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## Editorial

Dear Readers,

In order to remain improving the Journal, the news this year is the adoption of the American Psychological Association (APA) standards regarding quotes and bibliographical references, in addition to a new layout for the Journal.

In this edition, the articles have authors from the following locations: Paraná, Santa Catarina, Ceará, Minas Gerais, and Rio Grande do Sul. In each edition, we'll try to select authors from different locations, avoiding regional concentration throughout the year. Three of the published articles regard the Public Sector.

The first article of this edition, written by *Fernando Batista Fontana*, *Carlos Alberto Diehl*, *Marcos Antonio*, and *Clea Beatriz Macagnan*, titled “**A study about Accounting Publications from a Semiotic Focus**”, tries to analyze contributions using semiotics teachings for Accounting, through the analysis of the content of articles regarding the subject and published on the following conferences: Associação Brasileira de Custo, USP de Controladoria e Contabilidade and Meeting of the ANPAD, and also from 22 international scientific Accounting Journals.

With the purpose of understanding the existential aspects prior to the entrance to college, the second article, titled “**Difficulties and Perspectives of Accounting Students at Paraná Federal University According to Socio-Educational Profile**”, was published, written by *Laurindo Panucci-Filho*, *Ademir Clemente*, *Alceu Souza*, and *Marcia Maria dos Santos Bortolucci Espejo*. The evidences show that the groups have known difficulties and distinctive professional perspectives among themselves.

The work of writers *Sandro César Bortoluzzi*, *Marivânia Rufatto da Silva*, *Sandra Rolim Ensslin*, and *Leonardo Ensslin*, titled “**Structuring of a Performance Assessment Model for the Management of Accountancy Programs at Universidade Tecnológica Federal do Paraná**”, by means of an exploratory case study, has the purpose of structuring a Performance Assessment Model for the Accounting course that integrates perspectives for internal and external evaluations through a Multi-criteria Methodology for Supporting Constructivist Decisions (MCDA-C).

The fourth article, titled “**Reflection about public finance standards: a focus on the concession of benefits through revenue foregone**”, written by *Romualdo Douglas Colauto*, *Carla Márcia Botelho Ruas*, *Rita de Cássia Teixeira Pires*, and *Paulolino Pereira*, shows some advances regarding the waiver of revenue in Brazil by means of restrictions imposed by Fiscal Responsibility Law (LRF), through the methodology created by National Treasury (STN) and by the inspection of the Court of Audit.

The fifth publication is “**Controllership as a Governance Instrument in the Public Sector**”, written by *Mônica Clark Nunes Cavalcante* and *Márcia Martins Mendes De Luca*. Using bibliographic and document research, the study has the purpose of identifying which information made available by the General Controller’s Office (CGU) on its website comply with the type and content recommended by IFAC regarding external control and reports, considering governance dimensions in the public sector.

The last article of this edition, titled “**Public Governance and Governability: Accountability and Disclosure permitted by Accounting Applied to the Public Sector as a Sustainability Instrument for the State**”, written by *Antonio Gonçalves Oliveira*, *Hilda Alberton Carvalho*, and *Dayanne Paretti Corrêa*, has the purpose of discussing the importance of Accounting Applied to the Public Sector as an useful tool for the efficacy of Public Governance and Governability with a sustainability vision applicable to the Management of the State.

Finally, I would like to highlight that Professor Romualdo Douglas Colauto, Associate Editor of REPeC, had an article published on this edition. However, it should be noted that the article was approved for publication before the invitation to hold this position in REPeC. I also would like to inform you that the article went through a double blind review with complete independency and exemption.

Good reading to all!

**Prof. Dr. Valcemiro Nossa**  
**Editor-in-chief**



## A study about Accounting Publications from a Semiotic Focus

### Abstract

This paper was aimed at analyzing the contributions of semiotics teaching in Accounting. The actual development of semiotics as a modern science, which focuses on any language form, was only acknowledged between the 18<sup>th</sup> and 19<sup>th</sup> centuries. Since then, several authors have studied this theme, using semiotics as an instrument to analyze other sciences. Many authors classify Accounting, considered a science, as a language. Hence, it can be analyzed based on the premises of semiotics. In this study, bibliographic research and content analysis are used, the latter applied to the papers published about the theme in the following congresses: *Associação Brasileira de Custo, USP de Controladoria e Contabilidade* and *Encontros da ANPAD*. In addition, a search was undertaken in 22 international scientific Accounting journals. In conclusion, few theoretical contributions have been published in Brazilian congresses and in international scientific journals, but mainly practical contributions about the use of semiotics in Accounting.

**Key words:** Accounting; Semiotics; Discourse analysis.

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## 1. Introduction

According to Watzlawack, Beavin and Jackson (1971), the first axiom of communication affirms that it is impossible not to communicate. Each person, object, force or organization communicates continuously. This communication often takes places involuntarily because it goes beyond the limits of writing or speech and can assume other forms of expression. A historical conditioning has aroused the impression that the sole forms of knowledge about the world are those disseminated by language, in its verbal, oral and/or written manifestation (Santaella, 1983). Saussure (2006) sustains this understanding when discussing the prestige of written in comparison with spoken language. One of the explanations for this phenomenon is the impression the graphical images of words cause, as a solid and permanent object, which is more adequate than the sound of speech to constitute language over time.

All things communicate somehow, whether through sound, color, mode or performance, establishing a sense, a meaning. The consequence of this elementary fact – that the world has meaning – is that each person or organization's behavior (including the absence of behavior) is a potential source of communication (Volli, 2004). In this context, the premises of semiotics can be applied and thus contribute to any and all sciences, but mainly to those that use their own jargon, like Accounting for example. "Semiotics has a double relation with sciences: it is at the same time a science among the sciences and an instrument of sciences" (Morris, 1976, p. 10).

In this perspective, this study was aimed at analyzing the contributions of using semiotics knowledge in the elaboration of scientific studies in Accounting. It is relevant to the extent that it identifies the existing lack of studies that use semiotic theory or practice in Accounting, a very relevant theme due to this science's potential as a support instrument for the advancement of other sciences.

The paper starts with this introduction, followed by a literature review about semiotics and its connection with Accounting. Next, the study method is presented. Then, the research results are described and interpreted. Finally, some final considerations about the theme are presented, as well as the bibliographic references used.

## 2. Semiotics and its Link with Accounting

In this chapter, a literature review about Semiotics is presented, aimed at understanding its relation with Accounting.

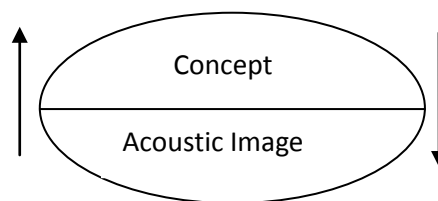
The word semiotics comes from the Greek root *semeion*, which means sign. In the historical roots of sciences, a distinction is due between the development of semiotics itself and semiotic trends *avant la lettre*, that is, before its more complete development. Semiotics itself was inaugurated by philosophers like John Locke (1632-1704) and Johann Heinrich Lambert (1728-1777). Semiotics *avant la lettre*, on the other hand, comprises all research about the nature of signs, signification and communication in the history of sciences. These studies started with the origins of philosophy (Nöth, 1995). This phase of semiotics *avant la lettre* was present in very ancient reflections, focused on signs and language itself. Ever since the pre-Socratics Plato and Aristotle, the Stoics, Augustine and Scholastica herself, comprising all of modern philosophy, as from Descartes (Nöth, 1995; Volli, 2000). A double relation exists between the signs and science. The signs and science are closely connected, as science simultaneously offers man more reliable signs and expresses its own results in a system of signs (Morris, 1994).

The actual development of semiotics as modern science was only acknowledged between the 18<sup>th</sup> and 19<sup>th</sup> centuries. The first to discuss it were the linguist Ferdinand de Saussure and the philosopher, mathematician and logician Charles Sanders Peirce. Thus, current semiotics followed two different branches: (a) the structural branch, deriving from de Saussure; (b) interpretive semiotics, deriving from the philosopher Peirce. Since these authors' contributions, different experts have worked to develop and improve the established ideas and concepts, particularly in the work by: Louis Hjelmslev, Claude Lévi-Strauss, Algirras J. Greimas and Umberto Eco, to name but a few (Nöth, 1995).

De Saussure's structural current considers language through the distinction between the social and the individual. While the social rests in language, it is speech that contains the individual. Language (minus speech) "appears to the individual as a pre-existing system, a social institution that historically accumulates a range of values and about which, in principle, the individual has no influence as an individual" (Coelho 1990, p. 18). Therefore, language takes the form of a system of rules, set by a given society, while speech is a process that grants concrete existence to language. The latter is a system of signs that express ideas, for example: writing, the alphabet of the deaf, symbolic rites, forms of politeness and military signs. This definition of language places this branch in the field of semiotics, as it consists of a system of signs, belonging to a language. This theoretical perspective expresses the relation between language and speech.

Language and speech: each of these two terms obviously only derives its full definition from the dialectic process that joins both: there is no language without speech and no speech beyond language. (...) Language and speech therefore exist in a relation of mutual understanding; on the one hand, there is language as the collective sum of individual marks, which can only be incomplete at the level of each isolated individual; language only exists perfectly in the 'speaking mass' (Barthes, 2006, p.19).

The linguistic sign is defined by the union, not between a thing and a word, but between a concept and an acoustic image or, better, a signifier and a meaning. The acoustic image is not a material sound, a purely physical thing, but the mental impression this sound leaves behind, registered based on our meanings, so this image is sensorial (Saussure, 2006).



**Figure 1.** Sign

Source: Saussure (2006).

Thus, according to Saussure, the sign is a binary scheme, as an entity that consists of two parts. In line with another perspective, interpretive semiotics, the sign is a triad entity. According to Peirce (2008), a third element exists, which he called *interpreter*. This indicates that the sign relation should be understood as a triad, and not as binary in accordance with Saussure. Thus, according to Saussure, the sign concept corresponds to the relation between two elements and, according to Peirce, between three.

In line with Peirce, the sign can be defined as follows:

the process in which something functions as a sign can be called *semiosis*. (...) this process implies three (or four) factors: the one that acts as a sign, the one the sign alludes to, and the effect it produces in a given interpreter because of which the thing in question represents a sign to him (Morris, 1994, p. 27).

The composition of the sign would be defined as follows: the *sign vehicle*, the *designatum* and the *interpreter* (Morris, 1994). According to Eco (2009), Peirce's definition offers somewhat more; it does not require intentional emission and artificial production as necessary conditions to define the sign. Peirce's triad can also be applied to phenomena without a human issuer, but a necessarily human addressee.

Based on these initial concepts, the field of semiotics can be understood as any and all forms of language, in any and all forms of communication. According to Santaella (1983, p. 13), "Semiotics is the science that focuses on all possible languages, i.e., which is aimed at investigating how any and all phenomena are constituted as phenomena that produce sense and meaning". The importance of studying se-

miotics is based on the premise that, without information, no message is transmitted, which does not permit different subsequent actions, such as planning, reproduction, process and control (Santaella, 1983). Semiotics is the base to understand the main forms of human activity, as it offers a general language, applicable to any other form of communication and, consequently, applicable to the language of any and all sciences (Morris, 1994).

It should be clarified that, despite some similarities with semiotics, the theme “discourse analysis” establishes another perspective on communication. Like content analysis, discourse analysis works with linguistic units superior to the phrase (statements).

But as its objective exists in the same dimension as the purely linguistic dimension it consequently derives from – formulating the rules to link the phrases, that is, describe the units (the macro-units, which are the statements) and their distribution in detail – it is difficult to situate it as a continuity of (and even instead of) content analysis (Bardin, 2009, p. 46).

Therefore, in the case of discourse analysis, the analysis unit is the statement, and not the sign itself, like in the case of Semiotics.

The sense of the relation between Accounting and Semiotics is based on the perspective of looking at the first. In that sense, it is important to reconsider the understanding about Accounting that permits this relation. Accounting is a science that covers a systemized knowledge set, with its own principles and standards. Basically, its function is to register, classify, demonstrate, audit and analyze all changes in organizations' equity, with a view to providing relevant information for decision-making by its managers, as well as by other organizational stakeholders (Franco, 1996). These accounting activities follow specific procedures that characterize and define it. In other words, it is shaped by its own language, a system of codes that responds to the specific particularities of accountancy. This is also the case when it uses numbers only. While the negative status of the number two is represented as “-2” in mathematical language, in Accounting, it is represented as “(2)”. Examples like this can illustrate differences between accounting and other languages, and also supports the understanding that Accounting can be classified as a language.

When discussing the theme, Hendriksen and Van Breda (1999, p. 29) affirm that “Accounting is a language. Many consider it as the language of business (...); accounting figures and classifications vary with regard to possible interpretations by the reader of financial statements”. Accounting basically uses its own language to transmit the registered facts to all users who are interested in this information (Anthony, Hawkins & Merchant, 1975; Ijiri, 1975; Belkaoui, 1995). When considering Accounting as the language of business, it could be related to Semiotics. As, according to Santaella (1983), Semiotics is a science that permits studying all languages, it could be of help in accounting research, with the relation between users and the normative system as an example of a possible research focus.

### 3. Methodological Considerations

This research is characterized as bibliographic, to the extent that articles published in congresses and international journals are analyzed. It was undertaken in two phases: first, publications in Brazilian congresses were reviewed, followed by those in international scientific journals. Figure 2 summarizes the congresses' characteristics.



Event	Characteristics
Congresso Brasileiro de Custos (CBC)	Main corporate cost event in Brazil. Its first edition took place in 1994.
Encontro da Associação Nacional de Pós-Graduação e Pesquisa em Administração	Currently the largest Brazilian scientific and academic event in business administration. Its first edition took place in 1976.
Congresso USP de Controladoria e Contabilidade	Promotes debate on innovative ideas about Controllershship and Accounting theory and practice. Its first edition took place in 2001.

**Figure 2.** Summary of Congress characteristics

Source: Associação Brasileira de Custos (2009), Associação Nacional de Pós-Graduação e Pesquisa em Administração (2009), and Congresso da USP de Controladoria e Contabilidade (2009).

Evidence was collected from the electronic files of those congresses, in different periods, distributed as follows: from the 1<sup>st</sup> until the 15<sup>th</sup> edition, between 1994 and 2008, of the Congresso Brasileiro de Custos; from the 22<sup>nd</sup> until the 32<sup>nd</sup> edition, between 1998 and 2008, of the Encontro da Associação Nacional de Pós-Graduação e Pesquisa em Administração; and from the 1<sup>st</sup> until the 8<sup>th</sup> edition, between 2001 and 2008, of the Congresso da USP de Controladoria e Contabilidade. The electronic files were obtained from the respective websites or congress CD-ROMs. As regards the Encontro da Associação Nacional de Pós-Graduação e Pesquisa em Administração (EnAnpad), given the large number of theme areas, more specifically in Business Administration, the research was restricted to papers in the theme area Accounting, namely:

- Accounting and Management Control (CCG)
- Finance and Accounting (FIC)
- Accounting (COM)

All theme areas were used for the other congresses and its publications were reviewed.

To select the articles, they were analyzed based on the identification of words in the titles and respective abstract. The following words were investigated: (1) semiotics; or (2) discourse analysis. All papers that contained these words were recovered in full and analyzed to validate those that attended to the research focus. The selected validated files constituted the analysis corpus.

Then, a review was undertaken in international journals, based on the reference base EBSCOHost, which offers the database Business Source Complete for consultation. Only those papers the database indexed as scientific were considered valid, whose full text was available, had been published as from 1990, limited to the main specific journals on accounting (22). The following search terms were used: Semiotic, semiologic, sign, discourse analysis, language theory, in the fields: title, abstract and key words, combined with the terms accounting, accountancy and bookkeeping.

## 4. Results

### 4.1 Research Results in Brazilian Events

The search was aimed at identifying studies in which Semiotics knowledge was addressed as an instrument for analysis in accounting research. Thus, seven papers were identified, all of them in Portuguese, distributed across the different congresses, as presented in Tables 1 to 3.

Table 1

**Publications on Semiotics in the Congresso Brasileiro de Custos**

Year	Edition	Number of articles on semiotics	Total Number of Articles
1994	1	0	27
1995	2	0	88
1996	3	0	46
1997	4	0	51
1998	5	0	79
1999	6	0	120
2000	7	0	166
2001	8	1	157
2002	9	1	183
2003	10	0	140
2004	11	0	251
2005	12	0	350
2006	13	0	212
2007	14	0	238
2008	15	0	259
<b>Total</b>		<b>2</b>	<b>2,367</b>

Source: Associação Brasileira de Custos (2009).

In the different editions of the Congresso Brasileiro de Custos (Table 1), two papers were found that complied with the research criteria. They represent 0.08% of all congress papers, considering all 15 editions.

Table 2

**Publications on Semiotics in the Congresso EnAnpad**

Year	Edition	Number of Articles on Semiotics	Total Number of Articles
1998	2	0	12
1999	3	0	10
2000	4	0	21
2001	5	0	23
2002	6	1	47
2003	7	0	57
2004	8	0	70
2005	9	0	70
2006	10	0	71
2007	11	1	94
2008	12	0	70
<b>Total</b>		<b>2</b>	<b>545</b>

Source: Associação Nacional de Pós-Graduação e Pesquisa em Administração (2009).

In the Congresso EnAnpad (Table 2), two articles were also found, equivalent to 0.37% of all congress articles, considering all 11 editions. Three articles were found that complied with the research cri-

teria, representing 0.37% of all articles published during the eight editions of the Congresso da USP de Controladoria e Contabilidade (Table 3).

Table 3

**Publications on Semiotics Congresso USP Controladoria e Contabilidade**

Year	Edition	Number of Articles on Semiotics	Total Number of Articles
2001	1	1	74
2002	2	0	85
2003	3	0	101
2004	4	2	100
2005	5	0	100
2006	6	0	150
2007	7	0	120
2008	8	0	84
<b>Total</b>		<b>3</b>	<b>814</b>

Source: Congresso da USP de Controladoria e Contabilidade (2009).

Despite the small share of the theme in the total number of papers presented during all congresses, it signals the emergence of this kind of research. Its hardly expressive role could mean a lack of recognition regarding its potential contribution to the scientific development of Accountancy. In addition, the area's traditional hermeticism and lack of knowledge about the instrument may have discouraged the inclusion of this perspective on Accounting.

In Figure 3, the titles of the seven papers found are displayed, classified by congress, year and edition.

Event	Year	Edition	Title
CBC	2001	8	A Phenomenological Look on the "res" of Accounting Logistics in the Identification of Costs
CBC	2002	9	The Education of Environmental Cost Accountants
EnAnpad	2002	6	Reflections about the Semiotic Dimension of Balance Sheet Analysis: A Contribution to the Optimization of Credit Decisions
EnAnpad	2007	11	Accounting Treatment of Carbon Credit Projects in Brazil: An Exploratory Research
USP	2001	1	Accounting Information and Social Order: A Contribution from Semiotic and Communication Theories
USP	2004	4	Measurement of Semiotics in the Coding of Financial Statements through Neural Networks
USP	2004	4	Social Accountability of Accounting for College Students

**Figure 3.** Article Titles

Source: Associação Brasileira de Custos (2009), Associação Nacional de Pós-Graduação e Pesquisa em Administração (2009), and Congresso da USP de Controladoria e Contabilidade (2009).

The information in Figure 3 reveals the range of topics addressed with help from semiotics or discourse analysis, in which no pattern can be highlighted.

In an analysis about the papers' contents, four of them were aimed at emphasizing the potential of semiotic theory as a tool to study the research/study topics, suggesting their use. In other words, they do not contribute with any practical applications or models. Practical applications were addressed in three papers: two of them used discourse analysis, one in Congresso EnAnpad and the other in the Congresso da USP; and the third used Semiotics, published in the Congresso da USP.

The dense contents and complex understanding about the particularities of semiotics could represent a barrier, hampering its applicability in Accountancy research. This difficulty could also derive from the researchers' own educational background, with a more quantitative than qualitative bias. These suppositions could be investigated in more specific studies.

#### 4.1.1 The Authors of the Articles

Table 4 displays the authors' distribution per article, so as to reveal their participation in the development of the theme.

