highlighting its demographic and occupational differences, to propose specific and targeted actions for each worker profile. Table 6 summarizes the results, specifically by career.

Table 6.
Summary of organizational bonds and moderations by career

Career	Main results
Technical-administrative	Lower level of commitment (3.92). Not entrenched, with the lowest levels in all three dimensions (ASP 2.50; IBA 3.23 and LA 2.61). It moderates the relationship between ASP and OC and between IBA and OC.
Tax analyst	Higher level of commitment (4.30). Entrenched, with the highest level in the LA dimension (3.25).
Tax auditor	Entrenched, with the highest level in the IBA (4,22) and ASP (3,28) dimensions. It moderates the relationship between IBA and OC.

Source: Survey data

An important contribution of this study is the differences in organizational bonds between different positions of public servants. This result is strategic for proposing more targeted management practices, considering the particularities of each position. For example, technical-administrative staff had a lower level of commitment than the other categories. And they had a below-average level of entrenchment. Therefore, there is a specific demand for people management practices involving the management of levels of commitment and entrenchment for technical-administrative staff, which in certain aspects would be different from the actions proposed to the other categories, demanding a closer look for managers.

5. Conclusions

Based on the results of this research, it was possible to identify relevant aspects regarding the organizational bonds established by Brazilian Federal Revenue employees. There was a predominance of organizational commitment, followed by the IBA dimension of entrenchment and other dimensions of OE (ASP and LA), in this order. It is worth mentioning the relationship between bonds and sociodemographic and occupational variables, especially regarding the career and the management position. Technical-administrative staff proved to be less committed and entrenched, while servants who hold management positions tend to be more committed. In view of these results, it was possible to identify which category of employees most needs incentives to establish and maintain bonds with the organization.

Regarding the moderating effect of sociodemographic and occupational variables on the relationship between OE and OC, it was observed that there is a moderating effect mainly in the relationship between the ASP dimension of OE and OC, being impacted by the five variables studied: gender, management position, career, age, and length of service. This result allowed the elaboration of preliminary proposals on actions to be carried out by the organization to develop the OC in certain contexts, considering the target audience and the time of the intervention, for example.

Given the lack of study of the moderating effect of sociodemographic and occupational variables on the relationship between organizational bonds, this research is innovative. In addition, it contributes to the field of organizational behavior studies, as it expands the investigations on the OE construct. As a relevant practical contribution, we highlight the fact that it was developed in a public service agency, helping to understand the relationship between bonds and the characteristics of public servants, in addition to providing subsidies for the proposition of people management practices in public administration. Therefore, the importance of this study in understanding the sociodemographic and occupational differences of workers is highlighted to contribute to the development and maintenance of organizational bonds.

Among the research limitation is the fact that it was carried out in a specific government organization, thus any extrapolation in the analysis of results must be made with caution. In addition, the cross-sectional nature of this study does not capture casual relations over time. Therefore, the results found in this research instigate the realization of other studies, which broaden the understanding of possible factors associated with an individual's tendency to commit and/or entrench. Additionally, as suggestions for future research, other moderating variables in the relationship between organizational bonds, such as job satisfaction and perceived organizational justice, can be investigated. Other studies could investigate more than one public organization, conducting a comparative study. And longitudinal studies of bonds are needed.

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