

ORGANIZATIONAL COMMITMENT: LONGITUDINAL STUDY IN A PUBLIC HIGHER EDUCATION ORGANIZATION



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ABSTRACT

Purpose: This article aims to describe and analyze the configuration of organizational commitment in a public higher education organization from 2010 to 2014. These years comprise the period after the change in the direction of the Institution.

Originality/value: Although the study of commitment is frequent in academia when a national article base (Spell) and another international study (Scopus) were found, no longitudinal study was found. In this direction, monitoring the commitment for periods of time takes peculiar contours, since the type of work performed within an organization, considering possible management changes, tends to be to establish different links between workers.

Design/methodology/approach: The research was descriptive with a methodological triangulation using a case study. It is possible to analyze quantitatively and qualitatively the understanding of the affection in the bases: effective, calculative and normative, according to Meyer and Allen model (1991).

Findings: The results indicated a reduction of the effective commitment in the second year of research, and could be related to the change of position of the new direction and, still can verify qualitative and quantitative concerning the change of organizational commitment in the researched years.

KEYWORDS

Organizational Commitment. Longitudinal Study. Institution of Higher Education. Mann-Whitney. Methodological triangulation.

1. INTRODUCTION

Since the beginning of the industrial revolution, work has been changing due to several transformations perceived over the years, such as: industrialized work, the knowledge age, new technologies, and their impacts on labor activity, among others. These transformations have boosted competitiveness and brought deployments in labor relations and the form of people management. It can be said that one of these outcomes refers to the organizational commitment, having the following bases: the acceptance of the organization's goals; the identification of the exchanges and the evaluation of the costs associated with leaving the organization; the perception about the feeling of loyalty and obligation to the organization, with a view to understanding the workers and how to leverage his commitment to the organization.

The organizational commitment studies have been constant and object of several looks in recent years. The studies deal with construct diagnoses in organizations (Schmidt & Pinheiro, 2003; Moraes & Costa, 2007; Yoshitake, Fraga, Torres, & Passos, 2009; Botelho & Paiva, 2010; Roman, Stefano, Andrade, & Zampier, 2012; Paiva, La Falce, & de Muylder, 2013; Soares & Fleck, 2014), investigations of construct relationship with consumer behavior and marketing strategies (Prado & Santos, 2007; Ferreira & Hormeyll, 2012; Alves, Terris, & Santos, 2013), relationship with leadership (Bergamini, 2002; Marques, Medeiros, França, & Ribeiro, 2007; Maciel & Nascimento, 2012; Zanini, Santos, & Lima, 2015, Thatcher, Stepina, & Boyle, 2002; Riggle, Edmondson, & Hansen, 2009), the relationship with organizational learning (Varga, Birrer, & Minello, 2012; Caprioli & Araújo, 2016), relationship with organizational performance (Valadares, Lima, 2007, Thatcher, Stepina, & Boyle, 2002; Riggle, Edmondson & Silva, 2009; Scheible & Bastos, 2007; Reis Neto, Kilimnik, Melo, & Theotônio, 2012), among other connections.

In the public sphere and particularly in higher education institutions, only the study by Alves, Terris, and Santos (2013) was identified. In this context, we sought to identify the relationship between consumer behavior and commitment. It is noteworthy that no studies analyzing the organizational commitment in public higher education institutions were found, mainly concerning diagnosis, the comparison between teachers and employees in the technical area, and also through a longitudinal study. Therefore, the following guiding question was proposed for this study: how did the organizational commitment in a public technical and higher education organization evolve?

The public educational institution, where the research has been conducted, is located in Belo Horizonte (MG), working at technical, undergraduate and postgraduate levels, as well as research and extension. There are 660 professionals, including teachers and administrative technicians, with career regulated by the Ministry of Education, within the system of a single legal regime, which guarantees stability to public servants. In 2009 and 2013, it underwent a change of management and administration, which confers peculiar characteristics in terms of commitment to be studied.

In this context, the longitudinal study of the commitment in an organization, considering its evolution over the years and the changes that occur periodically (4 years) derived from the changes of management and therefore, management may imply for the server to behave, commit and engage in different ways. This context materializes as the target investigated and presented in this article, whose general objective was to describe the evolution of the organizational commitment, in a public technical and higher education organization, from the comparison of data collected in two different years – 2010 and 2014 –, and in its interregnum, directors were replaced and therefore, the management.