Table 4

##### Authors most present in the events, per article

Ranking	Author	Number of authorships	%	Accum.%
1	Masayuki Nakagawa	4	21.1	21.1
2	Antônio Manoel R. De Carvalho	2	10.5	31.6
3	José Maria dias Filho	2	10.5	42.1
4-14	Anísio Candido Pereira, Edgard Monforte Merlo, Horacio Accioly Junior, Ivan Ricardo Peleias, João Bosco Segreti, Luiz Panhoca, Marcelo Botelho da Costa Moraes, Marcelo Seido Nagano, Marcelo Theoto Rocha, Nelson Satio Bito e Olga Maria Panhoca da Silva	1	57.9 (5.2/ cada)	100
Total		19		

Source: Associação Brasileira de Custos (2009), Associação Nacional de Pós-Graduação e Pesquisa em Administração (2009), and Congresso da USP de Controladoria e Contabilidade (2009).

On average, each paper had 2.7 authors (Table 5). In 42.8% of the cases (equivalent to three articles), there were two authors per article. The other four papers had one, three, four and five authors, respectively.

Table 5

##### Number of authors per article

Number of Authors	Frequency	%	Accum. %
1	1	14.2	14.2
2	3	42.8	57.1
3	1	14.2	71.4
4	1	14.2	85.7
5	1	14.2	100.0
Total	7		

Source: Associação Brasileira de Custos (2009), Associação Nacional de Pós-Graduação e Pesquisa em Administração (2009), and Congresso da USP de Controladoria e Contabilidade (2009).

A more specific analysis about the article contents revealed two articles, published in the Congresso da USP, elaborated by nine authors in total. Seven authors were responsible for the two papers published in EnAnpad, and only three for the two papers found in the Congresso ABC. It should be highlighted, however, that the Congresso da ABC was the sole event without any practical application of the theory.



#### 4.1.2 References

Publications that were not relevant for the research theme were not calculated. Traditional Accounting publications that support the classification of Accounting as a language were considered though.

Table 6

##### Studies most used as references

	Publication	Citations	%	Accum. %
1	HENDRIKSEN, Eldon S., BREDA, Michael F. Van. Teoria da Contabilidade. São Paulo: Atlas, 1999.	12	16.2	16.2
2	FINANCIAL ACCOUNTING STANDARDS BOARD. Statement of Financial Accounting Concepts nº 2, Qualitative Characteristics of Accounting Information, May 1980.	7	9.4	25.6
3	DIAS FILHO, J. M. Características qualitativas da informação contábil: O problema da compreensibilidade à luz da teoria semiótica e da comunicação. Dissertação de Mestrado, USP, 2001.	6	8.1	33.7
4	IUDÍCIBUS, Sérgio de. Teoria da Contabilidade. 5 Ed. São Paulo: Atlas, 1997.	5	6.7	40.5
5	PRETTO, Clea B.M. E NAKAGAWA, Masayuki. Semiótica e contabilidade: uma perspectiva interdisciplinar. São Leopoldo - RS 2000.	3	4.0	44.5
6	MORRIS, Charles W. Fundamentos da Teoria dos Signos. Rio de Janeiro: Eldorado Tijuca, 1976.	2	2.7	47.3
7	SANTAELLA, Lúcia. O que é semiótica. São Paulo: Brasiliense, 1983.	2	2.7	50.0
8	MARCHESE, Amauri B. Comunicação: fator estratégico na gestão empresarial. Revista ESPM, 2000.	2	2.7	52.7
9	CARVALHO, Antônio M. R. e NAKAGAWA, Masayuki. Um olhar fenomenológico sobre a "res" da logística contábil na identificação dos custos. In VII congresso Brasileiro de Custos - ABCustos Outubro: 2001.	2	2.7	55.4
10	ETHERIDGE, Harian Lynn. An examination of Semiotic Theories of Accounting Accruals. Unpublished Ph.D. Dissertation, Louisiana State University, 1991.	2	2.7	58.1
11	BELKAOUI, Ahmed Riahi. The linguistic shaping of accounting. Quorum Books, Westport, Connecticut: London, 1995.	2	2.7	60.8
12	CROPLEY, D. H. Towards formulating a semiotic theory of measurement information. Measurement, 1998.	2	2.7	63.5
13	DUNN. C. L.; GRABSKI, S. V. Perceived semantic expressiveness of accounting systems and task accuracy effects. International Journal of Accounting Information Systems. N. 1, p. 79-87, 2000.	2	2.7	66.2
14	PANHOCA, L.; ACCIOLY JR, H.; SILVA, O.M.P.; NAKAGAWA, M. A representação dos signos "contabilidade, custos e investimento": um enfoque da semiótica. In Anais VIII Congresso Del Instituto Internacional de Custos. Punta Del Este, Uruguay: Nov. 2003.	2	2.7	68.9
15	REINERT, M. Alceste, une méthodologie d'analyse des données textuelles et une application. Bulletin de méthodologie sociologique, (28) p. 24-54, 1996.	2	2.7	71.6
16	NAKAGAWA, Masayuki; PRETTO, Clea Beatriz Macagnan. An interdisciplinary view of accountancy in Brazil, In: Asian-Pacific Conference on International Accounting Issues, 12th. Anais. China, 2000	2	2.7	74.3
17	MOST, K.S. Accounting Theory. 2ª ed. Columbus, Ohio: Grid, 1982.	2	2.7	77.0
	<b>Total</b>	<b>57</b>		

Source: Associação Brasileira de Custos (2009), Associação Nacional de Pós-Graduação e Pesquisa em Administração (2009), and Congresso da USP de Controladoria e Contabilidade (2009).

The data were collected after equalizing the references, respecting the issue and year of the publications, due to the range of reference forms. Another important aspect of data treatment is that the references listed but not cited in the articles were not considered, in the belief that they were not used in the

study. The most cited publication in all articles is the book *Teoria da Contabilidade*, written by Eldon S. Hendriksen and Michael F. Van Breda, which was cited twelve times. Second ranks FASB standard 2. Third, cited six times, comes the Master's thesis by José Maria Dias Filho, entitled "Qualitative characteristics of accounting information: the understandability problem in the light of semiotics and communication theory". Fourth is the book *Teoria da Contabilidade*, by Sérgio de Iudícibus. In the fifth place comes the paper "Semiotics and accounting: an interdisciplinary perspective", by Pretto and Nakagawa (2000). The book *Foundations of the Theory of Signs*, by Charles W. Morris, the first book in the list that specifically addresses the theme Semiotics, only ranks sixth.

Various references on accounting theory used in the texts, including different classics, underline that they treat Accounting as the language of business. As it can be considered as such, it turns into the focus of Semiotics.

In all articles, 74 citations were identified. Fifty-seven of these are listed in Table 6, corresponding to 77% of all citations. The profile of these articles reveals a lack of references to more consistent and solid publications that specifically address the theme Semiotics. In general, the papers contained an incipient bibliography on the theme.

#### 4.1.3 Authors

Table 7 shows the distribution of citations in the papers to evidence the authors' participation and relevance in the development of the theme. When adding up all articles, 97 citations of authors were identified. The 58 listed in Table 7 represent 59.7% of the total. A lack of conceptualized authors and pillars of Semiotics theory can be inferred. The sole author with a specific semiotic focus and three or more citations is Lúcia Santaella. As observed, in most articles, the consulted authors' main ideas are reinforced, instead of offering new theoretical or practical contributions to continue building on the theme.

Table 7

**Citations of authors**

	Reference – Author	Number of citations	%	Accum. %
1	HENDRIKSEN, E.S.	12	12.3	12.3
2	VAN BREDA, M.F.	12	12.3	24.7
3	NAKAGAWA, M.	10	10.3	35.0
4	DIAS FILHO, J.M.	7	7.2	42.2
5	IUDÍCIBUS, S.	6	6.1	48.4
6	PRETTO, C.B.M.	5	5.1	53.6
7	BELKAOUI, A.R.	3	3.0	56.7
8	SANTAELLA, L.	3	3.0	59.7
	<b>Total</b>	<b>58</b>		

Source: Associação Brasileira de Custos (2009), Associação Nacional de Pós-Graduação e Pesquisa em Administração (2009), and Congresso da USP de Controladoria e Contabilidade (2009).

## 4.2 Research Results in International Journals

First, the semiotics approach was analyzed in the international journals available in the reference base EBSCOHost, in the fields of Business Administration, Economics and Accounting, as shown in Table 8. In this analysis, only scientific papers were considered, that is, other types of literature were discarded.

The presence of the term *semiotic* in the article title was considered as evidence for the use of this theory. This research was one way to show how the theory was approached in journals in the respective areas of social sciences. As observed, in Business Administration journals, the approach of the theme is more significant, with ten papers. In Economics, then, only four papers were found. In Accounting journals, no paper was found that complied with the criterion used, indicating lack of interest in the theme.

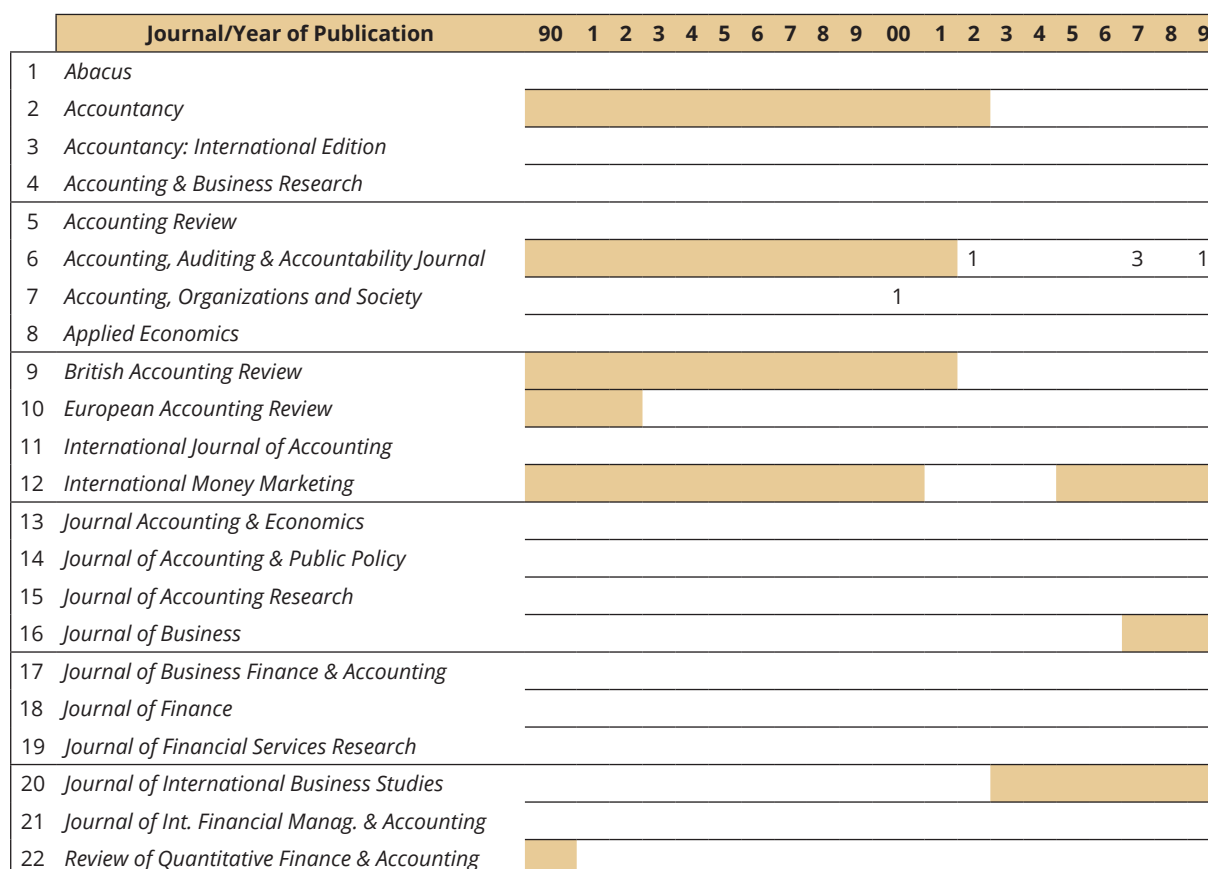
Table 8

**Approach of Semiotics in Business Administration, Semiotics and Accounting**

	In the publication title	Number of Articles
1 <sup>st</sup>	Management	10
2 <sup>nd</sup>	Economic	4
3 <sup>rd</sup>	Accounting	0
	<b>Total</b>	<b>14</b>

Source: EBSCOHost (2009).

Then, using the same reference base, 22 specific international Accounting journals were analyzed. The presence of one of the terms (*semiotic, semiologic, sign, discourse analysis, language theory* in one of the fields – title, abstract and key words of the papers, combined with the terms *accounting, accountancy and bookkeeping*) was considered evidence of the use of this theory. In this analysis, only scientific articles were considered, that is, other types of literature were discarded. The analysis period varied according to the availability of the journal in the database, between 1990 and 2009.



**Figure 4.** International journals analyzed

Source: EBSCOHost (2009).

A concentration of publications on the research theme is perceived in *Accounting, Auditing & Accountability Journal*. This journal seems to acknowledge the relevance of the theme by including it more than once in its publications. Besides the papers found in that journal, one further article was found in *Accounting, Organization and Society*. Hence, no other article was found in the other journals, over a period of more than 20 years considered in the review. This ratifies the result obtained from the analysis of Brazilian congresses and evidences that very few studies combine Semiotics with Accounting. More specific studies could shed light on the reasons for this limited exploration of the theme.

A more in-depth analysis of the papers found is displayed in Figure 5, listing all authors, year of publication and research description. Out of six papers found, four used discourse analysis and only two Semiotics. Few articles were found in the international references, proving that few accounting studies are equipped by Semiotics theory.

Authors	Year Publ	Research Description
Macintosh; Shearer; Thornton; Welker*	2000	The study investigates the ontological status of the information contained in the financial statements through two independent branches: Baudrillard's order of simulacra and Financial Accounting Theory.
Macintosh; Baker**	2002	The study adopted a literary theory perspective to describe financial statements and information as texts instead of economic goods, and thus available for analysis from the viewpoint of the linguistic theory of Semiotics.
Ferguson**	2007	The aim is to highlight John B. Thompson's approach as a useful method to solve gaps in existing Accounting research to analyze accounting "texts".
Haslam; Roper**	2007	The aim in this paper is to reply to Ferguson's paper <i>Analyzing accounting discourse: avoiding the "fallacy of internalism"</i> .
Llewellyn; Milne**	2007	The aim in this paper is to introduce Accounting coding as a discourse, to explain the idea of coding and locate the notion of a coded discourse. Taking into account the relation between the coded discourse and practice can add up to the general understanding of discourse/practice in organizational studies.
Hudaib; Haniffa**	2009	To explore the construction of meanings for independent auditors in an oil-rich autocratic state.

**Figure 5.** Authors, Year and Research Description

\* *Accounting Organizations and Society*;

\*\* *Accounting, Auditing & Accountability Journal*.

Source: EBSCOHost (2009).

In Figure 6, the results of each paper are presented. Another aspect evidenced in this second part of the research is the dissemination of accounting themes in which theory applied, proving the flexibility of Semiotics to address a wide range of themes present in different sciences that use language to support information transmission.



Authors	Year Publ	Research Results
Macintosh; Shearer; Thornton; Welker*	2000	Concludes that current Accounting no longer refers to any objective reality, but instead encompasses a "hyper-reality" of self-referential models.
Macintosh; Baker**	2002	Concluded by highlighting a new form of preparing financial statements, based on Mikhail Bakhtin's notion of heteroglossia.
Ferguson**	2007	Concludes that Gallhofer et al. infers about the production of letters without considering any formal production or reception analysis, or without paying sufficient attention to the social and historical context.
Haslam; Roper**	2007	The text defends Gallhofer et al. in his choice to promote critical discourse analysis, respecting the Accounting and finance focus.
Llewellyn; Milne**	2007	Identifies some topics that need future empirical research.
Hudaib; Haniffa**	2009	Through discourse analysis, the study shows that this construction is established upon appearance and reality through social interactions, classified in three types: micro, meso and macro.

**Figure 6.** Authors, Year and Research Results

\* *Accounting Organizations and Society*;

\*\* *Accounting, Auditing & Accountability Journal*.

Source: EBSCOHost (2009).

Departing from the premise that Accounting can be understood as the language of business (Hendriksen; Van Breda, 1999; Anthony et al., 1975; Ijiri, 1975; Belkaoui, 1995), organizational communication would be established based on the same language. Decision-making by managers would be mediated by defining signs. The wealth of this communication is supposedly related to the quality of texts Accounting produces.

In the development of Accounting and Business Administration research, using quantitative evidence and considering Brazilian and international publications, statistical techniques have been used that permit the achievement of an explanatory level. When observing research development with qualitative evidence, the situation is different, as the maximum level achieved in explanatory or descriptive. In that context, Semiotics, acknowledged as the science of signs or the theory of languages, could contribute to research development accompanied by a more solid analysis of qualitative evidence. Semiotic theory has permitted research advances in knowledge areas like Medicine, Communication, Law, among others. For Accounting, Semiotics could contribute to a critical analysis of bookkeeping, allowing for reflections that entail a new role for accounting professionals. These professionals face the challenge of offering something more than what technology permits in terms of accounting products, allowing managers or stakeholders to make decisions more efficiently.

The small number of studies that consider the study of semiotics, as observed in Table 8 and Figure 4, shows the little importance Accountancy attributes to this theme. This conduct might indicate that the influence accounting exerts on external or internal users has not been a priority, at least not in research in the area. This is totally at odds with the consulted authors, who signal that the role of Accounting is to provide its users with relevant information (Franco, 1996).

## 5. Conclusions

As verified, the theoretical base of Semiotics with regard to its use in Accounting is still incipient. In Brazil, there is no significant number of Accounting studies from a semiotic focus, in view of the few papers found in the annals of the investigated congresses.

Similarly, on an international scale, few studies have been published about the theme in the journals reviewed. In a comparison between Accounting and Business Administration and Economic studies,

less (although also limited) Accounting publications from a semiotic focus are observed. In international research, except for two journals, no studies were found in any other Accounting publication, which evidences that emphasis on the theme is lacking at the international level as well.

Another relevant aspect found in Brazilian congress articles is that these lack references and studies in more consistent and robust publications on the theme Semiotics. In fact, classical authors like Charles Sanders Peirce, Ferdinand de Saussure, Louis Hjelmslev, Claude Lévi-Strauss, Algirras J. Greimas, Thomas A. Sebeok, Jean Baudrillard, Winfried Nöth, Charles Morris, Umberto Eco and Roland Barthes are hardly cited, resulting in fragile theoretical references on Semiotics in almost all papers.

Semiotics shows to be a very complex theme, with several papers attempting to cover many solutions and treating Semiotics as a panacea for Accounting's communication problems. This does not necessarily guarantee that the application of Semiotics solves problems, like the reader's understanding for example. Its utility could be much more oriented towards an analysis technique than a solution to the problem.

Study limitations include the fact that only three Brazilian congresses were considered in the review, as the theme may have been addressed during other congresses that were left out of this research. Similarly, the review did not extend to Brazilian scientific journals and international congresses. In the article search, the review was limited to the search options the congress websites and databases used on EBSCOHost made available, an aspect that justifies that need to distinguish between the paper collection procedures used for the congresses and journals.

The lack of studies that use the semiotic approach in Accounting opens plenty of room for further research, which uses the potential of this theory in sciences that need support from communication to promote the efficacy of their actions. A wide range of accounting subthemes could fit into such studies.

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# Difficulties and Perspectives of Accounting Students at Paraná Federal University According to Socio-Educational Profile

## Abstract

The main focus of this study is to understand how the background of accounting students before entering Paraná Federal University (UFPR), according to their socio-educational profile, affects their perceived difficulties and professional aspirations, as well as how these aspects change during their undergraduate years. It is a descriptive study by means of analysis of descriptive statistics of survey data and application of the  $\chi^2$  (chi-square) test, cluster analysis and discriminant analysis, which identified the existence of two groups with distinct profiles among the students investigated. These groups were identified as the “Ascension Group”, composed of upwardly mobile students drawn from lower social strata, and the “Maintenance Group”, made up of students from higher social strata. The evidence showed that the two groups have different perceived difficulties and professional perspectives.

**Keywords:** Accounting students, accounting teaching, socio-educational profile, perceived difficulties, professional perspectives.

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## 1. Introduction

University admission in Brazil, both to public and private institutions, is in general based only on the results of the entrance exam, which is composed of a set of tests of the knowledge learned during primary and secondary school. (Rehfeldt, 2006; Kurchaidt, Nascimento, Zanette & Camargo, 2008; Stefanello, 2010).

It is generally harder to gain admission to public (state or federal) institutions, because they are tuition-free and are normally highly ranked in educational quality. This poses a particular problem for students from low-income families, because of the generally poor quality of public education at the primary and secondary level (in ironic contrast to the university level) and/or their need to work while in high school, leaving insufficient time for their studies. Among the reasons for this is the limited number of places in public institutions and the educational background of the student in primary and secondary levels, mostly from the free education nightly. (Rehfeldt, 2006; Stefanello, 2010).

In any event, the purpose of the entrance exam is to select the candidates with the best chances of graduating with a college degree. Therefore, besides the barrier posed by the entrance exam, factors such as the socio-educational background also influence the decision to attend college and the performance if accepted. In general, the education and occupation of the parents have a great influence on the choice of a determined major and thus on the future professional career of students.

The socio-educational profile is determined by factors such as family income, occupation and schooling level of the parents and the quality of the student's basic education. Those from lower social strata tend to see a college education as a way to transform their lives by taking a step up in the world, with the chance to earn more than their parents. This is certainly true of students who major in accounting, because of the high demand for this profession in the job market.

Despite recent expansion, Brazilian public universities still suffer from some limitations on the number of places and the number and qualification of teachers. There has also been an effort in recent years to smooth out the disparities in educational opportunities, to ameliorate the potential social problems caused by economic and social differences. But as stated, there is still much to be done in this respect, particularly to upgrade the quality of public primary and secondary schools so their students can have a better chance to compete for university spots and improve their professional perspectives.

In light of this situation, the aim of this study is to answer the following question: How do different socio-educational profiles influence the perceived difficulties and future perspectives of accounting students at UFPR?

Intrinsic to the analysis of the individual the adversities faced by individuals in society, we also investigated if there is formation of distinct groups with different socio-educational profiles, perceived difficulties and professional perspectives among accounting students at UFPR. Our specific objectives were: (1) to delineate the socio-educational profiles of the students; (2) to learn the main difficulties perceived by the students; (3) to learn their professional perspectives; (4) to statistically investigate whether the socio-educational profiles influence the perceived difficulties; and (5) to statistically investigate whether the socio-educational profiles influence the professional perspectives.

## 2. Theoretical Framework

### 2.2 Socio-Educational Aspects of Accounting Students

Society exercises influence on individuals in various aspects. Among them are the expectations regarding improvement of general conditions of life, subject to the context in which people live and their social groups. The study of these aspects allows an understanding of the organization and social structure to which people are subject, whether by choice or not (Guareschi, 1992; Oliveira, 1999; Ferreira, 2003; Giddens, 2005).

The concepts of social stratum and social class arose as ways to understand the social organiza-

tion of individuals, the behavior of social groups and the particular individual perspectives for the future (Guareschi, 1992; Oliveira, 1999; Ferreira, 2003; Giddens, 2005).

Social stratum is a reference used to describe the equalities and inequalities among individuals and groups in human societies. On this matter, Giddens (2005, p. 234) states that “often we think of stratification in terms of assets or property, but it can also occur because of other attributes, such as gender, age, religious affiliation or military rank.” Regarding the concept of classes, the comprehension of the social phenomenon by which individuals become involved in groups depends on the classification and ranking of the elements being studied.

Ferreira (2003, p. 122) and Oliveira (1999, p. 71) mention the types of stratification normally used, which include three dimensions:

- a) economic stratification – based on possession of material assets, resulting in a society divided into rich and poor people and people in an intermediate situation;
- b) political stratification – based on the situation of political control in society, of groups that detain the power to choose social policies;
- c) professional stratification – based on the different degrees of importance attributed to each profession by society.

The system of strata is composed of “individuals occupying a relatively similar position according to some objective characteristics (income, occupation, leisure activities),” and the characteristic of stratification “is the presence of status based on economic, political and cultural power and particular lifestyles” (Rabello, 1979, p. 28). The type of social strata leads the individuals of a society to compose social classes in which “the ownership of wealth, together with occupation, are the chief bases of class differences” (Giddens, 2005, p. 234).

Guareschi (1992, p. 32) states that “class is one among the many ways people can subjectively identify their social position within unequal societies.” Class is the ranking of priorities in a system of stratification within the various dimensions of the system, such as income, wealth, status, ties of friendship, etc. (Rabello, 1979; Guareschi, 1992; Oliveira, 1999; Ferreira, 2003; Giddens, 2005).

Further according to Guareschi (1992, p. 34), the most common criteria for division of individuals into social classes are “income and social status”:

- a) income determines the economic power of individuals, generally measured by what they receive in exchange for their labor or their possessions;
- b) social status refers to the prestige of people within society and mainly comes from their educational background (schooling) or profession, often including their political importance.

Therefore, social classes are mechanisms that allow understanding how the stratification process occurs in societies rather than a way to separate individuals within each class. Based on the structural elements of stratification and classes, the set of criteria that form society can be better understood and analyzed according to various influences and perspectives that operate in a society.

### 2.2.1 The Socio-Educational Context of Accounting Students

Because accounting is associated with the business area, along with the scientific and technological advances in the means of production and information, the increasing number women choosing to study accounting, the convergence of Brazilian accounting practices to international standards and other concerns over global reflections on the accounting profession, substantial changes have been occurring in the perspectives of accounting students, to a different extent than among students of other majors (Takakura, 1992; Marion, 1999; Escerdo & Quintana, 2007).

Some accounting students are aware of the activities associated with the profession before college admission, by means of the labor market or previous training in bookkeeping. While all have a notion of the amplitude of accountants' professional duties, few students have clearly defined what functions they want to perform when entering the job market (Marion, 1999).

This uncertainty is partly the result of the influence acquired during training in bookkeeping and premature entrance into the job market. Regarding this scenario, Takakura (1992, p. 21) states that "the family, community, social, political and economic systems, culture, educational system, professional associations, etc." all influence students' choice of major, their perspectives during their college years and plans for entering the job market.

Some circumstances characterize the general context of accounting students. Chief among these are the lack of clarity regarding professional definition and the difficulties faced during university studies. These difficulties are summarized by Takakura (1992, p. 18): "a) the fact that many studied in public primary and secondary schools, often during the night session; b) engagement in paid work; c) dependence on working to continue studying; and d) absence of the habit of reading." These aspects reveal the profile of student workers, who help their families financially and enter the job market early, assuming multiple responsibilities, to contribute to their family's subsistence while supporting their own studies. The absence of the habit of reading, a result of poor primary education, and the engagement in various activities at the same time, can impair students' learning (Takakura, 1992).

Involvement with other activities and inadequate educational fundamentals, among other factors, can cause difficulties for college students. Takakura (1992, p. 18) mentions some of these: "a) lack of time to devote to study; b) insufficient learning base from high school; c) boring professors; and d) low quality of the college program." Peleias et al. (2008, p. 82) also mention, in their investigation of first-year accounting students, that these students often face "financial difficulties, exhaustion, difficulties with accounting subjects, among others," besides stressing that "nighttime study is a possible option for many Brazilians," among them accounting students.

## 2.2.2 Expectations of Accounting Students

Individuals in general, motivated by their perspectives, seek to satisfy their basic needs, in many cases survival. But besides basic needs, others arise that redesign the process of choices and options. By means of distinguishing mechanisms, such as social classes and strata, individuals position themselves in layers according to criteria.

As elements of social transformation, individuals are the main agents of change in societies, by means of social mobility, which means the "movement of individuals and groups between different socio-economic positions" (Giddens, 2005, p. 248), a movement that demands actions and can cause transformations throughout society. Oliveira (1999, p. 73) says that "social mobility, therefore, is the change of social position of a person in a determined social stratification system." Pastore (1979, p. 4) shares this position, stating that social mobility "refers to changes of social status" – in the sense that each social position of an individual represents a condition of income, occupation and/or educational level.

Many factors contribute to the movement of individuals in the social scale, involving both actions of the individual or conditions outside their control (Oliveira, 1999; Giddens, 2005).

In the broad sense, social mobility occurs due to social inequalities in terms of rights, privileges, power, obligations and duties in society (Rabello, 1979). It often represents the survival of individuals and what they strive to achieve, individually or for the group (social class). The achievement of a certain social position often stimulates the effort to reach even higher levels.

The mobility of individuals has various connotations. Rabello (1979, p. 35) mentions that classifications often are based on "wealth, occupational activity, education, religion and even biological character-

istics.” Therefore, the study of social mobility needs indicators that are valid for all individuals, considering the causes of mobility between classes (Rabello, 1979). The indicators usually adopted to understand mobility are occupational activity, education and income (Rabello, 1979; Oliveira, 1999; Giddens, 2005).

The indicators of social mobility, when analyzing accounting students, reveal they choose this course of study because the profession offers good perspectives for financial stability and personal and professional recognition, and see obtaining a degree as a doorway to a promising future. These expectations are shaded by the family background and other influences, such as friends and conditions for access to university study (Takakura, 1992; Leite, 2005; Escerdo & Quintana, 2007; Lagioia et al., 2007; Peleias et al., 2008).

### 3. Methodology

This study is descriptive in nature, because the main objective is to describe the characteristics of a determined phenomenon and establish relations among variables. More particularly, it combines a review of the literature to obtain a valid theoretical framework to support a survey of a target population (Gil, 1996; Cooper & Schindler, 2003; Richardson, 2007; Raupp & Beuren, 2008).

A survey involves obtaining information directly from a representative sample of the population of interest (Gil, 1996; Cooper & Schindler, 2003; Richardson, 2007; Raupp & Beuren, 2008), generally through administration of a questionnaire. The questionnaire for this study was divided into three sections. The first contained 23 multiple-choice questions while the second and third each contained 25 closed questions with responses ranked on a Likert scale of six points, as follows: (TD) totally disagree; (D) disagree; (PD) partly disagree; (PA) partly agree; (A) agree; and (TA) totally agree.

Before administration, we tested and validated the questionnaire in a class of 40 first-year accounting students at Paraná Federal University (UFPR) and afterward with scholarship recipients in the master's in account program of UFPR. After correcting the confusing and inconsistent items in the pre-test phase, we applied the questionnaire to sophomores and juniors in the UFPR accounting program, obtaining 134 valid responses from the students in four classes, two from each level. We applied the questionnaire simultaneously in the two classes of students of each level, on a Tuesday to the sophomores and a Thursday to the juniors. In all cases, all the students attending class that day collaborated with the study.

The Cronbach's alpha for internal consistency of the questions in section II was 0.867 and for the 25 section III it was 0.766, in both cases greater than the lower limit generally considered acceptable of 0.70 (Hair et al., 2005).

The delimitation to the intermediate population of the accounting course was based on previous studies that had evaluated items such as factors influencing the choice to major in accounting, the perception of first-year accounting students of the difficulties faced in studying in the night session, integration in college life, academic satisfaction of entering and graduating students and demand for accountants in the job market (Bomtempo, 2005; Schleich, 2006; Pinheiro, 2008).

#### 3.1 Statistical Treatment of the Data

The analysis and interpretation of the data collected followed the quantitative approach. According to Richardson (2007, p. 80), this method “is characterized by employment of quantification both in the collection of data and their treatment by means of statistical techniques, from the simplest, such as calculation of percent, mean and standard deviation, to the most complex, such as measurement of correlation coefficients and regression analysis, etc.” In our case, we calculated the descriptive statistics and analyzed them by the  $\chi^2$  (chi-square) test, discriminant analysis and cluster analysis, using the Statistical Package for the Social Sciences (SPSS) version 13.



### 3.2 Hypotheses

Based on delimitation of the research questions (Richardson, 2007), potential solutions are declared by means of hypotheses, for the purpose of guiding the research process, identifying relevant facts, suggesting the appropriate way to plan the study and providing a conceptual framework to obtain conclusions (Cooper & Schindler, 2003).

According to Gil (2009, p. 31), a hypothesis “consists of the offer of a possible solution, through a proposition, that is, a verbal expression that can be declared true or false.” It is way to enable finding a response to the research problem from the possible responses. According to Cervo & Bervian (2002, p. 86), “a hypothesis consists of a supposition that the truth or explanation sought is known,” since if the researcher does not clearly define the response to the problem, the study may not reach a suitable conclusion. We formulated the following hypotheses and tested them between the groups:

$H_1$  – Accounting students with different socio-educational profiles do not differ regarding their perceived difficulties.

$H_2$  – Accounting students with different socio-educational profiles do not differ regarding their professional perspectives.

And as a necessary hypothesis to identify the relevance of each variable from section I in the formation of each group, we formulated the following:

$H_0$ : -The “analyzed variable” is independent and not associated with the formation of each group.

The result obtained by applying the statistical techniques for each “analyzed variable” are shown in Table 1.

## 4. Analysis of The Data

The cluster analysis revealed the formation of two groups, and using descriptive analysis we identified the characteristics related to these groups, allowing them to be called the “Ascension Group” and “Maintenance Group”. These characteristics were confirmed by analyzing each variable forming the group. The characteristics of these two groups are:

- a) Ascension Group – This group is composed of individuals between the age of 20 to 29 years who work and contribute to their family’s total income, which is up to five times the minimum monthly wage<sup>1</sup>, and who studied in public high schools (regular or technical). Their parents only studied up through high school at most and generally work in relatively low-paid jobs.
- b) Maintenance Group – This group is mainly formed of students up to 19 years of age who work and also receive financial support or who are responsible for their own support. Their families have total income levels higher than five times the minimum wage. These students studied in private high schools, mainly during the morning or afternoon session, and generally their parents have college degrees and work in higher paid jobs.

<sup>1</sup> At the exchange rate as of this writing, five times the minimum monthly wage is about US\$ 1,750.

The first group is called the Ascension Group because in analyzing the variables, we found characteristics showing they are seeking to evolve to higher levels of education, income and status than the levels of their parents. In turn, the Maintenance Group consists of students who are for the most part seeking to achieve the same general level of education, income and status as their parents. In the descriptive analysis of the variables, we sought to find statistical evidence of the contribution of each aspect to the formation of the groups.

#### 4.1 Summary of the $\chi^2$ Test of the Socio-Educational Profile Variables

Table 1 summarizes the results of the  $\chi^2$  test, to demonstrate what variables influenced or contributed significantly to the formation of each of the groups. We found that family income (9, 13), parents' occupation (11, 12) and parents' educational level, as identified by Rabello (1979), are the variables that most influenced the formation of the Ascension and Maintenance groups.

The mother's profession and level of schooling has potential to explain the formation of the groups of 67% and 39%, respectively, as confirmed by the high significance and the mean of the responses of each group. The analysis of these two variables together demonstrates reciprocity between the profession and schooling of the mothers, accentuating the distance between these groups due to the socio-educational influence of the students' mothers.

The father's profession and schooling level has potential to explain the formation of the groups of 43% and 36%, respectively, as confirmed by the high significance and mean of the responses for each group. These variables also have power in the socio-educational separation of these two groups, although less intensely than for mothers, demonstrating that fathers with higher schooling levels achieve better positions in the hierarchy of professions.

Table 1

**Summary of the  $\chi^2$  test for the socio-educational profile variables**

Variable	$\chi^2$	p-value	Cramer's V	Average Responses		Result of the Hypothesis Test		
				Ascension Group	Maintenance Group			
12 Mother's profession	89.284	0.001	6	0.816	67%	2.25	7.16	Reject H0
11 Father's profession	56.882	0.001	7	0.682	43%	2.70	3.71	Reject H0
15 Mother's schooling level	52.813	0.001	3	0.628	39%	3.19	6.62	Reject H0
16 Father's schooling level	47.547	0.001	3	0.596	36%	2.63	3.67	Reject H0
17 High school and institution	41.882	0.001	2	0.559	31%	1.40	2.42	Reject H0
13 Family income	25.438	0.001	4	0.436	16%	2.57	3.60	Reject H0
9 Economic participation in the family	15.069	0.005	4	0.335	11%	2.75	3.44	Reject H0
19 High school and session	14.513	0.001	2	0.317	10%	2.49	2.93	Reject H0
6 Means of commuting	11.629	0.009	3	0.295	9%	2.84	3.31	Reject H0
14 Type of housing of parents (own/rented)	10.656	0.014	3	0.282	8%	3.27	3.78	Reject H0
3 Marital status	9.752	0.008	2	0.27	7%	2.22	2.04	Reject H0
20 Other college course		0.008		0.236	6%	1.29	1.53	Reject H0
2 Age	4.766	0.190	3	0.189	4%	2.33	2.04	Do Not Reject H0
10 Field of activity of individual's occupation	5.618	0.230	4	0.205	4%	2.87	3.00	Do Not Reject H0
7 Hours devoted to study per week	5.962	0.202	4	0.211	4%	3.06	2.71	Do Not Reject H0
8 District of residence	5.962	0.202	4	0.211	4%	4.16	4.82	Do Not Reject H0
22 Year of graduation from high school	40.01	0.405	4	0.173	3%	2.79	3.11	Do Not Reject H0
21 College entrance exam preparatory course		0.105		0.149	2%	1.76	1.62	Do Not Reject H0
1 Gender		0.272		0.111	1%	1.46	1.58	Do Not Reject H0
18 Modality of high school	2.002	0.367	2	0.122	1%	2.81	2.91	Do Not Reject H0
8 City of residence		0.475		0.085	1%	1.80	1.87	Do Not Reject H0

Source: Survey data (2010).

Regarding high school and type of institution, the variable explains the formation of the groups on the order of 31%, as confirmed by the level of significance and mean of the responses of each group. This variable indicates that students of the Ascension Group attended public schools exclusively or partially during their secondary schooling while those of the Maintenance Group attended private high schools exclusively or partially. The modality of public or private schooling between the two groups also points to different income strata between them.

The family income variable, with explanatory power over formation of the groups of 16%, distinguishes the different economic power between them, with some strong consequences for the members of each group, particularly the limitation in the Ascension Group to achieve life goals.

The variables regarding student's financial participation in the family and the session during which they studied in high school (day versus night) have the respective potential to explain the groups' formation of 11% and 10%. These variables, analyzed together, evidence that students of the Ascension Group more often work during the day and attend school at night because of the need to contribute to their families' income.

The means of commuting to and from university and type of housing have the potential to explain the groups' formation of 9% and 8%, respectively. Parents' home ownership is a distinct economic char-

acteristic of the members of the Maintenance Group, evidencing the higher family income, a factor that also influences the spending on students' consumer goods, such cars or motorcycles to commute to and from school. In turn, the parents of members of the Ascension Group typically live in rented housing and the students use public transportation.

The marital status of the members explains 7% of the potential to form the groups, with a larger percentage of married students in the Ascension Group. This variable, if analyzed together with the previous ones, can explain part of the difficulties faced by this group's members. Besides the need to work during the day and study at night, more of them have responsibilities to spouses and children.

This higher percentage of married students in the Ascension Group is to a large extent explained by the age of the respondents. The age variable has group formation explanatory power of 6%. The members of the Ascension Group typically are between 20 and 29 years old, in contrast to the members of the Maintenance Group, whose average age is 19 years.

The other variables had lower power to explain the groups' formation, according to the results of the statistical tests, and some did not show any explanatory power.

## 4.2 Analysis of the Socio-educational Influence on Perceived Difficulties

In this section we report the results of the discriminant analysis of the difficulties perceived by the students surveyed.

The assumptions of normality and homogeneity of the variance for the perceived difficulties resulted in a significance of  $F = 0.705$  by the Box test, which does not allow affirming the differences observed are significant, with equality of the dispersions between the groups (Fávero et al., 2009). Table 2 summarizes the stepwise procedure, indicating the variables that were added as discriminants and the corresponding value of Wilks' lambda, which indicates the variables with discriminant capacity for the perceived difficulties.

Table 2

**Discriminant variables by the stepwise procedure for the perceived difficulties**

Step	Entered	Wilks' Lambda							
		Statistic	df1	df2	df3	Exact F			
						Statistic	df1	df2	Sig.
1	Q_II_20_I believe that the ideal situation is to dedicate full time to work or study.	0.931	1	1	132	9.790	1	132	0.002
2	Q_II_6_The lack of time to sleep and rest impairs my learning.	0.891	2	1	132	8.032	2	131	0.001
3	Q_II_18_In real situations, I tend to simplify the use of concepts (simplify the techniques learned).	0.845	3	1	132	7.966	3	130	0.000
4	Q_II_24_I think there needs to be more trust between the teacher and student.	0.818	4	1	132	7.165	4	129	0.000
5	Q_II_22_For me, the explanation given in class is generally very technical and hard to understand.	0.792	5	1	132	6.730	5	128	0.000

Source: Survey data (2010).

The result of the tolerance for each variable, at each step that discriminated the perceived difficulties, excluded one variable at a time until none presented significance of  $F < 0.05$ . We carried out five steps in the stepwise analysis.