Therefore, this study is justified by two perspectives, one pragmatic and the other academic: in the first, longitudinal studies on the subject can contribute to the alignment of people management policies, since they allow monitoring of the workforce over the years; in the second, academic, this type of study (longitudinal) has been highly recommended in literature, since it can contribute to its denudation, changes and evolution over the years. For that, it became necessary to deepen the concepts and studies carried out on the subject, inside and outside the country.

2. THEORETICAL REFERENCE

The theoretical reference of this article will approach concepts of organizational commitment, highlighting effective, normative and calculative, as well as its evolution in general, based on the studies available in Spell and Scopus databases. For the purpose of the research carried out in these databases, the keywords “organizational commitment” and “commitment to work” were used in the summary field of the bases and their equivalents in English for the international base. This research was conducted in March 2017.

Mowday, Porter, and Steers (1982) investigated and identified that commitment had several approaches, including 1. the people’s willingness



to develop their activities and loyalty to the social system; 2. identification of the person with the work and organization, perceived in the connection between goals and performances in a harmonic way, and 3. the person's relationship with the system as a whole. In a later research, Bastos, Brandão and Pinho (1997) describe the existence of three forms used in the daily life of this construct: the first, perceived as involvement and commitment, involvement; the second, the individual's loyalty to something; and, finally, the third that relates the construct as a way to prevent or harm someone because of being committed.

Currently, the literature indicates the frank use of the three-dimensional model of organizational commitment analysis, considering the effective, calculative and normative bases. (Medeiros et al., 2002). Paiva, La Falce and De Muylder (2013) emphasize that commitment can be approached in several foci, such as organizational links, types of work, values, culture, among others. Sociological and behavioral approaches are still found in the literature, much less adopted in these studies (Botelho & Paiva, 2010).

The effective focus assumes that organizational commitment emphasizes the process of the worker's identification with the organization's values and goals (Mowday, Porter, & Steers, 1982; Meyer, Allen, & Smith, 1993; Medeiros & Enders, 1998; Medeiros, Albuquerque, Marques, & Siqueira, 2005). Mowday, Porter, and Steers (1982) argue that this approach is characterized by organizational effort, strong belief, recognition, and acceptance of the organization's goals, values and mission and willingness to remain a member.

Yet the calculative approach, also called instrumental, identifies the commitment in relation to the side-bets, perceived as the changes occurred in relation to the investments made by the individuals they left the organization, for instance, backsliding in salary, status etc. (Maia & Bastos, 2011). The authors also affirm that, in this aspect, the commitment imposes limits and can restrict the workers' future actions, considering that these would be linked to the probability of abandoning the organization if they gained incentives from other organizations. (PIFO), organizational losses (PIFO), loss of organizational remuneration (PRO), and social losses (PST) and professional losses (PP), all measured by the exchanges evaluated if the workers changed their organization.

Finally, the normative approach represents the commitment motivated by normative pressures (rules and norms), that is, it is accepted by individuals who believe these norms are right and moral. This approach addresses cultural issues and their impact on the workers' behavior (Maia & Bastos, 2011).



It should be noted that these three approaches are part of the commitment research model created by Meyer, Allen, and Smith (1993) and validated nationally by Medeiros and Enders (1998), among others, and more recently by Medeiros, Albuquerque, Marques, and Siqueira (2005).

After the conceptual review, we sought to verify the studies carried out over the years by the Brazilian academy; for this, we tried to analyze the articles in the national Spell base. The 35 studies found there range from diagnosis of impairment to study of relationship with several constructs of organizational behavior and even consumers' behavior.

In the studies found, most of the diagnoses of organizational impairment were carried out in several organizations (Schmidt & Pinheiro, 2003; Moraes & Costa, 2007; Yoshitake, Fraga, Torres, & Passos, 2009; Botelho & Paiva, 2010; Roman, Stefano, Andrade, & Zampier, 2012; Paiva, La Falce, & De Muylder, 2013 and Soares & Fleck, 2014). It is interesting to note that such diagnostic studies were carried out in both public and private organizations, with the Meyer, Allen, and Smith (1993) model prevailing, attesting its applicability in national studies. In addition, the studies of Botelho and Paiva (2010) and Paiva, La Falce, and De Muylder (2013), who applied the model in public organizations, obtained results that were antagonistic to those of Roman, Stefano, Andrade, and Zampier (2012): in the first studies, calculative impairment was evidenced in public organizations, and in the latter, effective commitment was more evident. In addition, the need for other investigations on commitment in public organizations was indicated to understand the peculiarities of the phenomenon in such context better.