The variance explained in terms of the difference between the groups is shown in Table 3, where the eigenvalues are the mean representing how much each function differs from the discriminant function. The farther from 1 the groups are, the greater will be the variations explained between the groups by the discriminant function (Fávero et al., 2009). The output of the discriminant function reports that it made a 100% contribution to explain the differences between the groups.

Table 3

**Eigenvalues related to the perceived difficulties**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	0.263	100	100	0.456

Source: Survey data (2010).

Table 4 shows the significance of the discriminant function, by means of which the difference between the groups can be observed.

Table 4

**Wilks' lambda and c2 for the significance of the discriminant function of the perceived difficulties**

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	0.792	30.225	5	0.000

Source: Survey data (2010).

The values of the standardized coefficients of the discriminant functions of the perceived difficulties, in Table 5, can be used to assess the importance of each explanatory variable in the discriminant function and subsequent interpretation of the results.

Table 5

**Standardized coefficients of the discriminant functions of the perceived difficulties**

	Function
	1.000
Q_II_6_ The lack of time to sleep and rest impairs my learning.	0.452
Q_II_18_ In real situations, I tend to simplify the use of concepts (simplify the techniques learned)	-0.513
Q_II_20_ I believe that the ideal situation is to dedicate full time to work or study.	0.523
Q_II_22_ For me, the explanation given in class is generally very technical and hard to understand	0.458
Q_II_24_ I think there needs to be more trust between the teacher and student.	-0.511

Source: Survey data (2010).

The analysis of the mean values of the discriminant variables confirms different perceived difficulties in each step regarding the variables subjected to the discriminant analysis:

- in variable Q\_II\_6, which mentions the interference in learning due to the lack of time to sleep and rest, the agreement is greater among the students in the Ascension Group;
- in variable Q\_III\_18, which mentions the application of concepts learned in real situations, the agreement is greater among the students in the Maintenance Group;
- in variable Q\_III\_20, which mentions the need either to dedicate time to study or work, the agreement is greater among the students in the Ascension Group;

- in variable Q\_II\_22, which mentions the difficulty of understanding the explanation in the classroom because the student finds it overly technical, the agreement is greater among the students in the Ascension Group;
- in variable Q\_II\_24, which mentions the need for more trust between teacher and student, the agreement is greater among the students in the Maintenance Group.

In analytic form, Table 6 depicts the mean values of the responses on the discriminant variables for each group.

Table 6  
**Mean values of the discriminant variables**

	Ascension	Maintenance
Q_II_6_ The lack of time to sleep and rest impairs my learning.	4.64	3.93
Q_II_18_ In real situations, I tend to simplify the use of concepts (simplify the techniques learned).	3.72	4.22
Q_II_20_ I believe that the ideal situation is to dedicate full time to work or study.	3.78	2.87
Q_II_22_ For me, the explanation given in class is generally very technical and hard to understand.	3.84	3.16
Q_II_24_ I think there needs to be more trust between the teacher and student.	3.93	4.16

Source: Survey data (2010).

Based on the statistical analyses of the perceived difficulties,  $H_1$  is rejected, because the accounting students with different socio-educational profiles have mutually different perceived difficulties.

### 4.3 Analysis of the Socio-educational Influence of the Professional Perspectives

The assumptions of normality and homogeneity of the variance for the professional perspectives resulted in a significance of  $F = 0.092$  by the Box test, which does not allow affirming the differences observed are significant, with equality of the dispersions between the groups (Fávero et al., 2009).

Table 7 summarizes the stepwise procedure, indicating the variables that were added as discriminants and the corresponding value of Wilks' lambda, which reports which variables have greater discriminant capacity for professional perspectives.



Table 7

**Discriminant variables by the stepwise procedures for professional perspectives**

Step	Entered	Wilks' Lambda							
		Statistic	df1	df2	df3	Exact F			
						Statistic	df1	df2	Sig.
1	Q_III_11_I think the accounting profession is subject to a heavy set of legal requirements.	0.928	1	1	132	10.300	1	132	0.002
2	Q_III_13_Accounting training will allow me to occupy a management or executive position more quickly.	0.875	2	1	132	9.335	2	131	0.000
3	Q_III_12_In my opinion, accounting training provides the best conditions for finding a job.	0.790	3	1	132	11.521	3	130	0.000
4	Q_III_21_I have verbal, leadership and interpersonal skills that will assure stability and success in the profession.	0.761	4	1	132	10.108	4	129	0.000
5	Q_III_9_The accounting profession is most compatible with my social condition.	0.736	5	1	132	9.190	5	128	0.000
6	Q_III_6_In my opinion, the salary between genders is equal among accountants.	0.700	6	1	132	9.053	6	127	0.000
7	Q_III_7_I think the supply of jobs in the accounting area is very large.	0.676	7	1	132	8.609	7	126	0.000

Source: Survey data (2010).

The result of the tolerance for each variable, at each step that discriminated the professional perspectives, excluded one variable at a time until none presented significance of  $F < 0.05$ . We carried out five steps in the stepwise analysis.

The variance explained in terms of the difference between the groups is shown in Table 8, where the eigenvalues are the mean representing how much each function differs from the discriminant function. The farther from 1 the groups are, the greater will be the variations explained between the groups by the discriminant function (Fávero et al., 2009). The output of the discriminant function reports that it made a 100% contribution to explain the differences between the groups regarding professional perspectives.

Table 8

**Eigenvalues related to professional perspectives**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	0.478	100	100	0.569

Source: Survey data (2010).

Table 9 indicates the significance of the discriminant function, by means of which the difference between the groups can be observed.

Table 9

**Wilks' lambda and  $\chi^2$  for significance of the discriminant function of the professional perspectives**

Test of Function(s)	Wilks' Lambda	Chi-square	Df	Sig.
1	0,676	50,226	7	0,000

Source: Survey data (2010).

The values of the standardized coefficients of the discriminant functions of the professional perspectives, in Table 10, can be used to assess the importance of each explanatory variable in the discriminant function and subsequent interpretation of the results.

The analysis of the mean values of the discriminant variables confirms different professional perspectives in each step regarding the variables subjected to the discriminant analysis.

Table 10

**Standardized coefficients of the discriminant functions for professional perspectives**

	Function
	1.000
Q_III_6_ In my opinion, the salary between genders is equal among accountants.	-0.430
Q_III_7_ I think the supply of jobs in the accounting area is very large.	0.361
Q_III_9_ The accounting profession is most compatible with my social condition.	0.401
Q_III_11_ I think the accounting profession is subject to a heavy set of legal requirements.	0.317
Q_III_12_ In my opinion, accounting training provides the best conditions for finding a job.	0.556
Q_III_13_ Accounting training will allow me to occupy a management or executive position more quickly.	-0.627
Q_III_21_ I have verbal, leadership and interpersonal skills that will assure stability and success in the profession.	-0.427

Source: Survey data (2010).

- in variable Q\_III\_6, which mentions the equality in salary between genders in the accounting profession, the agreement is greater among the students in the Maintenance Group;
- in variable Q\_III\_7, which mentions the large supply of jobs in the accounting area, the agreement is greater among the students in the Ascension Group;
- in variable Q\_III\_9, which mentions the compatibility of the accounting profession with the student's social condition, the agreement is greater among the students in the Ascension Group;
- in variable Q\_III\_11, which mentions that the accounting profession is subject to a heavy set of legal requirements, the agreement is greater among the students in the Ascension Group;
- in variable Q\_III\_12, which mentions the conditions for finding a job provided by accounting training, the agreement is greater among the students in the Ascension Group;
- in variable Q\_III\_13, which mentions the benefit of faster promotion to management and executive positions provided by accounting training, the agreement is greater among the students in the Maintenance Group;
- in variable Q\_III\_21, which mentions verbal, leadership, interpersonal or other skills that provide stability and success in the accounting profession, the agreement is greater among the students in the Maintenance Group.
- In analytic form, Table 11 depicts the mean values of the responses on the discriminant variables for each group.

Table 11

**Mean values of the discriminant variables**

	Ascension	Maintenance
Q_III_6_ In my opinion, the salary between genders is equal among accountants.	3.44	3.89
Q_III_7_ I think the supply of jobs in the accounting area is very large.	5.06	4.58
Q_III_9_ The accounting profession is most compatible with my social condition.	4.02	3.40
Q_III_11_ I think the accounting profession is subject to a heavy set of legal requirements.	5.10	4.51
Q_III_12_ In my opinion, accounting training provides the best conditions for finding a job.	4.36	3.84
Q_III_13_ Accounting training will allow me to occupy a management or executive position more quickly.	3.72	4.27
Q_III_21_ I have verbal, leadership and interpersonal skills that will assure stability and success in the profession.	4.15	4.60

Source: Survey data (2010).

Based on the statistical analyses of the perceived difficulties,  $H_2$  is rejected, because the accounting students with different socio-educational profiles have mutually different professional perspectives.

## 5. Final considerations

The general objective of this study was to identify, by means of statistical evidence, if different socio-educational profiles influence the perception of difficulties and professional perspectives of accounting students of Paraná Federal University. To attain this objective, the work required methodological scope and depth which, by following a set of procedures, revealed the existence of two distinct groups of students. The results of the specific objectives are described below.

With respect to the first specific objective, the socio-educational profiles of the students, delineated from the questionnaire responses and statistical analysis, confirmed that accounting students at UFPR come from unequal social strata, with different profiles, permitting classifying them into two groups, called the Ascension Group, with 89 individuals, and the Maintenance Group, with 45 individuals.

As the groups' names indicate, the Ascension Group was composed of students from lower social levels, while the Maintenance Group's students were from higher social levels. This classification scheme, anchored on the individual manifestation of each student, by the statistical significance of each variable in the group formation and the mean of the responses of the set of students of each group, emerged in the definition of the groups. The parents of the students of the Ascension Group were mainly occupied in lower-paid jobs and had low schooling levels, as revealed by the average of the responses, in contrast with the occupational and educational levels of the parents of the students in the Maintenance Group, which were higher.

The second and fourth specific objectives were attained as follows: the main difficulties perceived by the students were concentrated with greater emphasis in one of the groups. Besides the discriminant variables that stood out, the average of the responses in each variable showed that the greatest difficulties perceived by students in the Ascension Group involve finding enough time to study, the need to work to help support families and other factors that hamper learning, leading them to believe the excess content is inappropriate for their perspectives.

For the students in the Maintenance Group, the perceived difficulties were manifested as foreboding over insertion in the job market, lack of time to study, overly technical class content, doubt over the adequacy of this content, and a perception of lack of trust between teachers and students.

The variables that allowed identifying the main perceived difficulties allowed statistically testing the research hypotheses and rejecting  $H_1$ , because the accounting students with different socio-educational profiles also differed regarding their perceived difficulties.

The third and fifth specific objectives were achieved as follows: besides the variables highlighted by the discriminant analysis for perceived difficulties, the groups also were found to differ regarding professional perspectives, in terms of their activities as accountants and insertion in the job market.

The students of the Ascension Group generally share the belief that they will not have problems finding a job in the accounting profession, due to the large supply of jobs in the field, and see the profession as a step up in status, in contrast to those in the Maintenance Group, where there was more worry expressed over future job prospects and an accounting degree was not necessarily seen as a step up in status.

The accounting professions is seen by both groups as a way to attain management or executive positions in companies, but the Maintenance Group expressed greater agreement with this affirmation. This suggests that the individuals belonging to each group still have some individual values, needing to be reviewed to permit continuing growth to higher social levels, as indicated in the theoretical framework, based on aspects such as income, occupation and schooling level of the members of the groups.

The variables that allowed identifying the professional perspectives were sufficient to statistically test the research hypotheses and to reject  $H_2$ , because the accounting students with different socio-educational profiles also differed regarding their professional perspectives.

This study has some limitations. One is the small and narrow sample, composed of 134 students in the second and third years of the four-year accounting degree program, so the results cannot be generalized. Another limitation is that the sample was drawn from a single university.

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# Structuring of a Performance Assessment Model for the Management of Accountancy Programs at Universidade Tecnológica Federal do Paraná

## Abstract

A review of the literature reveals the need to structure a Performance Assessment model for the internal management of higher education courses. In this context, the aim of this research was to structure a Performance Assessment model for the Accountancy program at Universidade Tecnológica Federal do Paraná that integrates the internal and external assessment perspectives, using the Multicriteria Decision Aid Constructivist (MCDA-C). To respond to the research objectives, an exploratory research was undertaken, including the application of a case study. Based on the structured model, the following were identified: (i) three large areas that correspond to the general course performance: Teaching, Research and Community Services; (ii) eight Fundamental Viewpoints, four for teaching (teaching staff, infrastructure, internal processes and curriculum), two for research (scientific production and scientific dissemination) and two for community services (external projects and external partnerships); and (iii) 84 performance indicators to be considered in Performance Assessment in this context. In conclusion, an assessment model could be structured to respond to the particularities of the Accountancy program.

**Key words:** Performance; Higher Education; MCDA-C; Accountancy; SINAES.

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## 1. Introduction

In Brazil, most undergraduate programs do not assess performance through an assessment system that considers internal and external objectives. Hence, the managers administer their courses solely based on the performance indicators used by external regulatory entities, that is, in many cases, they do not to evaluate highly-relevant factors (Piratelli & Belderrain, 2010).

It is highlighted that, to respond to undergraduate programs' management needs, a Performance Assessment (PA) model needs to be structured that attends to the particularities of the decision process and considers the complexity of performance assessment. Thus, a PA model needs to address all contextual factors, including qualitative and quantitative information; objective and subjective aspects; power relations among the stakeholders in the process; value conflicts and objectives of the groups interested in the decision (Bortoluzzi, Ensslin & Ensslin, 2011; Bortoluzzi, Ensslin & Ensslin, 2010a; Bortoluzzi, Ensslin & Ensslin, 2010b; Ensslin, Montibeller & Noronha, 2001; Montibeller, Belton, Ackermann & Ensslin, 2008; Montibeller & Belton, 2009;).

In that context, the research question emerges: "What performance indicators need to be considered in a Performance Assessment model for the higher education program in Accountancy, taking into account the particularities of the decision-making context?" to answer the research question, the general aim is to structure a Performance Assessment model for the Accountancy program at Universidade Tecnológica Federal do Paraná (UTFPR), which considers the decision maker's perceptions through the Multicriteria Decision Aid Constructivist (MCDA-C).

To reach the general objective that was proposed, the Multicriteria Decision Aid Constructivist Method was selected as the intervention instrument, which permits: (i) identifying the research objectives of the undergraduate program; (ii) identifying course performance dimensions; (iii) constructing performance indicators to measure the course objectives.

This study is justified as follows: (i) it contributes to the scientific community by developing a research on Performance Assessment in Higher Education; (ii) it contributes to the academic community as it presents a case study in which the MCDA-C method is applied; and (iii) it contributes to the theme Performance Assessment of higher education as it applies a scientifically consolidated method to structure a multi-criterion assessment model, which considers the particularities of the decision-making context.

Besides the introductory aspects presented, the research is organized in the following sections: (i) theoretical framework; (ii) research method; (iii) research results; and (iv) final considerations.

## 2. Theoretical Framework

Education, mainly at the higher level, plays an important social role: to contribute not only to economic development, but also to human development, graduating ethical and competent professionals who are capable of constructing relevant scientific knowledge. Hence, besides considering the quality of teaching, educational assessment should also take into account whether society's expectations are being attended to (Sobrinho, 2008).

In that context, the need for course performance assessment emerges in Higher Education Institutions (HEI). First, however, the external assessment process higher education programs are submitted to needs to be discussed through, as the higher education assessment process has gone through great changes in the last two decades, mainly to adjust to the alterations that have taken place in the context of higher education (Polidori, 2009).

In Brazil, according to Polidori (2009, p. 444), educational assessment processes can be divided in four cycles:

In the first cycle (1986 to 1992) – several initiatives to organize an evaluation process, and the existence of isolated assessments in the country, without a national assessment (PARU, GERES);

Second cycle (1993 to 1995) – called policy formulation. Establishment of Institutional Assessment Program at Brazilian Universities (PAIUB);

Third cycle (1996 to 2003) – called consolidation or implementation of the governmental proposal. The National Course Exam (ENC), aka *Provão*, and the Supply Condition Assessment (ACO) were developed, later called Teaching Condition Assessment (ACE). Finally, some Decrees were issued to regulate and organize the assessment of HEI;

Fourth cycle (2003 until today) – called construction of emancipatory evaluation. The SINAES was implemented in the intent to develop a formative assessment in which the particularities of HEI in the country were considered.

In the first cycle, no structured educational process exists at the national level. The two processes that stood out in this period were the Evaluation Program of the University Reform (PARU) and the assessment proposal of the Executive Group of the Higher Education Reform (GERES).

In 1993, in the second cycle, the Institutional Assessment Program of Brazilian Universities was created (PAIUB). The PAIUB was focused on the institution itself and adherence was voluntary. The program was intended at creating an evaluation committee in each institution, which would elaborate a self-assessment project, based on self-regulation. Some universities ended up developing the PAIUC, but it was extinct when the National Course Exam was adopted (Barreyro & Rothen, 2006).

The third cycle starts with the implementation of the National Course Exam, aka *Provão*. The *Provão* was an annual and compulsory test for all graduating students and a condition to receive their degree. The main criterion the program received was related to being an HEI assessment process, using only the students' performance results as, according to the students' test results, the Higher Education Institution received a concept ranging between "A" and "E", where "A" was the "best" and "E" the "worst" result (Polidori, 2009).

In the same cycle, other evaluation forms were introduced, which were less disseminated and only served regulatory purposes though, including: Teaching Condition Assessments (ACE), which regulated the recognition or renewal of course recognitions and the accreditation assessment of new Higher Education Institutions (HEI) or re-accreditation of active HEI. In the same period, the Education Law (LDB) was approved, determining that the validity of institutional functioning permits and course recognitions would be limited and linked to assessments (Barreyro & Rothen, 2006).

The fourth cycle starts in 2003, when the National Higher Education Assessment System (SINAES) was put in practice, in force until today. This system, according to Art. 1º of Law 10.861/2004, is aimed at the qualitative improvement, control of expanded supply, increased efficacy and effectiveness and deepening of Higher Education Institutions' commitments and social accountability.

To reach its objectives, the system departs from three pillars: (i) self-assessment and external assessment of Higher Education Institutions; (ii) assessment of undergraduate programs; and (iii) Performance Assessment of Higher Education Students.

The first pillar, the assessment of Higher Education Institutions, takes for through self-assessment and external assessment processes and addresses ten evaluation dimensions: (i) mission and institutional development plan (IDP) – verifies the institution's mission and whether the proposals included in the IDP are put in practice in accordance with the programs' functioning; (ii) the teaching, research, graduate education and community service policy – describes the didactical-pedagogical organization, curriculum development and checks the procedures to stimulate academic production; (iii) social accountability of the institution – analyzes its contribution to social inclusion, social and economic development and its relation with the public and private sectors and job market; (iv) communication with society – examines how the institution's image is disseminated in society and internal and external communication processes; (v) staff policies – checks the careers of the teaching staff and technical-administrative staff,

qualification, professional development and job conditions; (vi) institutional organization and management – describes the functioning and representativeness of management boards and the participation of the university community in decision processes; (vii) physical infrastructure – checks the entire teaching and research infrastructure, library, information and communication resources; (viii) planning and evaluation – particularly assesses processes, outcomes and efficacy of institutional self-assessment; (ix) student monitoring policies – checks alumni monitoring and pedagogical monitoring of students; (x) financial sustainability – describes funding and resource application policies in view of the continuity of the higher education supply. The analysis of the system's internal and external HEI assessment proposal reveals that SINAES intends to go beyond the regulation and bureaucratic control of the HEI. Through SINAES, the government intends to play an educative role, offering support to allow the HEI to be able to assess themselves, improve their management processes and the quality of their services (Rothen, 2006).

The second pillar, the assessment of higher education courses, in accordance with Law 10.861/2004, is aimed at verifying the teaching conditions students are offered, identifying (i) the teaching staff profile; (ii) the quality of physical infrastructure; and (iii) the didactical-pedagogical organization of the undergraduate program.

The third pillar, the assessment of higher education students' performance, is accomplished by applying the National Student Performance Assessment Exam (ENADE). The test, which combines general and specific questions, is applied to a student sample every three years, at the end of the first and final course year, to check the knowledge evolution or value the institutions have added to the students' skills and competences (Verhine, Dantas & Soares, 2006).

Each of the system pillars and evaluation dimensions develop into indicators that permit Performance Assessment. As this research is focused on the Performance Assessment of a higher education program, in Figure 1, the variables/indicators of the second pillar are presented, grouped in the three component dimensions.