From the review carried out, it is still perceived that studies relate the organizational commitment to issues related to the marketing area, especially related to the consumers' behavior and customers' loyalty (Prado & Santos, 2007; Amaral, Reis Neto, & Gonçalves, 2010; Rodrigues, Silva, Ferreira, & Hor-Meyll, 2012; Alves, Terris, & Santos, 2013). The work of Prado and Santos (2007) and Amaral, Reis-Neto and Gonçalves (2010) approached banking institutions, where higher levels of effective commitment were shown to be important in customers' loyalty. According to Rodrigues, Silva, Ferreira and Hor-Meyll (2012), as well Alves, Terris and Santos (2013), high levels of commitment are also related to the intention of exchange and the intention to buy in the surveyed organizations.

The relationship between leadership and commitment was also present in the list of national academic studies, such as Bergamini (2002), Marques, Medeiros, França and Ribeiro (2007), Maciel and Nascimento (2012), Zanini, Santos and Lima). The first work deals with an essay that approached



the subjects discussing the influence of the leader in the organizational commitment. Empirical tests were carried out in the other studies; however, Marques, Medeiros, França and Ribeiro (2007) did not obtain conclusive results of this relationship, differently from Maciel and Nascimento (2012) and Zanini, Santos, and Lima (2015).

Varga, Birrer and Minello (2012) and Caprioli and Araújo (2016) have tested the link between commitment and organizational learning. Although these studies use different instruments to measure organizational learning, both identified a relation between the constructs. On the other hand, the work of Maciel and Camargo (2011) and Palacios, Almeida and Rezende (2011) dealt with the relationship between commitment and satisfaction in work, finding positive results in both.

The relationship between performance and commitment was the subject of three studies (Valadares & Silva, 2007; Scheible & Bastos, 2007; Reis Neto, Kilimnik, Melo, & Theotônio, 2012). Valadares and Silva (2007) identified that the higher the employees' perception of the opportunity for earnings, the higher levels of the employees' commitment. These results can also be corroborated by Scheible and Bastos (2007), for whom the democratic structure of targeting also influences the workers' commitment. Reis Neto, Kilimnik, Melo and Theotônio (2012) complemented these findings by identifying a relationship between commitment and performance in sales teams.

In addition to the studies that related the commitment to the previously described constructs, others also dealt with its relationship with other constructs of the administration field, namely organizational strategies (Becker & Ruas, 1997), organizational values (Tamayo, 1998), burnout and justice (Kramer & Faria, 2007; Vidal & Rodrigues, 2016), entrenchment (Rodrigues & Bastos, 2013) and competences (Reis, Teixeira, Reis Neto, & Silva, 2009).

Internationally based studies also address commitment and its relationships with organizational behavior constructs. Although we do not pretend to show all studies, 305 articles in the Scopus database, we tried to identify the lines and advances found. In general, the Brazilian studies are in line with the international literature that points out relationships between constructs, such as Thatcher, Stepina and Boyle (2002), Chen and Francesco (2003), Hakanen, Schaufeli and Ahola (2008), Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu (2008), and Riggie, Edmondson and Hansen (2009), as well as theoretical essays that analyze the advances of the theme, such as Cohen (2007). However, no longitudinal studies were found, despite the frequent suggestions in this direction.



Thatcher, Stepina, and Boyle (2002) tested the influence of the internal environment of organizational commitment. The results indicated that management attitudes can positively or negatively influence commitment. Interestingly, these results had similar results in the research of Riggle, Edmondson and Hansen (2009). Concern about engagement and its results was also investigated by Chen and Francesco (2003), who analyzed the impact of organizational performance impairment. This study indicated the importance of effective commitment as a way to leverage performance and suggested the performance of permanent diagnoses as a way to understand the commitment and its variation.