<b>Variables Dimension 1: Didactical-Pedagogical Organization</b>	
1	Implementation of institutional policies in Institutional Development Plan
2	Self-assessment of the program
3	Activities of program coordinator
4	Program objectives
5	Graduate student profile
6	Number of places
7	Curriculum contents
8	Method
9	Attendance to students
10	Encouragement of academic activities
11	Supervised training and professional practice
12	Complementary activities
<b>Variables Dimension 2: Teaching Staff</b>	
1	Composition of NDE (Structuring Teaching Staff)
2	Degree and academic education of NDE
3	Work regimen of NDE
4	Degree and education of program coordinator
5	Work regimen of program coordinator
6	Composition and functioning of course management board or equivalent
7	Degree of teaching staff
8	Work regimen of teaching staff
9	Work experience in higher education teaching or experience of teaching staff

10	Number of places authorized per year per "full-time lecturer"
11	Students per class in theoretical subject
12	Mean number of subjects per lecturer
13	Research and scientific production
<b>Variables Dimension 3: Physical Infrastructure</b>	
1	Teacher rooms and meeting room
2	Work cabinets for teachers
3	Classrooms
4	Student access to informatics laboratories
5	Academic records
6	Basic bibliography books
7	Complementary bibliography books
8	Specialized, indexed and current journals
9	Specialized laboratories
10	Specialized laboratory infrastructure and services

**Figure 1.** Indicators/variables used by SINAES system for undergraduate program performance assessment

Source: Ministry of Education.

Based on the above, the dimensions the Ministry of Education assesses through the SINAES system are important in the context of a teaching institution, although other aspects need to be taken into account in the performance assessment of a higher education course, mainly the particular aspects of each undergraduate program in the context it is inserted in.

The educational assessment process is frequently discussed in Brazil, whether in the sphere of regulators, teaching institutions or society in general. In the educational assessment context, research with a focus on the SINAES system is identified in the literature (Giolo, 2008; Limana, 2008; Polidori, Marinho-Araújo & Barreyro, 2006; Reis, Silveira & Ferreira, 2010; Rodrigues, Ribeiro & Silva, 2006; Sobrinho, 2008; Vieira & Freitas, 2010).

Nevertheless, few studies are focused on the Performance Assessment of undergraduate program. It is highlighted, however, that although few studies address the theme, Performance Assessment is an important organizational management tool, and this assertion is no different for undergraduate programs at Higher Education Institutions (HEI). Nevertheless, the educational assessment process is complex, as it involves not only several variables that are hard to measure and integrate, but also different interests of many stakeholders (Barreyro & Rothen, 2006).

In addition, different Performance Assessment concepts are identified in the literature. In that context, this research's theoretical affiliation should be clarified with regard to the Organizational Performance Assessment (OPA) concept, which is the management process used to construct, fix and disseminate knowledge through the identification, organization, measurement and integration of the aspects that are necessary and sufficient to measure and manage the performance of strategic objectives in a given organizational context (Ensslin & Ensslin, 2009). For the sake of this study, the Performance Assessment concept is restricted to organizational contexts, that is, to environments that involve multiple actors with different degrees of power, not well-known objectives and interests, usually conflicting and dissatisfactions of not well-identified origins for the stakeholders themselves (Ensslin & Ensslin, 2009).

### 3. Research Method

In this section, (i) the methodological framework; and (ii) procedures to construct the model are presented.

### 3.1 Methodological framework

Considering the nature of the study objective, this is an exploratory study, as it is aimed at gaining further familiarity with the problem and making it more explicit (Gil, 1999). The exploratory characteristics of the research can be perceived in the development of the model structuring phase in which, through the facilitator's interaction with the coordinator of the Undergraduate Accountancy program (decision maker), further knowledge on the context was produced, making concerns with the course performance more explicit.

The nature of the research is characterized as practical, through the development of a case study. A practical research, like a case study, emerges from the need to understand complex social phenomena, preserving real-life characteristics (Yin, 2005). As a research modality, the case study is aimed at investigating a specific case that is outlined and contextualized in time and space to seek information (Ventura, 2007). This research design was chosen as the performance of a higher education course is a complex phenomenon, in view of different stakeholders, with distinct interests and objectives. As the objective of a case study is not the construction of generalized knowledge on the theme, but the understanding of the research context's reality, this research practice is compatible with the knowledge view and scientific paradigm adopted in this research. Thus, the specific Performance Assessment model was elaborated for the Accountancy program, in accordance with the particularities of this context, through direct interaction with the course coordinator.

As regards the data collection and instruments used for this process, primary data were used, collected through interviews; as well as secondary data, applying documentary analysis as a research instrument (Richardson, 2008). In the research, the primary data were obtained through interviews with the program coordinator, aimed at structuring the Performance Assessment model. The secondary data consulted to structure the model was the program's Pedagogical Project, as well as the legislation that regulates Brazilian higher education assessment processes.

Concerning the problem approach, this research is characterized as qualitative (Richardson, 2008), as only the model structuring phase was accomplished.

### 3.2 Procedures to construct the model

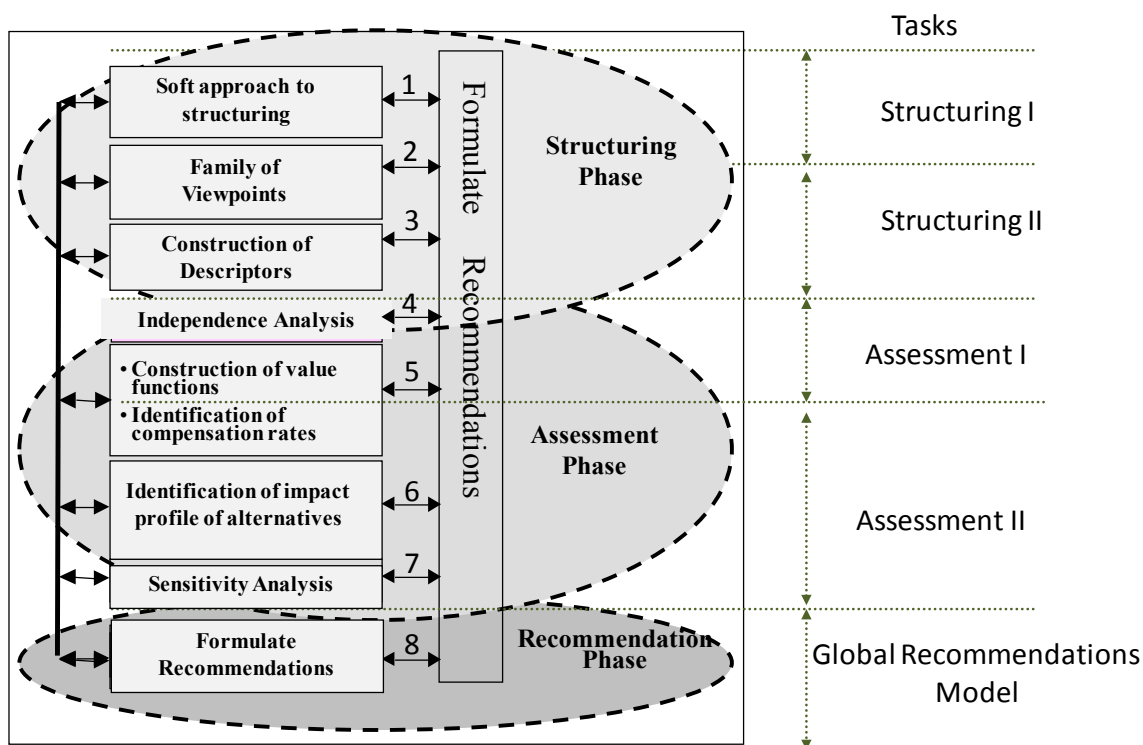
According to Ensslin *et al.* (2010, p. 128), MCDA-C became consolidated as a scientific management instrument as from the 1980's. The scientific bases of the MCDA-C method emerged when the studies by Roy (1996) and Landry (1995) were published, who defined the limits of objectivity for decision support processes; as well as the studies by Skinner (1986) and Keeney (1992), who acknowledged that the decision maker has his/her specific attributes (objectives, criteria) in each context.

The difference between the MCDA-C and traditional MCDA methods mainly relates to the fact that traditional MCDA restricts decision support to two phases: the first is formulation, and the other assessment to select, according to a defined set of objectives (with little or no participation by the decision maker), among previously set alternatives, the best (excellent) one (Ensslin *et al.*, 2010). According to the authors, the research logic of traditional MCDA is deductive rationalism, while MCDA-C uses a mixed (inductive and deductive) constructivist research logic.

According to Roy (1994, 1996, 2005), MCDA researchers are classified in two groups: those who assume a rationalist position and those who adopt constructivism as research logic. Even among the fans of the constructivist view, however, many experience difficulties to put in practice the structuring phase in a form that acknowledges the limits of objectivity. In line with Ensslin *et al.* (2010), This context stimulated some authors, who consider and prioritize this phase in their research instrument by designating it as MCDA-C to emphasize the research logic. The use of this designation is present in Bana and Costa; Ensslin; Corrêa; Vansnick, (1999); Ensslin, Dutra and Ensslin (2000); Bortoluzzi, Ensslin and Ensslin (2010c); Albuquerque (2011); Lacerda; Ensslin and Ensslin, (2011a); Lacerda; Ensslin and Ensslin, (2011b), among others.



In this context, and in accordance with the convictions and concepts of MCDA-C, this research was constructed based on the Multicriteria Decision Aid Constructivist Method (MCDA-C), which is divided in three main phases, demonstrated in Figure 2: (i) structuring; (ii) assessment; and (iii) elaboration of recommendations.



**Figure 2.** Activity flow of MCDA-C method

Source: Adapted from Ensslin, Montibeller, Noronha (2001).

It is highlighted that, in the present study, only the structuring phase of the Performance Assessment model was undertaken. The research phases are described under items 3.2.1, 3.2.2 e 3.2.3.

### 3.2.1. Contextualization

This phase is aimed at explaining the context and constructing a level of understanding about the environment that permits outlining what belongs to the problem and what does not. *Contextualization* starts with the identification of the decision context in which the actors are presented, that is, those who participate, direct or indirectly, in the management process. The actors in this process are: decision maker; facilitator; players and indirect stakeholders. Next, the problem should be labeled, which involves elaborating its summary, which should contain the main research focus, indicating the intended aim.

### 3.2.2. Hierarchical Value Structure

In this phase, the facilitator encourages the decision maker to talk openly about the context, recommending as few interruptions as possible. Then, the facilitator extracts a range of information, corresponding to the concerns and values of the decision maker and the properties of the context. This information is called Primary Assessment Elements (PAEs), which represent the aspects the decision maker



considers essential and are part of the set of elements that support the dimensions he takes into account when assessing the context. Hence, they are in a too summarized form. The next phase is to expand this information to transform it into concepts. This is accomplished by encouraging the decision maker to talk about the sense of his/her preference with each of the PAEs, as well as about the consequence of not achieving this goal. What results is a huge set of information in the form of preferential directions sought in the context. This information is now grouped per content or area of concern (Ensslin *et al.*, 2001). Each area of concern then consists of a set of concepts. To expand the knowledge for each, a cognitive map is constructed (Eden, 1988). Each map is then dismembered into its constituent clusters and this structure is transformed into a Hierarchical Value Structure (Ensslin *et al.*, 2001; Keeney, 1992).

### 3.2.3. Construction of Descriptors

The top part of the Hierarchical Value Structure represents the strategic objectives or dimensions of the decision maker for the context, which in the MCDA-C method are called Fundamental Viewpoints-FVP. Its bottom parts explain what tactical functions and, further down, what operational activities explain the strategic objectives. Thus, after evidencing the alignment between the strategic and operational objectives, the measurement is missing, which is performed in this phase. The concepts and means on the cognitive maps provide information on the performance of what contextual property should be measured (Bana & Costa *et al.*, 1999). To express the decision maker's preference in this ordinal scale, one should now specify the reference levels. The bottom level is named Neutral and the top Good (Ensslin *et al.*, 2001). This information closes off the construction process of a qualitative understanding in the MCDA-C method.

## 4. Results

In this section, the results of the research undertaken in the Higher Education program in Accountancy at Universidade Tecnológica Federal do Paraná (UTFPR) are presented. The section is organized as follows: (i) contextualization; (ii) hierarchical value structure; (iii) construction of descriptors; and (iv) comparison between SINAES and Performance Assessment model structured based on the MCDA-C.

### 4.1 Contextualization

The case study was undertaken in the Higher Education program in Accountancy at Universidade Tecnológica Federal do Paraná (UTFPR), Campus Pato Branco. In the interviews with the program coordinator, who is responsible for its management, the intent was to check the functioning of the undergraduate program and the way it is managed. At the time the research was accomplished, the program was subject to sporadic assessment processes by external entities. Internally, the sole assessment process is the students' evaluation of the teachers. This reveals the need for a management instrument that informs about the current program performance with regard to the criteria that are considered important for the context and also permits the elaboration of strategies to improve the program performance.

After understanding this management process, the actors were identified who directly or indirectly influence the decision process, as presented in Figure 3.

Decision maker	Program Coordinators
Facilitators	Authors of the research
Players	Campus Dean; Dean of Teaching; Department Head and Course Teachers
Indirect stakeholders	Students

**Figure 3.** Actors involved in the course performance assessment process

Source: Research data.

The decision maker, the course coordinator, was the actor who actively participated in the entire structuring process of the model, as he is the person responsible for its performance, and his perceptions and values should be considered across the process. The facilitator, i.e. the research authors, were the people responsible for developing the method in the selected context. The players were the campus dean, the dean of teaching, the department managers and other course teachers, who did not participate actively in the structuring of the model but influence the decision maker. The indirect stakeholders are the students, whom the decision maker takes into account, but who exert no direct influence.

After defining the actors, together with the decision maker, the label was identified that best identifies the problem: management Performance Assessment of the Higher Education program in Accountancy at UTFPR.

## 4.2 Hierarchical Value Structure

The construction of the Hierarchical Value Structure starts with the identification of the Primary Assessment Elements (PAEs). This identification process of the PAEs happened through interviews with the Program Coordinator, in the attempt to motivate the decision maker to talk about all aspects he finds important and which direct or indirectly affect the performance of the Accountancy program; and also by consulting internal documents and legislation on the assessment of undergraduate higher education programs. After identifying the PAEs, knowledge about the context was further expanded by transforming each PAE into one or more action-oriented concepts. The concepts are also constructed through the interviews, in which the decision maker was asked to talk about each listed PAE in detail. In this phase, the intent was to identify what a good performance would be for each PAE, as well as the intended performance and what the worst performance would be, the minimum acceptable. The ellipsis (...) in each concept separate the intended hub from the psychological opposite and should read as “instead of”.

Figure 4 displays examples of Primary Assessment Elements and their respective action-oriented concept.

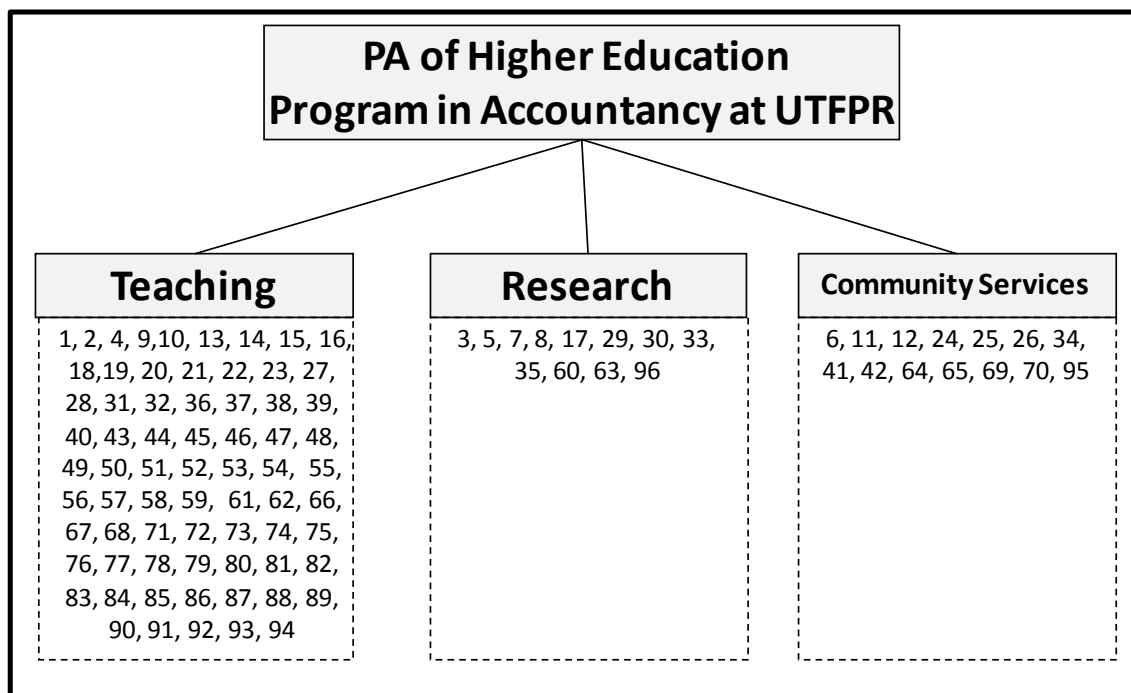
PAEs	Concepts
1. Degree of teachers	1 – Having more teachers with a Ph.D. degree... compromising class performance and research productivity.
2. Diligence of teachers	2 – Guaranteeing teachers’ diligence in classes... being unable to address the full program contents and causing students’ dissatisfaction.
3. Teachers’ available time	3 – Guaranteeing that teachers are available for the full time they were hired for... being unable to count on their participation in course decisions.
4. Teachers’ practical experience outside the classroom	4 – Permitting means for teachers to experience accounting practice... being unable to connect theory with practice in teaching.
5. Teachers’ participation in course activities	5 – Guaranteeing that all teachers participate in the activities developed in the course... not using teachers’ different skills.

**Figure 4.** Examples of Primary Assessment Elements and Action-Oriented Concepts

Source: Research data.

In this process: through the interviews with the decision maker and the analysis of the course functioning legislation, 78 Primary Assessment Elements (PAEs) and 96 action-oriented concepts were identified.

The construction of the concepts further expressed the decision maker’s concerns with the course performance. Thus, the concepts could be grouped into main areas of concern, as presented in Figure 5.

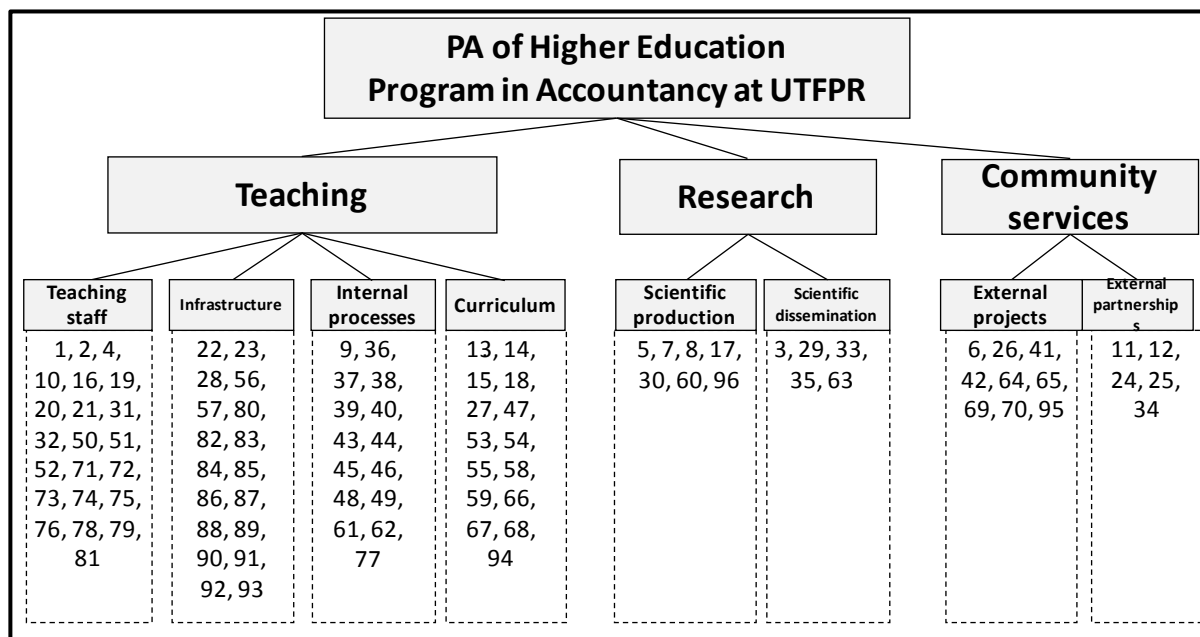


**Figure 5.** Grouping of Concepts into Main Areas of Concern

Source: Research data.