Ragu-Nathan et al. (2008), following a line of relationship identification of organizational behavior constructs with commitment, described the relationship of stress due to technological change, job satisfaction and commitment. As a result, the authors evidenced the influence of the technological changes in the reduction of the commitment, due to the managers' attention, as well as in the turnover of workers. In addition to investigating influence among other constructs and commitment, Hakanen, Schaufeli, and Ahola (2008) showed the importance of longitudinal studies when analyzing motivational health impairment. The authors, although they did not investigate the organizational commitment construct, identified relationships of loss of health and lack of motivation in reducing the employees' engagement. They also suggested longitudinal studies with organizational behavioral constructs to delve deeper into the results pointed out in their research.

In Cohen's theoretical essay (2007), the importance of constant evaluation of commitment is highlighted, as a result of the various moments experienced by the workers in the organization that can cause commitment, especially effective, to change.

It is interesting to note that the Meyer and Allen (1991) scale, modified by the same authors in 1993, has been used in the national and international surveys cited above, denoting its efficiency in measuring organizational commitment.

After reviewing the literature on the construct focused on this study, the next section presents the research environment.

3. RESEARCH ENVIRONMENT

The research organization is a public technical and higher education institution, located in Belo Horizonte, Minas Gerais. It operates with

technical education, undergraduate, and postgraduate courses, as well as research and extension. There are 660 professionals among teachers and administrative technicians, and their career is regulated by the Ministry of Education, within the system of a unique legal regime, which confers stability to public servants.

With regard to the years 2010 and 2014, the period of interest of the study presented here, it should be noted that these years correspond to mandates of different directorates, elected by the internal community. The body underwent an electoral process of change of management in 2009 and 2013. It is important to report that in the two administrations, there were changes of heads of departments and internal sectors in the organization. This was precisely the reason for the choice of this organization, that is, to have undergone a change of management, making the longitudinal study especially interesting, both in academic and pragmatic perspective, as mentioned above.

The next section presents the methodological paths covered in the empirical research.

4. METHODOLOGY

Field research with a descriptive and longitudinal character (Babbie, 2001) with a predominantly quantitative approach (Vergara, 2014) was carried out in a public technical and higher education institution in Minas Gerais. The Institution has 660 registered employees, 359 teachers, and 301 administrative technicians.

For the accomplishment of this research, a questionnaire composed of 5 parts was used: the respondents' demographic and functional; (ECOIA, ECON and ECOIC), based on the three-dimensional model of Meyer, Allen and Smith (1991), widely used in research on the theme (Simosi, 2012), and described in the theoretical framework; and, finally, a group of four open questions that addressed the respondents' perception of the organization's practices regarding commitment. Considering the qualitative nature of the data collected in this last part of the questionnaire, a mixture of methods was promoted, forming a methodological triangulation, as indicated by Collis and Hussey (2005).

Data were collected in two different moments of evaluation, the first in 2010 and the second in 2014, using the same collection instrument in both. In both collection stages, 660 questionnaires were delivered to all servants

in the organization (population); 77 questionnaires were returned completed and validated in 2010 and 118 in 2014, characterizing non-probabilistic samplings. It is important to emphasize that many professionals refused to participate in the research, verbally and explicitly explaining their reasons, mainly: not wanting to participate due to lack of interest, fear of retaliation, not having time and not finding research on organizational commitment relevant. This “no” to participate has also been configured as research data, since it implies in relationships of trust and in the own discredit with the research, which is worrisome, considering that the research was in a higher education organization, which also has similar activity to research several areas of knowledge, especially applied social sciences.

For analysis of the data from the first to the fourth part of the questionnaire, univariate descriptive statistics (Collis & Hussey, 2005) were used, working primarily with position measures (means) and also bivariate, focused on the Mann-Whitney test to verify the statistically significant differences when comparing results among the collected samples (Mesquita, 2010). As for the data of the open questions, these were analyzed through the content analysis technique that, according to the models outlined by Bardin (2009), allowed elaboration of tables from the verification of the recurrence of the answers written by the approached people. For that, all responses were contemplated and their content categorized by commitment dimensions of the adopted model.

The results and the analysis of the obtained data will be shown below.

5. RESULTS AND DISCUSSIONS

The research conducted in the organization was attended by 77 respondents in 2010 and 118 respondents in 2014, whose personal and professional characteristics are summarized in Table 1.