The three main concerns in terms of course performance are Teaching, Research and Community Services. These three main areas can be dismembered in a further level. Therefore, concepts in each area are read to verify those concepts with the same strategic concern for the decision maker. Through this process, the Fundamental Viewpoints (FVPs) are established.

In Figure 6, the concepts grouped in FVPs are displayed, within the main areas of concern.



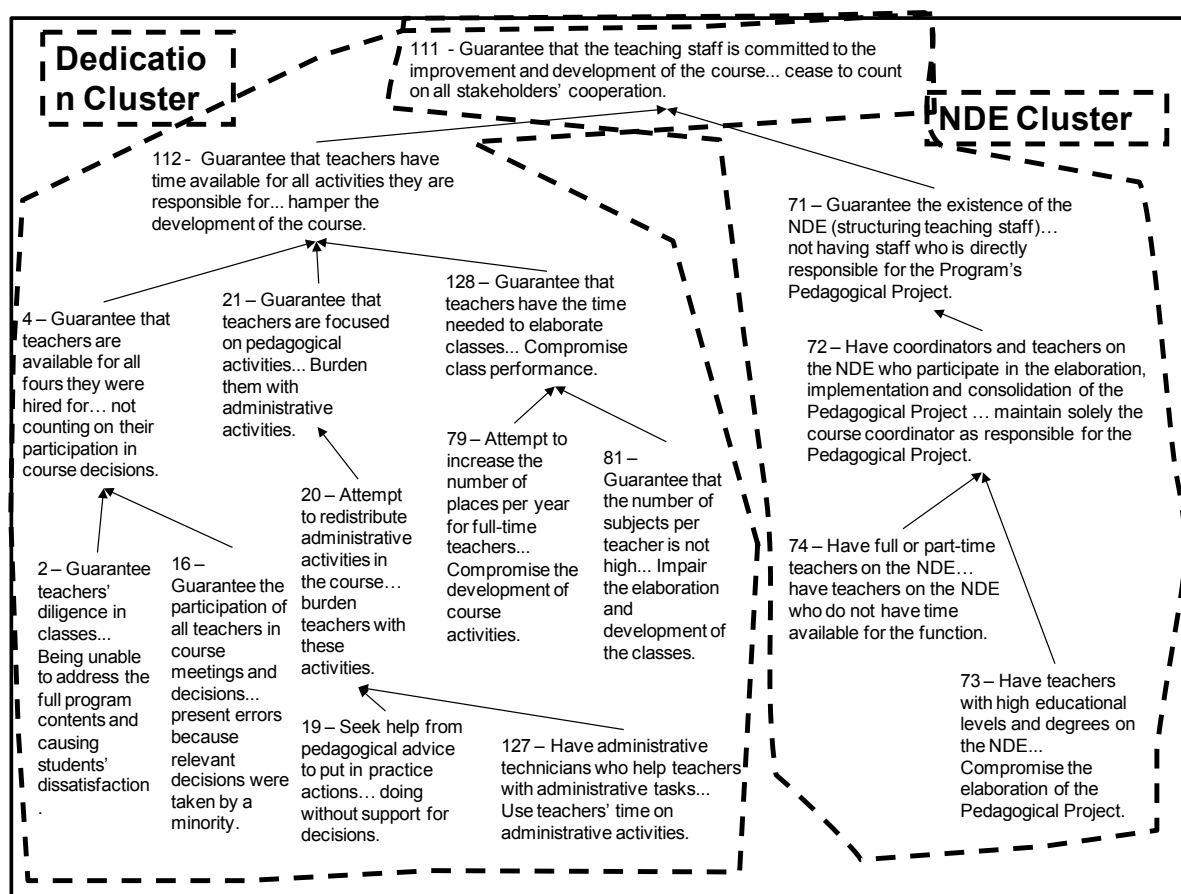
**Figure 6.** Grouping of Concepts in Fundamental Viewpoints (FVPs)

Source: Research data.

The concern “teaching” corresponds to four areas: “teaching staff, infrastructure, internal processes and curriculum”. The concern “research” corresponds to “scientific production and scientific dissemination” and the concern “community services” to “external projects and external partnerships”.

Based on this grouping into eight FVPs, the means-ends relation maps or cognitive maps can be constructed. The elaboration of the means-ends maps is the next phase in the structuring of the mode. In this phase, the concepts of each FVP are listed in the form of a map, which contains the concepts-means or operational concerns at the bottom, and the concepts-ends or strategic concerns at the top.

In this study, ten Means-Ends Relation Maps were elaborated. Figure 7 only presents the “Teaching Staff” map through, for the sake of illustrating the process developed.



**Figure 7.** Means-Ends Relation Map of FVP “Teaching Staff”

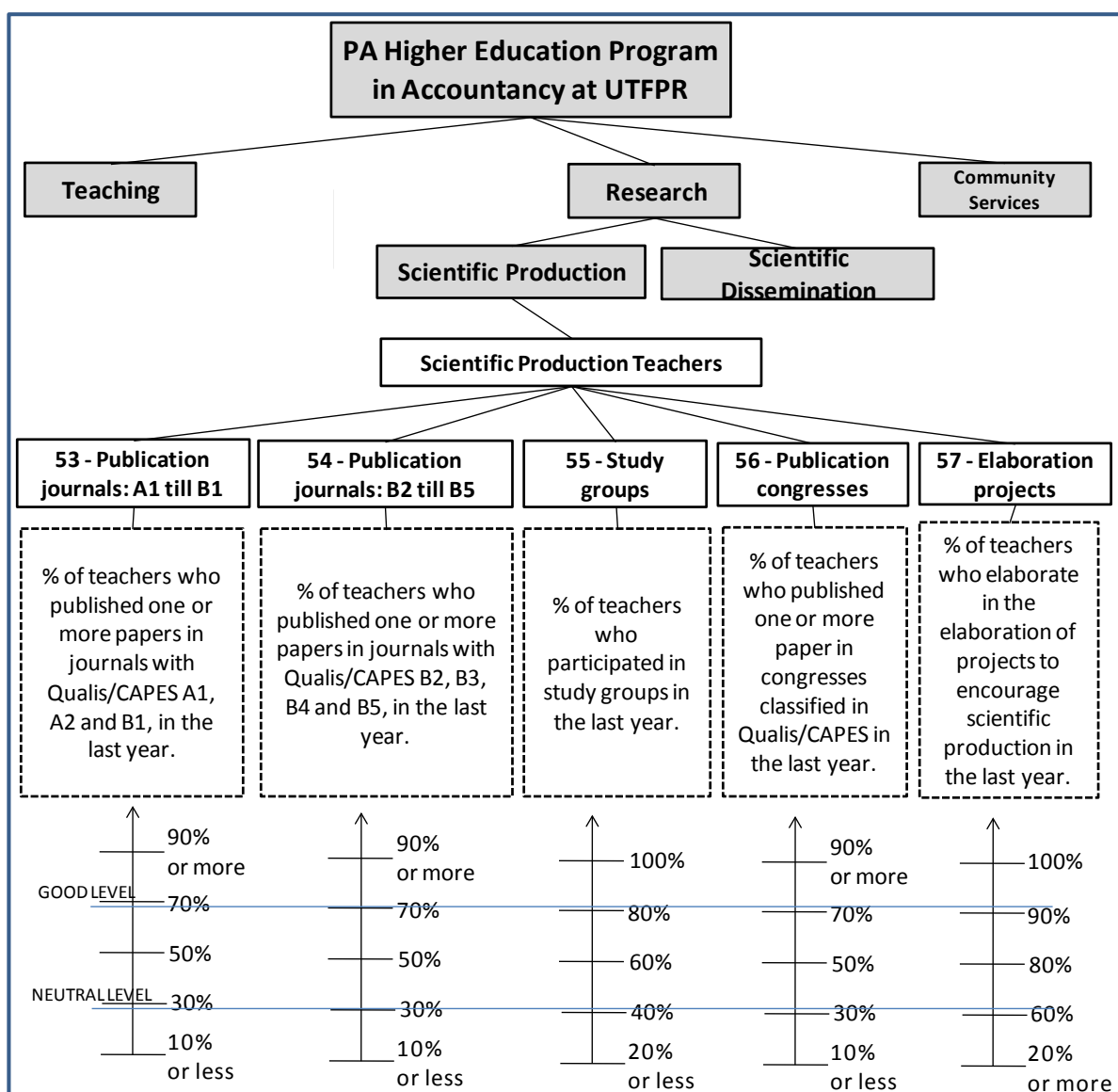
Source: Research Data.

As verified in Figure 4, the map of the FVP “teaching staff” contains two clusters: the first, containing aspects of the teaching staff’s dedication; and the second containing aspects of the “Structuring Teaching Staff (NDE)”. The cognitive map permitted building the decision maker’s knowledge on the strategic course objectives and, consequently, identifying the operational concepts that need to be pursued to reach the strategic objectives.

### 4.3 Construction of Descriptors

In this phase, the means-ends relation maps are transcribed to the Hierarchical Value Structure and the descriptors are constructed. The construction of the descriptors and impact levels is based on the information from the means-ends relation maps. The opposite extremes on the maps help to define the lowest impact level of a descriptor, and the present extremes help to define what the decision-maker considers as the level of excellence. Thus, the concept helps to construct the scale for the descriptors (Ensslin *et al.*, 2001).

In this transition process, 84 performance indicators were identified. Thus, as the model is extensive, in Figure 8, the Hierarchical Value Structure of the FVP “scientific production” and the Elementary Viewpoint (EVP) “teachers’ scientific production” are presented.



**Figure 8.** Hierarchical Value Structure and Descriptors of FVP Teaching Staff-Dedication

Source: Research data.

In Figure 8, performance indicators are constructed for each operational objective, that is, for all concepts situated at the base of the Hierarchical Value Structure. It is highlighted that the descriptors constructed in this phase are ordinal, i.e. the difference between several levels of the descriptor is the same.

As regards teachers' scientific production, the decision-maker is concerned with the quality of the teachers' publication. Performance indicator 53 measures the teachers' publication in Qualis/CAPES journals A1, A2 and B1, which are considered top-quality and the most relevant. Indicator 54 measures the teachers' other publications in Qualis/CAPES journals B2, B3, B4 e B5. Indicator 56 also reveals the decision-maker's concern with teachers' publications in congresses. Indicator 57 shows the decision-maker's concern with the teachers' elaboration of research projects, while indicator 55 shows his concern with the teachers' participation in study groups.

Next, the list is presented of all indicators constructed to measure the performance of the Higher Education program in Accountancy at UTFPR - Campus Pato Branco. The indicators are presented as a figure because they are very numerous.

In Figure 9, the performance indicators constructed for the teaching area are presented.

Name of the Indicator	Description of the Indicator	Name of the Indicator	Description of the Indicator
Diligence	% of teachers with unjustified absences in the last two years.	Students per subject	% of subjects with 40 registered students or less.
Participation in Meetings	% of teachers who participated in all course meetings in the last year.	Infrastructure	Number of classrooms with complete infrastructure completa.* *multimedia, quilted chairs, air-conditioning, whiteboard, computer, individual tables.
Pedagogical Advice	Number of times pedagogical advice was summoned to help with pedagogical course issues in the last year.	Course Resources	% of infrastructural improvement funding taken from course budget in the last year.
Administrative Assistance	Number of trainees and administrative technicians divided by the number of teachers active in the program.	Institutional Resources	% of infrastructural improvement funding taken from HEI budget in the last year.
Work Regimen	% of teachers working under exclusive dedication.	Work Rooms	% of teachers with individual work offices.
Number of Subjects	Relation between teachers' hour load in the program and number of teachers.	Meeting Rooms	The program has its own room for teacher meetings.
Dedication to Structuring Teaching Staff	% of teachers in Structuring Teaching Staff working under exclusive dedication.	Collection Register	What type of register the program maintains for its collection.
Qualification Structuring Teaching Staff	% of teachers in Structuring Teaching Staff with a Ph.D. degree.	Academic Register	What type of academic register the program maintains.
Administrative Technicians	% of administrative activities of coordinator performed by administrative technicians in the last year.	Course Assessment by Students	% of students who assessed the course with score 7 or more in the last year.
Department Head	% of administrative activities of coordinator performed by department head in the last year.	Assessment of Didactic Material	% of teachers who use all* didactic material sources available in their subjects. *books, newspaper articles, congress and journal articles and business newspapers.
Work Regimen	Type of work regimen of current coordinator.	Assessment of Teachers	% of teachers whose performance was scored 7 or more by the students.
Pedagogical Project	Participation and review by coordinator in the elaboration of the program's pedagogical project.	ENADE score	ENADE score students achieved on the most recent assessment.



Institutional Policy	% of meetings of HEI board with the coordinator's participation and discussion about IDP on the agenda in the last year.	Leveling Activities	Number of extra class hours made available in the last year to level students' knowledge with a view to ENADE.
Degree and Experience	Degree and teaching experience of course coordinator.	Communication with Students	Number of communication means* used by the coordination to update students in the last year. *own website, institutional website, e-mail, internal newspaper, notice board.
Selection Criteria	% of selection criteria* the candidate coordinator complies with. * criteria to be established	Course Management Board	% of course management board the student representative participated in in the last year.
Teaching Experience	% of teachers with ten years or more of teaching experience in higher education.	Communication with Administrative Staff	Number of communication means* used by coordination to update administrative staff in the last year. *telephone, own website, institutional website, e-mail, internal newspaper, notice board.
Degree	% of teachers with Ph.D. degree.	External Community	Number of news items* in which the program was cited in the last year in newspaper, magazines, TV, radio, websites. *regional and Brazilian
Internet	% of laboratory computers with Internet access.	Participation in External events	Number of events in which the course participated with the coordinator or a representative's presence in the last year.
Equipment	Number of laboratory computers divided by number of course students.	Promotion of Open-House Events	% of participants from external community* in events held by the course in the last year. *in relation to total number of participants
Rules	Existence and dissemination of informatics laboratory rules.	Course Syllabus	% of teachers who fully* complied with the course syllabus in the last year. *in relation to contents in class diary.
Dissemination of Bibliography	% of students who receive two or more e-mails per year with information about updates in the collection.	MEC Requirements	% of MEC requirements* regarding curriculum structure the program complies with. *see SINAES
MEC Requirements	% of MEC requirements* the collection attends to. *see SINAES document	IDP Policies	% of IDP requirements the program's curriculum structure complies with.
Updates	% of new acquisitions in the last year in relation to the total number of course references in the library.	Changes in Pedagogical Project of the Program	Frequency of restructuring in the Program's Pedagogical Project.
Journals	% of collection consisting of specialized print or computer journals.	On Curriculum Matrix	Supervised training is included in the program's curriculum matrix, with a defined current hour load.
Basic Bibliography	Relation between number of basic bibliography books and number of course students.	Supervision Process	% of training covered by any program teacher's supervision process in the last year.
Complementary Bibliography	Relation between number of books in the complementary bibliography and number of course students.	Laboratory Classes	% of total practical classes that took place in the laboratory in the last year.

**Figure 9.** Performance indicators constructed for the teaching dimension

Source: Research data.

In accordance with Figure 9, the constructed indicators are aimed at measuring and managing important course management aspects, which comprise aspects assessed by external entities, while others are concerns inherent in the particularities of the program in the context it is inserted in.

It is highlighted that, in the performance indicators, the main concerns or objectives for which the decision-maker wants to improve the performance are related to: (i) teaching staff; (ii) infrastructure; (iii) internal processes; and (iv) curriculum.

In Figure 10, the performance indicators constructed for the research area are presented:

Name of the Indicator	Description of the Indicator	Name of the Indicator	Description of the Indicator
Publication journals: A1, A2, B1	% of teachers who published one or more papers in Qualis/CAPES journals A1, A2 and B1 in the last year.	Publication Congresses	% of students who published one or more papers in congresses classified by Qualis/CAPES in the last year.
Publication journals: B2, B3, B4, B5	% of teachers who published one or more papers in Qualis/CAPES journals B2, B3, B4 and B5 in the last year.	Lectures/ Seminars	% of teachers who presented one or more lectures in the last year.
Study Groups	% of teachers who participate in study groups in the last year.	Mini-courses	% of teachers who presented one or more mini-course in the last year.
Publication Congresses	% of teachers who published one or more papers in congresses classified by Qualis/CAPES in the last year.	Internet Dissemination	% of studies by teachers published on the institutional website in the last year.
Elaboration Projects	% of teachers who participate in the elaboration of scientific production encouragement projects in the last year.	Lectures/ Seminars	% of students who presented one or more lectures in the last year.
Publication Journals	% of students who published one or more papers in Qualis/CAPES journals in the last year.	Participation Internal Events	% of students who participated in internal course events in the last years.
Distribution of Students	Relation between number of students under advice for course conclusion paper and number of program teachers in the last year.	Mini-courses	% of students who presented one or more mini-course in the last year.
Quality course conclusion papers	% of course conclusion papers approved with score 9 or higher in the last year.	Internet Dissemination	% of studies by students published on the institutional website in the last year.
Scientific Initiation Subject	% of teachers who required scientific initiation papers in their subjects in the last year.		

**Figure 10.** Performance Indicators constructed for research dimension

Source: Research data.

In accordance with Figure 10, the indicators for the research area are aimed at measuring and managing important aspects to improve the course performance in terms of research. According to the decision-maker, course management should include aspects previously assessed by external entities, as well as others that are concerns inherent in the particularities of the course in the context it is inserted in.

It is highlighted that, in the performance indicators, the main concerns or objectives the decision-maker wants to improve with regard to research are related to: (i) scientific production; and (ii) scientific disclosure.

In Figure 11, the performance indicators constructed for the community service area are presented.

Name of the Indicator	Description of the Indicator	Name of the Indicator	Description of the Indicator
Accounting Practice	% of teachers whose activities were linked to accounting practice (consulting, advice and continuous activities) in the last year.	Activities Complementary Themes	% of additional activities that address themes complementary to the program (finance, economics, administration and others).
Advice Projects	% of teachers who participated in one or more social projects on accounting advice in the last year.	Class Organs and Entities	% of funding for the organization of events that departed from partnerships with class organs and entities in the last year.
Community Service Projects	% of teachers who participated in one or more community service projects in the last year.	Private Initiative	% of funding for the organization of events that departed from partnerships with private initiative in the last year.
Organization Seminars	% of teachers who spent four hours or more on the organization of the most recent course seminar.	Course Budget	% of funding for the organization of events that departed from the course budget in the last year.
Event Organization	% of students who participated in the organization of external events in the last year.	Technical Visits	% of students who made technical visits to organizations in the last year.
Participation External Events	% of students who participated in external events related to accounting in the last year.	Job Contracts	% of students who work in the accounting area.
Advice Projects	% of students who participated in social projects on accounting advice in the last year.	Traineeships and Case Studies	% of subjects that required the elaboration of practical studies in the last year.
Activities Cross-Sectional Themes	% of complementary activities that address cross-sectional themes (sustainability, diversity, human rights and others).		

**Figure 11.** Performance indicators constructed for the community service dimension

Source: Research data.

The indicators reveal that the community service area corresponds to teachers and students' participation in external projects and the ability to close external partnerships.

#### 4.4 Comparison between the SINAES system and the performance assessment model constructed through MCDA-C

In addition to the performance assessment model constructed to manage the Accountancy program at UTFPR, it is considered relevant to compare the model developed with the SINAES system the Ministry of Education uses to assess undergraduate programs.

In Figure 12, the comparison between the two models is described to confront the variables considered by the SINAES system with the variables identified in the present study. In the same Figure, the presence of the variable in the SINAES system and/or in the present study is marked with an "X".