(Table 1)
**PERCENTAGE OF RESPONDENTS IN THE SAMPLE,
 BY CATEGORY AND YEARS SURVEYED**

Data	Categories	2010	2014
Gender	Male	49	38
	Female	28	80

(continue)

(Table 1 (continuation))**PERCENTAGE OF RESPONDENTS IN THE SAMPLE,
BY CATEGORY AND YEARS SURVEYED**

Data	Categories	2010	2014
Age group	Less than 25 years	1	44
	From 26 to 30 years	11	25
	From 31 to 35 years	12	30
	From 36 to 40 years	6	9
	From 41 to 45 years	14	7
	From 46 to 50 years	9	3
	More than 50 years	24	0
Marital status	Single	19	80
	Married	37	28
	Divorced/separated	10	5
	Widowed	1	0
	Stable union	10	5
	Other	0	0
Education	Elementary School	0	1
	Incomplete high school	8	0
	High school completed	14	21
	Expertise	36	93
	Master's Degree	15	1
	Doctor's Degree	4	2
Time in the organization	Less than 1 year	18	65
	From 1 to 5 years	23	44
	From 6 to 10 years	5	6
	From 11 to 15 years	6	0
	From 16 to 20 years	7	2
	More than 20 years	18	1

(continue)

(Table 1 (conclusion))**PERCENTAGE OF RESPONDENTS IN THE SAMPLE,
BY CATEGORY AND YEARS SURVEYED**

Data	Categories	2010	2014
Time at the job position	Less than 1 year	18	46
	From 1 to 5 years	20	48
	From 6 to 10 years	8	17
	From 11 to 15 years	6	4
	From 16 to 20 years	8	2
	More than 20 years	17	1

Source: Elaborated by the authors.

According to Table 1, respondents of both genders, predominantly male, and a higher concentration of civil servants over 50 years participated in the survey in 2010. As far as marital status is concerned, for the first year of study, the sample is very diverse with representatives of all categories, with a higher concentration in married individuals. It should be noted that most participants have at least a complete undergraduate degree, only eight respondents do not have tertiary education. It is interesting to note that, although the age of the majority is over 50 years, the concentration of respondents shows time in the organization below 10 years, allowing to infer that most are new servants, 54 of them have at the organization for 1 to 10 years, although the sample also includes servants, who have been in the organization longer.

Regarding the respondents of the study carried out in 2014, the presence of both genders, a greater predominance of women, besides the concentration of servants below 35 years of age, different from the sample in 2010. In relation to the marital status, the highest concentration was single servants, but also diversified and covering all categories. It is interesting to note that only one respondent does not have higher education. As in the first collection, the sample has a higher concentration of newly enrolled, although other groups are present.

As for the organizational commitment bases, in the two years of studies carried out in the organization, higher means were observed for the effective basis, with a higher value for the first year of analysis, followed by the calculative impairment (2.9 for both years), the normative basis (2.4 for

the two samples). Regarding the losses related to the study of the side bets (calculative basis), the diversified results can be observed in Table 2.

(Table 2)
**MEAN OF RESPONDENT COMMITMENT DIMENSIONS,
 YEAR AND MANN WHITNEY RESULT**

Dimensions \ Year	2010	2014	Mann Whitney sig
Effective	3,9	3,4	0,006
Calculative	2,9	2,9	0,977
PST	2,6	2,5	0,467
PIFO	2,9	2,7	0,119
PRO	2,4	2,4	0,892
PP	2,9	2,8	0,078
Normative	2,4	2,4	0,642

Source: Elaborated by the authors.

It should be noted that in the effective dimension, although it is considered higher in both years, there is a reduction in the second year, dropping from 3.9 (mean above 3.5 is considered “strong”) to 3.4 (considered as “Median”, between 2.5 and 3.4). Mean of the calculative dimension considered “median” (between 2.5 and 3.4), obtaining 2.9, in both years of research. Lastly, the normative dimension, 2.4 in 2010 and also in 2014, was considered as “weak” commitment (below 2.4).

Using the Mann Whitney method, it was verified that the effective dimension presented a statistically significant difference, which may imply concerns for the organization with the reduction of the effective commitment in 2014. Tamayo (1998) affirm that the reduction of Effectiveeffective commitment can generate a reduction of sense and perceived value in the organization, thus being a worrying indicator for it. The other dimensions of organizational commitment did not present significant differences.

Considering the percentage of respondents by levels of impairment (“strong” means above 3.5, “average” means between 2.5 and 3.4, and “weak” means below 2.4), in agreement with other studies on impairment (Botelho & Paiva, 2010; Paiva, La Falce, & De Muylder, 2013), the results shown in Table 3 indicate that effective impairment is concentrated at a strong level (81.3) in 2010; in 2014, a reduction of this level and concentration

division in the strong and average levels (44,1 and 43,2, respectively) is perceived. This reduction in the level of commitment may be related to the respondents' profile, but also to the change of leadership in 2013 and reflected here in the data. Bergamini (2002), Marques, Medeiros, France and Ribeiro (2007), Ragu-Nathan et al. (2008), Maciel and Nascimento (2012), and Zanini, Santos and Lima (2015) described leadership impacts and relationships on organizational commitment, and failure to recognize a positive leadership profile can lead to reduced levels of commitment.

Regarding the calculating impairment, the percentage of respondents in 2014 compared to 2010 indicates that the levels of losses associated with this dimension had a reduction in the indicators of social losses at work (PST), losses of organizational salaries (PRO) and (PP), as well as an increase in the "weak" level in the three indicators in the last year (Table 3). According to some studies, these facts can be a problem for the organization, since employees are not positively identifying the exchanges with the organization (Maia & Bastos, 2011; Botelho & Paiva, 2010 and Paiva, La Falce, & De Muylder, 2013).

In Table 3, it can be seen that the percentage levels of normative commitment were perceived in most years as weak (53.3% in 2010 and a slight increase in 2014, 59.3%), which draws attention in the case of a public organization, governed by formal norms and not perceived as strong by the respondents of this research. Botelho and Paiva (2010) indicate that in public organizations, attention should be given to organizational norms. Thus, the results in both years can be understood as worrying for the managers of the addressed organization.

(Table 3)
**PERCENTAGE OF RESPONDENTS BY LEVEL OF
COMMITMENT AND YEAR SURVEYED**

Dimensions	Year levels	2010			2014		
		Strong	Medium	Weak	Strong	Medium	Weak
Effective		81,3	16,0	2,7	44,1	43,2	12,7
Calculative		21,3	57,3	21,3	7,6	60,2	32,2
PST		28,0	48,0	24,0	27,1	44,1	28,8
PIFO		21,3	26,7	52,0	15,3	33,9	50,8
PRO		22,7	45,3	32,0	16,1	41,5	42,4

(continue)

(Table 3 (conclusion))

PERCENTAGE OF RESPONDENTS BY LEVEL OF COMMITMENT AND YEAR SURVEYED

Dimensions \ Year levels	2010			2014		
	Strong	Medium	Weak	Strong	Medium	Weak
PP	5,3	38,7	56,0	8,5	30,5	61,0
Normative	8,0	38,7	53,3	5,1	35,6	59,3

Source: Elaborated by the authors.

An important fact to consider is that the reduction of “strong” levels of effective commitment can be seen as worthy of greater attention by the research organization because the results indicate weaknesses in the relations between the servants and the organization. This concern has already been reported in other studies, such as Kramer and Faria (2007), Maia and Bastos (2011), Paiva, La Falce and De Muylder (2013) and Vidal and Rodrigues (2016).

Considering that the research work carried out within the organization in both years (2010 and 2014) was done with the participation of both teachers and administrative technicians, these results broaden the perspective of weaknesses in the relations between its different types of servants, with low predominance of the commitment dimensions perceived in the last year by most respondents, and may result from the change of management occurred in 2013.

In addition, the answers of the open questions allowed to understand part of the quantitative data better, promoting deepening in the understanding of the focused phenomena. In this context, the data coming from the open questions, of qualitative character, indicate alignment with the results obtained in the quantitative part, as shown below.

5.1. Qualitative aspects of the respondents’ commitment

Four questions were asked in the questionnaire so that the covered professionals could manifest themselves in a freer way, in order to deepen their perceptions about the organization and its counterparts. It should be noted that not all respondents wrote answers in this part of the questionnaire.