Criteria/Indicators	SINAES	Present Study
Diligence		X
Participation in Meetings		X
Pedagogical Advice	X	X
Administrative Assistance		X
Work Regimen - Teachers	X	X
Number of Subjects	X	X
Dedication to NDE	X	X
Qualification NDE	X	X
Composition of NDE	X	
Administrative Technicians		X
Department Head		X
Work Regimen - Coordinator	X	X
Activities program coordinator	X	X
Pedagogical Project		X
Students per subject	X	X
Number of authorized places per year per "teacher equivalent to full time"	X	
Infrastructure	X	X
Program Resources		X
Institutional Resources		X
Offices	X	X
Meeting Rooms	X	X
Register of Collection	X	X
Academic Register	X	X
Student Assessment of Program	X	X
Assessment Didactic Material	X	X
Teacher Assessment	X	X
ENADE Score		X
Institutional Policy	X	X
Degree and Experience - Coordinator	X	X
Selection Criteria - Coordinator		X
Teaching Experience	X	X
Degree Teachers	X	X
Internet	X	X
Equipment	X	X
Rules	X	X
Dissemination of Bibliography		X
MEC Requirements Collection	X	X
Updates	X	X
Journals	X	X
Basic Bibliography	X	X
Complementary Bibliography	X	X
Leveling Activities	X	X
Communication with Students	X	X
Course Management Board	X	X
Communication with Administrative Staff		X

External Community		X
Promotion Open-House Events	X	X
Course Syllabus		X
MEC Requirements – Curriculum Structure	X	X
IDP Policies	X	X
Changes in CPP		X
In Curriculum Matrix	X	X
Supervision Process	X	X
Laboratory Classes		X
Publication journals: A1, A2, B1	X	X
Publication journals: B2, B3, B4, B5	X	X
Study Groups		X
Publication Congresses	X	X
Elaboration Projects		X
Publication Journals - Students	X	X
Distribution of Students		X
Quality Course Conclusion Paper		X
Scientific Initiation Subject	X	X
Publication Congresses	X	X
Lectures/Seminars – Teachers	X	X
Mini-courses	X	X
Internet Dissemination – Teachers		X
Lectures/Seminars – Students	X	X
Participation Internal Events		X
Mini-courses	X	X
Internet Dissemination – Students		X
Accounting Practice	X	X
Advice Projects - Teachers		X
Community Service Projects		X
Organization Seminars	X	X
Organization Events	X	X
Participation External Events	X	X
Advice Projects - Students		X
Activities Cross-Sectional Themes	X	X
Activities Complementary Themes	X	X
Class Organs and Entities		X
Private Initiative		X
Course Budget		X
Technical Visits		X
Job Contracts		X
Traineeships and Case Studies	X	X
Contratos de Práticas y Estudios de Caso	X	X

**Figure 12.** Comparison between variables used in SINAES system and model developed in the present study

Source: Elaborated by the authors.

As presented in Figure 12, the assessment of higher education programs according to the SINAES system considers three dimensions: (i) didactic-pedagogical organization; (ii) teaching staff; and (iii) physical infrastructure. The model structured in this study also presents three dimensions or areas of concern: (i) teaching, (ii) research; and (iii) community services.

In the document “Assessment of Undergraduate Programs: Bachelor and Teaching Diploma (2008)”, SINAES has published a list of 35 variables that need to be considered in the Performance Assessment of a higher-education program, while the model developed in this research includes 84 variables. Part of this difference in the number of variables is due to the fact that SINAES adopts a broad analysis criterion to score each indicator and due to the decision-maker’s more detailed perception. To give an example, in the SINAES system, Teaching Staff dimension, indicator 13 (research and scientific production), the highest concept for the indicator would be: “When excellent research development exists in the program, involving students (scientific initiation); and when program teachers have published at least an average three productions per teacher in the last three years”. This indicator presents more than one concern the decision-maker has listed (scientific initiation of students and publication by teachers). Thus, in the model structured in this research, this criterion takes a different form than in SINAES, but corresponds to the same variables.

As regards the proposed comparison, the Performance Assessment model structured in this study does not address two indicators that are considered in SINAES, as the decision-maker did not list these as concerns.

Based on the analysis of Figure 12, various indicators listed in the model developed are not addressed in the SINAES system, mainly in the “Community Service” dimension. Therefore, the importance of a higher education program performance assessment that considers the particularities of the decision context is highlighted.

## 5. Final considerations

This research was aimed at structuring a Performance Assessment model for the Accountancy program at UTFPR - Campus Pato Branco, which would consider the decision-maker’s perceptions about the particularities of the decision context. The Multicriteria Decision Aid Constructivist (MCDA-C) method was the intervention instrument chosen to construct the assessment model in function of its ability to incorporate qualitative and quantitative aspects, objective and subjective aspects and, mainly, to build the decision-maker’s knowledge on what objectives to pursue. To achieve the proposed objective, the following was necessary: (i) establish the context to understand what environment the course was inserted in, the actors involved in the management process and what the course intended; (ii) identify the primary evaluation elements and action-oriented concepts; (iii) elaborate the Means-Ends Relation Maps; and (iv) construct the Value Hierarchy Structure and the performance indicators.

The first step in the structuring of the model was made feasible through interviews with the course coordinator and the analysis of knowledge and laws that regulate Brazilian higher education programs, with a view to producing knowledge about the context and listing all concerns the decision-maker believed that affected the program’s performance, that is, the Primary Assessment Elements (PAEs) were identified. In this process, 78 PAEs were identified, which revealed both internal aspects and concerns with the external assessment by the Ministry of Education (MEC).

Next, also through interaction with the decision-maker, knowledge was enhanced and the PAEs were transformed into action-oriented concepts, totaling 96 concepts or action-oriented objectives. The next phase was to group the concepts into large areas of concern, resulting in three areas: “teaching, research and community services”. The next phase was to construct the Means-Ends Relation Maps or cognitive maps, with a view to verifying the cause-effect relations of each concept or objectives and identify the strategic, tactical and operational objectives. In the next phase, the intent was to make the transition from the cognitive maps to a Hierarchical Value Structure and, then, the 84 performance indicators were constructed.



It is highlighted that the research objective was achieved, which was to structure a Performance Assessment model to manage the program. The developed model considered the particularities the program is inserted in and was constructed through the decision-maker's perception. The Hierarchical Value Structure and descriptors revealed that the model considered the external evaluation aspects as well as the particular needs of the program that were not considered in the external assessment process.

In addition to the constructed model, in this research, the variables considered in the SINAES system were compared with the model constructed for the Accountancy program at UTFPR. Thus, it was concluded that the model constructed specifically for the UTFPR program is broader, as it considers different variables the SINAES system does not take into account.

Hence, for the management of a higher education program, the SINAES system presents important variables teaching institutions need to consider. Nevertheless, the model needs to be expanded to respond to some particular characteristics of each higher education program's decision context, which attends to the singularity of its objectives and considers the regional culture, the institutional culture and that of its teachers and collaborators (Bortoluzzi *et al.*, 2010a; Bortoluzzi *et al.*, 2010b; Bortoluzzi *et al.* 2011; Ensslin *et al.*, 2001; Montibeller *et al.*, 2008).

The following research limitations are mentioned: (i) the model structured is valid for the study context. Therefore, its application to another program or HEI is unfeasible; (ii) the model considers the decision-maker's perceptions. Hence, it is legitimate for this decision-maker, within the study context; and (iii) only the structuring phase of the model was developed.

Hence, for future research, the methodology phases that were not addressed in this study should be developed in the Accountancy program, as well as the evaluation phase and recommendations. Also, the proposed method should be apply in other contexts, with other decision-makers, validating it as a Performance Assessment tool that considers the particularities of the decision context.

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# Reflection about public finance standards: a focus on the concession of benefits through revenue foregone

## Abstract

The Brazilian society is experiencing changes in the public equity management model. Part of these changes is due to the enactment of the Fiscal Responsibility Law (LRF), which created strict rules for revenue foregone. Analyzing public finance standards that set limits and conditions to achieve fiscal management responsibility, particularly regarding the concession of benefits through revenue foregone, is highly relevant as a social contribution. The aim in this study is to reflect on the doctrine and jurisprudence of the Brazilian Federal Court of Auditors (TCU) and of the State of Minas Gerais, which establish restrictive conditions for revenue foregone. The research is characterized as exploratory and the documentary sources include legislation, doctrine and jurisprudence of the Federal Court of Auditors and the Minas Gerais State Court of Auditors, with a view to supporting inferential observations about the theme. The study results indicate some advances in terms of revenue foregone in Brazil: 1) the LRF represents the first advance by imposing restrictions on the concession of this benefit; 2) the National Treasury created the revenue deduction method, thus promoting greater disclosure of these amount; 3) the Courts of Auditors supervise compliance with the limits set for revenue foregone.

**Key words:** Reflection; Public Finance: Revenue Foregone.

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## 1. Introduction

Supplementary Law 101/00, called the Fiscal Responsibility Law (LRF), was issued to change the way public finances have historically been managed in Brazil, inserting the current principles of fiscal management transparency and responsibility into the legal order. This legislation established accountability in fiscal management, presupposing planned and transparent action, including the prevention of risk and the correction of deviations that are capable of affecting the balance in public accounts through compliance with: (1) revenue and expense balance targets; (2) compliance with limits and conditions for revenue foregone; (3) creation of staff expenses; (4) social security and others; (5) consolidated and security debts; and (6) credit operations, including revenue acceleration, guarantee concession and registration in residuals payable. Thus, the limits and conditions imposed for revenue foregone need to be observed, a benefit granted by public administrators to encourage economic-social activities.

Leiria (2005) underlines that the establishment of public finance standards for the sake of fiscal management responsibility determines that public managers be confronted with the imperative need for administrative planning, that is, an administration with previewed objectives, with beginning, middle and end, as public finance standards are linked to fiscal responsibility.

Fiscal responsibility in public management means compliance with standards and limits for public finance management, including accountability about how much of and how the resources resulting from the taxes society pays were spent. In addition, fiscal management responsibility means saying that, if this scope of good public finance management is not complied with, public managers will be held responsible for their bad management, submitted to the respective penalties applicable.

Balanced public accounts require planned administration, efficient and systematic control of budgetary resources, including their consequent monitoring and assessment. If this is not the case, managers can be held accountable in the field of fiscal responsibility because of reckless management. Responsibility means the quality of being responsible, which means the condition of being accountable for a certain event that is subject to pertinent legal rules (Martins & Nascimento, 2001).

Public managers cannot use foregone revenue indistinctly, covering up interests under the pretense of encouraging the development of a given economic sector. To give an example, the Federal Government's recent fiscal policy can be discussed, reducing IPI (Tax on Manufactured Products) tax rates for some products to try and dribble the global economic crisis. It should be investigated whether this revenue foregone was in compliance with legal limits, as well as whether it entailed positive effects in the economy.

The aim in this study is to reflect on the doctrine and jurisprudence of the Federal Court of Auditors and of the State of Minas Gerais, which establish restrictive conditions for revenue foregone. It is highlighted that there is no intent in this research to take a stand against the use of revenue foregone, but merely to investigate the limits and conditions for its concession established in the Constitution of the Republic and in Supplementary Law 101/00, besides providing an inferential analysis about the doctrine and jurisprudence of the Federal Court of Auditors and the State of Minas Gerais related to the theme.

## 2. Study method

This research is characterized as an exploratory study, using secondary sources, with a logical-deductive approach. Tripodi, Fellin and Meyer (1981, p.64) explain that the main goal of exploratory studies is to "develop, clarify and change concepts and ideas, with a view to providing researchable hypotheses for further investigation". Thus, the aim is to get to know public finance standards on foregone revenues in depth, as established in the Federal Constitution, in Supplementary Law 101/00 and in infra-legal standards about fiscal management responsibility standards.

Concerning systematic procedures to describe and explain the phenomena, the study was developed in an environment in which the qualitative approach was recommended. According to



Richardson (1999), the qualitative method is characterized by the non-use of statistical instruments to analyze a problem. A bibliographic research was used to develop the study, as well as a documentary research focused on Brazilian legislation, on the doctrine and jurisprudence of the Federal Court of Auditors and the Minas Gerais State Court of Auditors to support a reflection on the theme foregone revenues.

### 3. Characteristics of Supplementary Law 101/00 in Fiscal Management

Supplementary Law 101/00 relates to fiscal management responsibility, particularly the necessary involvement of revenues, expenses and their balance. Lino (2001) describes that the main premise is planning to direct all governmental actions, including both the collection of resources and the realization of expenses, which should always be subject to strict containment, or particularly to the strict imposition of public spending limits, ranging from staff to indebtedness and actions to improve the governmental apparatus. In this respect, Supplementary Law 101/00 can be an instrument to accomplish the Brazilian society's aspirations, as an efficient internal and external supervision and control system, especially considering political and social aspects.

Sanctioned and enacted on May 4<sup>th</sup> 2000, Fiscal Responsibility Law was aimed at altering the public resource management mechanisms, inserting the principles of fiscal management responsibility and transparency into the legal order. Lino (2001) highlighted the Federal Government's deliberate effort to transmit the idea to the general public that Supplementary Law 101/00 would be capable of achieving the Brazilian society's main objective: put an end to corruption, fight against dishonest administrators, in short, solving problems related to the due and correct application of public resources.

Art. 1 of Supplementary Law 101/00 states that fiscal management responsibility presupposes planned and transparent action, preventing risks and correcting deviations capable of affecting the public account balance through compliance with revenue and expense targets and limits and conditions for foregone revenues, creation of staff, social security and other expenses, consolidated and security debts, credit operations, including revenue acceleration, guarantee concession and registration in residuals payable. In that sense, Motta and Fernandes (2001, p. 243) explain that:

fiscal management responsibility is planned and transparent action; preventive and corrective action of risks and deviations that can affect the public account balance; compliance with revenue and expense balance targets; compliance with limits and conditions for tax collection previews and their realization, revenue foregone, and creation of staff, social security and other expenses, consolidated and security debts, credit operations, including revenue acceleration, guarantee concession and registration in residuals payable. (Motta & Fernandes, 2001, p. 243).

To achieve fiscal management responsibility, managers need to consider how to manage the resources resulting from the revenues collected, so that public expenses are incurred within these limits, and mainly so that the quality of public spending is in accordance with society's expectations. Nunes (2002, p. 13) emphasizes the need to plan expenses, to guide the actions of today's managers by the consequences of these actions for future generations. No attempts should be made to obtain the gain of expenses at present while transferring the burden to the future, whether to the next year, next mandate or future generations. Funding new expenses with inflation, tax rises, debt increases, budget revenue acceleration, guarantees, residuals payable and revenues foregone should be avoided. Also, creating expenses for the future without funding previews should be avoided, particularly in the staff and social security areas, as well as the accumulation of hidden deficits.

The intent of this instrument was to regulate political-management issues in public management, presenting the limitations and prohibitions public managers are obliged to comply with, with a view to pre-



serving the financial balance of public accounts and the transparency of administrative procedures through different management instruments. According to Khair (2000), Supplementary Law 101/00 rests on four axes to fulfill its function as a public finance regulator: planning, transparency, control and accountability.

In that sense, planning is improved by the creation of new information, targets, limits and conditions for foregone revenues, generation of expenses, staff expenses, social security expenses, debts, credit operations, budget revenue acceleration (ARO) and the concession of guarantees. Transparency is achieved through the large-scale dissemination of five new fiscal management monitoring reports that permit identifying revenues and expenses: (1) Fiscal Policy Attachment; (2) Fiscal Target Attachment; (3) Fiscal Risk Attachment; (4) Summary Budgetary Execution Report; and (5) Fiscal Management Report. Control is enhanced through greater transparency and information quality, requiring more effective and continuous supervision by the Courts of Auditors. Managers should be held accountable whenever rules are not complied with, through the suspension of voluntary tasks, guarantees and the hiring of credit operations, including ARO. Those responsible will be subject to the sanctions established in the Penal Code and Fiscal Responsibility Law.

#### 4. Normative Variables Outlined in Supplementary Law 101/00

One of the important aspects to be highlighted in that each city, state and Union has its own quantifications and limits to promote management that is compatible with the fiscal responsibility concept. Supplementary Law 101/00 merely presents the general lines, granting each political entity the autonomy to legislate according to its specific needs. And these aspects outlined in Supplementary Law 101/00 are only put in practice when three regulatory instruments are issued: the Pluriannual Plan (PPA), the Law of Budgetary Guidelines (LDO) and the Annual Budget Law (LOA). These regulatory instruments have been defined in Federal Constitution Art. 165, as well as in Supplementary Law 101/00.

Art. 3º of Supplementary Law 101/00 deals with the PPA. It was blocked though, which only left the definition in Art. 165 of the Federal Constitution, according to which the law that establishes the pluriannual plan should regionally set the guidelines, objectives and targets of the federal public administration for capital and other resulting expenses, as well as for expenses related to continuing programs.

In other words, the PPA contains the intended management planning of a given political entity for a four-year period. The LDO then, according to the Federal Constitution, should include the targets and priorities of the federal public administration, provide orientations for the elaboration of the LOA and discuss changes in tax law. Supplementary Law 101/00 also establishes that the LDO should deal with other control mechanisms, including: balance between revenues and expenses, contract limitation, cost control and result assessment of programs funded with budgetary resources, which should include the Fiscal Target Attachment and the Fiscal Risk Attachment, currently regulated in the Technical Manual for the Elaboration of Fiscal Statements, approved by National Treasury Decree 462, issued in August 2009.

In the Fiscal Target Attachment, annual targets are set in current and constant amounts, related to revenues, expenses, nominal and primary results and public debt amounts, for the year they refer to and the next two years. It should contain, for example, a statement of estimated foregone revenues and their compensation and of the expansion margin of continuing compulsory expenses, as well as a statement of annual targets, based on a calculation history and method that justify the intended results, comparing them with the results of the previous three years, and evidencing their consistency with the premises and objectives of the Brazilian economic policy.

The Fiscal Risk Attachment helps to evaluate contingent liabilities and other risks capable of influencing public accounts, and should inform about the necessary measures if they come true. In other words, the LDO presents a more objective planning for each financial year, in which the governmental planning outlined in the PPA gains more visible outlines. Highlighting this characteristic, Supplementary Law 101/00 emphasizes the importance of the LDO and grants it a fundamental role in the analysis of fiscal management responsibility.

The LOA makes this all concrete, previewing revenues and setting public expenses in accordance with previous planning. Thus, it is only by analyzing these three regulatory instruments, under each political entity's competence, that one can dimension how public management is conducted. What Supplementary Law 101/00 proposes are general standards, which political entities are obliged to comply with, using these planning instruments to quantify and give form to the limits imposed on public managers. In that sense, one needs to clarify that, in the present study, these general standards will be analyzed, as specified in the legislation in force. It should be kept in mind, however, that fiscal responsibility can only be analyzed if, besides these general standards, the PPA, LDO and LOA are also included in the analysis.

## 5. Concept and Legal Aspects Of Foregone Revenues

In Art. 150, the Federal Constitution prohibits unequal treatment between taxpayers in equivalent situations. Nevertheless, it admits the concession of fiscal incentives to promote a balanced socioeconomic development among different Brazilian regions. In that context, foregone revenues derive from a situation in which the Public Power, based on a generic or specific legal authorization, gives up part of the revenues it would be entitled to collect due to economic or institutional political reasons, aiming to encourage certain productive segments, stimulate regional development or enhance the competitiveness of strategic sectors. Typical examples of such waivers are: tax exemptions, amnesties and subsidies. Almeida (2001, p. 54) explains revenues foregone as a government policy:

the act of foregoing revenues is essentially a government policy like any another, put in practice to execute the functions inherent in the political entities that constitute the different governmental spheres: federal, state and municipal. This is a longstanding public policy in the international sphere, whose application has spread across countries on all continents, without any distinction in terms of socioeconomic development level and government regimen, aimed at promoting the financial support needed to accomplish programs, projects and activities of interest to society and balanced socioeconomic development among the country's different geo-economic regions, to develop strategic economic segments and to favor certain groups of contributors, among other relevant public objectives (Almeida, 2001, p. 54).

Foregone revenues represent an economic policy instrument. One may say that it is an instrument for the State to intervene in the economy and, as such, depends on Public Management acts in its different competency spheres. A very good illustration is the federal government's reduction, in some cases even to zero, of the IPI rate on cars, and later on construction material and domestic appliances, in the attempt to find a way around the global economic crisis that started in the United States of America in 2008. In December 2008, Decrees 6687 and 6696 were issued, zeroing or reducing rates on motor vehicles until March 2009. Then, on March 30<sup>th</sup> 2009, Decree 6809 was issued, extending the benefit on cars and including other products, particularly from the civil construction and domestic appliance branches.

The Federal Constitution establishes that any subsidy or exemption, calculation base reduction, presumed credit concession, amnesty or remission, related to taxes, fees or contributions, can only be granted through a specific federal, state or municipal law, which exclusively regulates the subjects listed above. Art. 153, §1, of the Federal Constitution, however, creates the possibility of a rate reduction for some taxes under federal responsibility through a simple Executive Decree. When the federal government reduced the IPI, it used this prerogative, issuing decrees that changed the IPI rate on different products. Besides the IPI, the Union can change tax rates on the importation of foreign products; on the exportation of Brazilian or nationalized products; and in credit, exchange and insurance or securities operations, without the need to issue a law.