The first question dealt with the reasons for insertion in the institution and the most recurrent answers in 2010 indicated a greater relationship with the effective commitment, followed by the calculative basis. This

relationship is reversed in the research conducted in 2014, confirming the observation already identified in the quantitative step because, in the second survey, the most present answers are related to “side bets”, i.e., calculative basis, according to Table 4:

(Table 4)
**REASONS FOR INSERTION IN THE INSTITUTION,
PER YEAR OF RESEARCH**

Reasons	2010	2014
Effective Base	73	35
Work in the area of knowledge and the professionals' interest (achievement)	51	25
Company name	22	10
Calculative Base	63	65
First job, new career path	45	36
Growth and professional development	9	11
Stability, security and livelihood	8	14
Flexible hours	1	1
Location	0	3

Source: Elaborated by the authors.

Considering that this is a public institution, this inversion of the effective base to the calculative base is seen as disquieting, since the effective commitment denotes greater acceptance of the ideology and values of the organization, a fact also identified in research in environments of the same legal nature, such as Botelho and Paiva (2010) and Paiva, La Falce and De Muylder (2013).

The second open question asked the respondents to list three positive points of working at the institution (Table 5) and the most recursive answers, both in 2010 and 2014, were also those related to the calculative basis of the commitment. However, the effective basis was also perceived in the two years of study and in a larger scale in 2014.

In the research by Paiva, La Falce and De Muylder (2013), the results pointed only to positive points linked to the calculative basis; unlike these results, the present study identifies points linked to the effective basis, albeit to a lesser extent. This result is attributed to the organization's profile, aimed at higher education and, thus, greater recognition of the mission.

In this direction, Medeiros, Albuquerque, Marques and Siqueira (2005) affirm that the effective dimension can be perceived by recognition and trust in the organization. It is also worth noting that, in the study by Maia and Bastos (2011), it was identified that a greater computational impairment may have a connection with aspects of retaliatory attitude, a disturbing fact in a public organization, since it may negatively influence service delivery.

(Table 5)

POSITIVE POINTS OF WORKING IN THE RESEARCH INSTITUTION

Positive Points	2010	2014
Effective Base	33	57
The recognition (national and international) and the reliability of the organization	22	57
Company name	11	10
Calculative Base	191	210
The infrastructure of the organization and the offered work conditions	103	79
The various human resources policies of the organization	47	78
Interpersonal relationship and communication	24	44
The logistics and purchasing actions were undertaken by the organization	10	0
Planning and organization in the Institution.	7	9

Source: Elaborated by the authors.

The third open question of the questionnaire was directed to the indication of three negative points, and the answers directed to the calculative base were more recurrent as well. Although in small scale, the effective and normative bases are also perceived in the answers found, as can be observed in Table 6.

(Table 6)

NEGATIVE POINTS OF WORKING IN THE RESEARCH INSTITUTION

Negative Points	2010	2014
Effective Base	7	12
The recognition (national and international) and the reliability of the organization	7	12

(continue)

(Table 6 (conclusion))**NEGATIVE POINTS OF WORKING IN THE RESEARCH INSTITUTION**

Negative Points	2010	2014
Calculative Base	112	212
The various human resources policies of the organization	13	39
The infrastructure of the organization and the offered work conditions	62	141
The logistics and purchasing actions were undertaken by the organization	16	0
Interpersonal relationship and communication	21	32
Normative Base	10	10
Non-compliance with norms and injustice	10	10

Source: Elaborated by the authors.

It is interesting to note that there is an increase of negative aspects, mainly oriented to the calculative basis, which may indicate possible losses perceived by the workers and that may have influenced the reduction of the effective commitment, detailed in the quantitative data shown before.

The last question of the data collection instrument was what the respondents would change in the organization and suggestions regarding various aspects of the organization were given, focusing on the calculative basis in both years studied. (Table 7)

(Table 7)**WHAT RESPONDENTS WOULD CHANGE IN THE INSTITUTION**

Aspects to be changed	2010	2014
Calculative Base	131	215
The infrastructure of the organization and the offered work conditions	71	113
The various human resources policies of the organization	7	34
Interpersonal relationship and communication	21	48
The logistics and purchasing actions were undertaken by the organization	9	1
Planning and organization in the Institution.	23	19
Normative Base	10	11
Non-compliance with norms and injustice	10	11

Source: Elaborated by the authors.

It is interesting to note that, as for the negative points, there was an increase in the suggestions in 2014, comparing to 2010. This may be related to the change of management occurred in the period and with the consequent change of administration, a fact assessed negatively by the participants. This line of thought, which associates the commitment to leadership, was highlighted in the work of Bergamini (2002) and Marques, Medeiros, França and Ribeiro (2007), Maciel and Nascimento (2012) and Zanini, Santos and Lima (2000) in Brazilian studies, as well as those of Thatcher, Stepina and Boyle (2002), Ragu-Nathan et al. (2008), Riggle, Edmondson and Hansen (2009). This may also indicate a need for ongoing evaluation through constant concern about how to lead an organization, as the impacts on reducing commitment can have disastrous consequences for both the organization itself and the service delivery.

Finally, it should be pointed out that when comparing the quantitative results to those of the open-ended questions, a difference in commitment was reported by the participants, namely: the calculative dimension stood out over the effective, measured in the Meyer, Allen and Smith (1991) scales, which may indicate the need for adjustments in these scales, as well as other methods to investigate impairment, although the three-dimensional model is still widely used in academic studies (Simosi, 2012).

Here are the final considerations of the article.

6. CONCLUSIONS

This article aimed to describe the evolution of organizational commitment in a public technical and higher education organization, based on the comparison of data collected in two different years – 2010 and 2014 –, considering a change of the board and then, the management in the said period. The methodology used in the descriptive field research was predominantly quantitative, using a questionnaire composed of personal and professional data, three scales of commitment based on the three-dimensional model of Meyer, Allen and Smith (1993), and four open questions on motives for insertion in institutions, three positive and three negative aspects of it, and suggestions for changes to the organization.

The theoretical framework elucidated concepts and approaches of the theme, focusing on the three-dimensional model of Meyer, Allen and Smith, (1993) adopted in this study. In addition, in the analyzed national and international studies, lack of research in the public sphere and absence of

longitudinal studies were observed, despite being recommended to several of their research agendas.

Regarding the quantitative data, it was verified that the effective base has the highest means in both years, followed by the calculative and, finally, the normative. It is important to note that, although the effective impairment had the highest means in both years, in the second year of research, 2014, there was a statistically significant reduction of its mean. This variation of commitment over the years, as observed in the literature, can indicate the importance of periodic diagnoses in the organizations, considering the possible impacts of the commitment on the workers' attitudes and effective performance. Another highlight is that this variation may have occurred due to the change in the board of directors in the surveyed organization, perceived as negative by the respondents, which deserves attention from their leaders and managers, as the literature indicates, since leadership's style and the people management actions in the organization can have dysfunctional consequences and change the workers' involvement with the organization.

The qualitative data evidenced calculative basis in the respondents' perceptions, both regarding positive and negative points, as well as suggestions for improvements to the organization, which may be the result of fragile institutional relationships. These data corroborate the quantitative results, especially in relation to 2014, when there has been a reduction of the effective base.

The use of longitudinal study was adequate and important to understand the researched phenomenon and to understand its evolution over the years. This variation was verified by crossing data of different nature (qualitative and quantitative), between each other and between the observed years.

Thus, this study contributes academically to the extent that it fulfills an agenda on commitment often indicated in studies, which refers to longitudinal work, and therefore, changes in the people's behavior that certainly impact their actions in the organization can be observed. This fact leads to the pragmatic contribution of this study since it shows the need to consider effectively people and their interests when there are changes in leadership and administration in a public organization.

These contributions implicate on the design of a future research agenda, noting some of its limitations, namely: having addressed a single organization and the explicit denial of participation by some members, among others, the latter being very important for studies on organizational commitment. Commitment is about a positive bond with the organization, which portrays its workers' motives and intentions to remain and, when some of them

vehemently refuse to participate and verbalize their motives, this relationship between the individuals and the organization is weakened.

Given the data, the contributions and the limitations of this study, it is suggested for similar research to be carried out in other public organizations, focused on education at its various levels (fundamental, middle and higher), as well as others of an essentially qualitative nature, with data collection instruments, such as interviews and direct observation (participant or not), with the purpose to broaden and deepen the discussions about the findings presented herein. In addition, the answers to the open questions lead to a research that considers more than one construct, joining commitment to others, such as culture and organizational change.

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