Martins and Nascimento (2001) explain that the expression "foregone revenues" means waiving the right on a certain tax, as a result of abandonment or express giving up by the federal entity compe-

tent for its establishment. Thus “always import based on abandonment or voluntary giving up, according to which the holder of a right ceases to use it or announces that (s)he does not want to use it” (Plácido & Silva, 1997, p. 701). This act derives from the concession of tax incentives. These incentives, in principle, are instruments the Public Power has at its disposal to promote economic development and permit increased jobs in a certain territorial area where they are applied. They imply a reduction of the amount due by the contributor who is in the condition of beneficiary.

According to Supplementary Law 101/00, foregoing revenues comprises amnesty, remission, subsidy, presumed credit, granting of non-general exemption, rate change or modification of the calculation base to imply a distinguished reduction of taxes or contributions, and other benefits corresponding to distinguished treatment. As observed in the concept introduced in Supplementary Law 101/00, the forms of foregoing revenues are presented in further detail than in the Federal Constitution, including concepts like: presumed credit; rate change and calculation base modification. In generic terms, amnesty means the partial or complete loss of the infractions the debtor of the tax incurred in.

## 5.1 Legal limits and conditions for foregone revenues

Foregone revenues actually refer to the use of a tax for extra-fiscal purposes, with a view to reaches social, economic or political-administrative objectives. After the enactment of Supplementary Law 101/00, the balance of public accounts became imperative, and compliance with result targets fundamental to bring down deficits. The Union, the states, the Federal District and cities are responsible for establishing, previewing and actually collecting all taxes within its constitutional competency, in accordance with Art. 11 of Supplementary Law 101/00. Each government sphere needs to adequately explore its tax base and, consequently, be able to estimate its revenues. Thus, those in power cannot make decisions to reduce revenues which will compromise the health of public finance or make the public entity’s going-concern unfeasible.

To widen the control on fiscal exemption, the federal Constitution determines that the LOA project needs to contain a regional statement about the effect on revenues and expenses deriving from tax, financial and credit exemptions, amnesties, subsidies and benefits. The intent of elaborating this statement is to enhance budgetary transparency, so as to assess the actual effects of the economic policies promoted through foregone revenues. Art. 14 of Supplementary Law 101/00 sets the legal limits and conditions to promote foregone revenues without affecting the health of public finances, as follows:

the concession or expansion of tax incentives or benefits that result in foregone revenues should be accompanied by estimates of the budgetary-financial impact in the year it should come into force and the two subsequent years, comply with budgetary legal determinations and with at least one of the following conditions: (I) statement by the proponent that the exemption was considered in the budgetary law’s estimated revenues, in the form of Art. 12, and that it will not affect the fiscal result targets established in the attachment to the budgetary law; and (II) be accompanied by compensation measures, during the period mentioned in the main section, through increased revenues, resulting from rate increases, expansion of the calculation base, mark-up or creation of a tax or contribution (Supplementary Law 101, 2000, art. 14).

Revenues foregone through amnesty, remission, presumed credit, non-general exemption, rate change of some tax or calculation base modification, resulting in lower public revenues, should be accompanied by estimates of the budgetary-financial impact in the year it should come into force and the two subsequent years. In addition, to comply with the premises of Supplementary Law 101/00, each decision-maker should demonstrate that the exemption complies with the determinations in the LDO.

Public managers need to demonstrate that the exemption was considered in the estimated revenues mentioned in the LOA and that it will not affect the fiscal result targets established in the respective attachment to the LDO. If that is not possible, revenues can only be foregone if compensation is present,

that is, increased revenues through higher rates, a broader calculation base, a mark-up or creation of a tax or contribution.

In case the second alternative is true, the act that implies exemption will only come into force when compensation through increased revenues has been guaranteed. This procedure is an important support mechanism in compliance with fiscal targets and in the allocation of revenues to different expenses in the LOA.

If the determinations of Supplementary Law 101/00 are not complied with, this will entail several consequences for the federal entity as well as for the public manager. What the federal entities (Union, states or cities) is concerned, voluntary transfers to entities that do not establish, preview and actually collect all taxes are prohibited. As regards public managers, Law 8.429/92 defines the granting of administrative or fiscal benefits without compliance with the legal or regulatory formalities applicable to the kind, as well as acting negligently in tax or income collection as acts of administrative improbity that infringe on public finance.

The legally established consequences for public managers with unethical behavior are strict: complete reimbursement of damage; loss of goods or values illegally added to his/her equity, if that is the case; loss of public function: suspension of political rights between five and eight years; payment of civil fine corresponding to up to twice the value of the damage and prohibition to close contracts with the Public Power or receive tax or credit benefits or incentives, whether direct or indirectly, even if intermediated by a legal entity of which (s)he is the majority partner, for a five-year period.

As for mayors, Decree-Law 201/67 ranks the granting of loans, support or funding without the authorization of the Chamber or against the law as a responsibility crime. And, in that case, the penalty imposed is between three months and three years of confinement, as well as the loss of the public function and inability to exercise any public function, whether elected or nominated, during a five-year period, without prejudice to the civil reparation of the damage caused to public or private property.

It is important to highlight that, in accordance with Art. 14, §3 of Supplementary Law 101/00, all of these limits and conditions are not applicable to the Union if it intends to change tax rates on the importation of foreign products, exportation of Brazilian or nationalized products, industrialized products and credit, exchange and insurance or securities operations. Hence, to reduce the rates of the IPI and all these taxes, the Union is not obliged to observe the restrictions imposed on foregone revenues through Art. 14 of Supplementary Law 101/00, but can do this through a mere Executive Decree, without the need for legal authorization.

## 5.2 Doctrine about revenues foregone

Public managers can elect direct costing and investments in certain programs or projects, or can encourage policies through indirect spending. That is, the non-receipt of tax revenues owed to them. When Public Management chooses the economic policy based on foregone revenues, it should be investigated in detail that these refer to indirect fiscal spending. Thus, the main problem appointed in the doctrine is how to measure the fiscal loss. That is the case because it is not simple to determine the actual loss public entities will incur when foregoing certain tax revenues.

In the search for greater transparency in public management, the Federal Constitution establishes that the budgetary law project should be accompanied by a statement about the effect on revenues and expenses deriving from exemptions, amnesties, remissions, subsidies and financial, tax and credit benefits. Nevertheless, the way the budgetary-financial impact of foregone revenues is evidenced does not reveal the actual amounts of the resources foregone, the beneficiaries of these actions and, mainly, the actual results when compared to the objectives of the government plans. This means that, although the Constitution had this intent, the mechanisms created by law do not provide sufficient levels of public management transparency.

Almeida (2001, p. 55) presents some possible solutions for this dilemma: (a) elaboration of a specific budget of revenues foregone, structured in the form of the tax budget; (b) improvement of the demonstrative chart elaborated by the Secretary of the Treasury, including the benefits linked to social contributions, and evidencing, besides the effect on revenues, the effect on expenses resulting from exemptions, amnesties, remissions, subsidies and financial, tax and credit benefits, as well as the effect on revenues and expenses resulting from subsidies and financial and credit benefits; (c) inclusion of this chart as an attachment to the tax budget of the Union and the Secretary of the Treasury's measurement of the amounts actual foregone, in each financial year, for analysis in comparison with estimated amounts, with a view to adjusting the estimation method the entity adopts.

As a result of these countless criteria, the Secretary of the Treasury, together with the Federal Budget Secretary of the Ministry of Planning, Budget and Management, issued different Decrees. Joint Decree No. 2 is in force, issued in August 2009, which determines the calculation and disclosure method of the amount of revenues foregone. Thus, the Decree imposes the obligation to account for the nature of the revenues foregone, against a deduction of revenue (reduction of revenue account). Consequently, and driven by the doctrine that has been discussing this subject for a long time, mechanisms were created to improve the survey of data about foregone revenues, as of yet without the possibility to assess whether they will actually be effective.

Another question discussed by the doctrine relates to the fiscal war the federal entities can promote among them, disputing the attention of businessmen and, in other words, disputing investments for their region through the concession of incentives. The effects of this fiscal war may end up enhancing regional inequalities.

According to Lino (2001), Supplementary Law 101/00 was not aimed at preventing or avoiding the fiscal war; or, if it was, its intent was not successful. That is so because the figure of foregone revenues, as outlined in that law, only normalizes the hypotheses of extinction, exclusion or reduction of tax credit, logically presupposing the previous existence of this credit, which in turn needs a tax event. In the fiscal war, however, the only thing that exists is the promise, that is, it will only affect future events. Consequently, it does not affect the budget in the period during which the incentive is promised and, therefore, is not aimed at inhibiting the fiscal war.

The doctrine raises a concern about the quality of the fiscal policy that is to be developed based on the revenues foregone. Martins and Nascimento (2001, p. 103) express that it is certain that "foregone revenues can be used to stimulate business activities, and should definitely be permeated by rational compensations, which should not impair the economy as a whole and the interests of the taxpayer society". Better, its concession should in no way be driven by electoral political motives, on the authority of the governmental corporation in power.

Besides concerns with measuring the amount of revenues foregone in one of these fiscal policies, attention is due to its goal, whether the objective is actually to promote an economic activity that is important to society, or merely to privilege personal and electoral interests. Martins and Nascimento (2001) point towards the need for governmental actions that are compatible with society's interests, with a view to achieving the ideal of justice.

### 5.3 Case Law of the Federal Court of Auditors and the Minas Gerais State Court of Auditors

Despite the constitutional relevance and premises of fiscal responsibility, the Federal and State Courts of Auditors have indicated the need to improve surveillance, especially regarding the measurement and monitoring of actual benefits for society resulting from the development of a public policy for the concession of fiscal benefits.

The Federal Court of Auditors (TCU), for example, analyzed the system of tax and social security benefits of the Secretary of the Treasury (SRF), Social Security Secretary/MPAS and National Social Securi-



ty Institute (INSS), during the financial years between 1997 and 2003. This relates to Process 003.924/2003-0, in which the Plenary Session of the TCU, on January 28<sup>th</sup> 2004, issued Agreement 38/2004, published in the Official Newspaper of the Union on February 6<sup>th</sup> 2004. The aim was to supervise the foregone revenues registered between 1997 and 2003, with a view to analyzing the consistency of estimates and identifying revenues that serve as a source of resources to handle the expected rises in the minimum wage, public payroll, as well as to analyze the impact of revenues foregone by the Union during the most recent years on the federal budget. It was verified, for example, that the SRF started actually calculating (real values) the revenues foregone only as from the year 2001. That is so because no actual data on revenues foregone are available for financial years before 2000.

In the financial year 2000, the TCU found that the SRF estimated R\$18.04 billion in tax benefits, while only R\$ 14.86 billion of these estimated values could be calculated, corresponding to 82.36% of that value. The amounts of revenues foregone that were actually verified added up to R\$15.62 billion, representing an additional 5.11% over the estimated values. The amounts of many of these benefits were unavailable according to the TCU, such as luggage, micro and small-sized companies, ships, tax on rural territorial property, additional freight to renew mercantile navy, among others. In 2001, the SRF estimated tax benefits at R\$19.33 billion, but was only able to calculate R\$18.27 billion of the estimated values, corresponding to 94.51%, which means saying that the amounts for some of these benefits were unavailable. The actually verified amounts added up to R\$19.09 billion, totaling an addition 4.48% over the estimated amounts.

Despite verifying these improprieties, the TCU was able to verify that the share of revenues foregone in 2000 in the revenues administered by the SRF corresponded to 11.35% and 1.45% of the Gross Domestic Product (GDP). In 2001, the share of revenues foregone in the revenues administered corresponded to 10.69% and 1.49% of the GDP. Hence, the share of actual benefits in the revenues administered negatively varied by 0.5% between 2000 and 2001, while the share in the GDP positively varied by 2.68% in the same period.

The TCU also found that it was impossible to analyze how revenues foregone have behaved with regard to the previews in budgetary laws. That is so because the amounts the SRF presents, for example, for the tax benefits in the statement accompanying the bill for the federal budget went through a range of methodological changes over time. Hence, no reasonable conclusions could be inferred in this respect.

In addition, the TCU verified that revenues foregone, according to the justifications presented by the SRF and Social Security employees responsible for surveys and calculations, as well as for the analyses applied to the set of data, are marked by a characteristic strictness and stability over time, in function of the fixed and undetermined deadlines in the original legislation. That is due to the fact that most benefits have no expiry data, but are undetermined. This Court appointed that, when the audit was done, about 97 bills were going through the National Congress on the initiative of parliament members, which could affect the volume of federal revenues foregone. In addition, errors were appointed in the determination of revenues foregone. They concluded that efforts have been made, through deliberations based on audits, to orient the SRF with a view to improving the definition of revenues foregone, in the attempt to achieve a more evident, transparent and reliable image of the expenses that are implicitly incurred in through the tax system.

The Minas Gerais State Court of Auditors (TCEMG) took a stand about revenues foregone in its response to consultation 694.469, forwarded by the President of the Municipal Chamber of Visconde do Rio Branco, in which he questioned whether moratorium fines represent public revenues and whether its reduction by up to 100% corresponds to foregone revenues, in disagreement with Art. 14 of Supplementary Law 101/00.

Initially, the TCEMG clarified that the consulter did not specify the nature of the moratorium fine he was referring to. It was explained that the moratorium fine can be fiscal, when it represents a sanction due to delayed compliance with the main obligation, with a view to inhibiting the loss tax authorities incurred as a result of the delayed receipt of the tax payment. On the other hand, the fine may be adminis-



trative instead of fiscal, representing a sanction due to an illegal action, and which therefore is not part of fiscal revenues. The Court affirmed that moratorium fines are indeed public revenues, and that amnesty for fiscal moratorium fines, resulting from the delayed payment of a tax (tax, fee or contributions), means the exclusion of credit, that is, the foregoing of fiscal revenues. Hence, when the administrator grants such reduction, compliance with the requirements of Art. 150 of the Federal Constitution is due (concession based on specific and exclusive law on the matter), as well as with the conditions established in Art. 14, paragraphs I and II of Supplementary Law 101/00, as it entails a distinguished treatment of the administration.

In this case, the TCEMG expressed that the administrator should comply with three conditions. First, the budgetary-financial impact should be estimated in the year it comes into force and the next two years. Second, compliance is due with the determinations of the LDO and, finally, with at least one of the following conditions: statement by the proponent that the exemption was considered in budgetary law revenue estimates, in the form of Art. 12, and that it will not affect the fiscal result targets previewed in the attachment to the LDO; or a statement that the exemption will be accompanied by compensation measures, for the period mentioned, through increased revenues, resulting from increased rates, expansion of the calculation base, mark-up or creation of a tax or contribution. Finally, it was highlighted that, if the Administration reduces an essentially administrative instead of fiscal moratorium fines, this measure will not be subject to the conditions established in Supplementary Law 101/00.

Another consultation the TCEMG answered relates to the foregone revenues formulated by the Municipal Government of Paraopeba. It was inquired, among other aspects, whether the City could grant exemption from the payment of the Real Estate Transmission Tax (ITBI), through an authorization law, with a view to creating jobs, and whether this exemption would characterize revenues foregone in the light of Supplementary Law 101/00. The TCEMG answered that the hypothesis clearly involves foregone revenues and that, therefore, compliance is due with Art. 14 of Supplementary Law 101/00, in accordance with Art. 150 of the Federal Constitution. However, the Court highlighted:

Besides the statement about the effective return to society, *in casu*, the creation of jobs, the concession of the benefit needs to be accompanied by all studies and documents established in Art. 14 of the Fiscal Responsibility Law, that is, the estimated budgetary and financial impact of the exemption, the study that the exemption does not affect the fiscal targets established in the LDO, not those set for the compensatory municipal tax collection increase.

It should be mentioned that, above all, the Administration should possess the guarantee that, as a result of the tax exemption, a certain specific minimal number of jobs will be created, as the exemption leads to a drop in revenues, and it is but fair for the city to have this certainty in advance. As indicated in Art. 14 of Supplementary Law 101/2000, exempting companies from tax charges is legal, provided that it is substantially demonstrated that public finances will not suffer any loss, as the budgetary equilibrium is a *conditio sine qua non* for healthy tax management. (TCEMG)

Hence, when a manager gives up public resources, (s)he takes responsibility towards society, as well as the Court of Auditors which, in accordance with the Constitution, possesses the constitutional competency to supervise the tax exemption process, including the efficacy of the measure the Administration has adopted. Thus, the Minas Gerais State Court of Auditors underlines the responsibility of public managers who decide to adopt the revenue exemption policy, appointing that society should truly feel the benefits of this program.

## 6. Reflexive Appointments About Pronouncements Related to Revenues Foregone

Soon after the enactment of Supplementary Law 101/00, regulators started to discuss the implementation of a calculation method to measure the amount that actually was not collected as a result of

the economic policy based on revenues foregone. This issue was left unanswered for a very long time. On April 28<sup>th</sup> 2005, when the National Treasury issued Decree 303, the determination form of the amount left uncollected was defined. With their inquiries, academic studies encouraged the National Treasury to improve the measurement process of the amount of revenues foregone, favoring greater transparency in Public Administration, as one of the main scopes of Supplementary Law 101/00.

Despite advances in the measurement of actually foregone revenues, the need for further research continues. In Brazil, no system exists to control and monitor the socioeconomic results actually achieved as a result of revenues foregone, in order to assess society's satisfaction level and, consequently, the effectiveness of this policy. Thus, like in a program the administration directly invests its resources in, when a tax benefit is granted, the effectiveness of the fiscal program needs to be verified.

The doctrine should play an important role in this discussion by creating mechanisms according to which the achievement of a certain fiscal incentive program's objectives can be assessed, as well as whether the product of this program was able to at least satisfy part of society. Assessing results is a legal requirement, as Art. 4 of Supplementary Law 101/00 imposes the inclusion into the LDO of standards and guidelines to promote outcome assessment mechanisms for programs funded with budgetary resources. In this case, when elaborating its LDO, each entity needs to establish the method that is to be used in the assessments of Government programs for implementation, including the monitoring method of fiscal revenue exemption policies.

The doctrine also appoints that Supplementary Law 101/00 is not aimed at putting an end to the fiscal war. In fact, no legal device whatsoever exists that contributes to avoid it. By adopting a range of requisites for the concession of fiscal incentives, Supplementary Law 101/00 requires that this process be accomplished with greater rationality, planning and transparency. This ends up undermining damage by public managers' concession of benefits far beyond what public finances allow. Indirectly, therefore, it is believed that Supplementary Law 101/00 is capable of containing the warlike climate among states and among cities in terms of fiscal war, as decisions can only be made if in accordance with the respective political entity's financial situation.

As for the jurisprudence observed, the Federal Court of Auditors' agreement under analysis indicates an interesting fact: no data are available about revenues foregone in financial years before 2000. This demonstrates the absence of control and transparency before the enactment of Supplementary Law 101/00. If not even the actual amounts of revenues foregone were controlled, it is impossible to verify the quality of this public policy political entities put in practice, which is not in the least subject to surveillance.

The TCU made many observations that demonstrate that plenty of ground remains to verify the actual amounts of revenues foregone. To give an example, the difference verified between the estimated value of tax benefits granted and the actually verified amounts of revenues foregone may be attributed to errors in the methods applied to estimate any revenues that were not collected. By the way, the different methodological changes the statement accompanying the bill for the federal budget was subject to over time were indicated as a harmful point as, due to these, the way revenues foregone behaved in comparison to the previews in budgetary laws could not be analyzed.

On the other hand, it cannot be forgotten that the constant modifications were put in practice to achieve greater financial information transparency and quality, which shows to be a praiseworthy initiative. However, besides the disclosure of the revenues foregone, the TCU's agreement clearly reveals that the spectrum of the discussion about this theme should be broadened, with a view to promoting permanent changes in the maintenance and concession of fiscal benefits. It is not enough to create mechanisms to verify the amount of revenues foregone when the quality of the fiscal policy is not assessed.

Moreover, the agreement reveals that fiscal benefits tend to be granted for an undetermined period of time. This differs from the initial idea of fiscal benefits, changing it from an incentive into a permanent benefit. Therefore, issues like the duration of the benefits should be discussed, which should only be granted until their goal has been achieved, or until a certain situation has been rectified. The TCU itself found that, at the time of the audit, about 97 bills were still going through the National Congress, which could affect the volume of revenues foregone.

The discussion on the quality of these fiscal policies should be broadened with a view to inhibiting these situations of benefits granted for an undetermined period, and indiscriminately to many sector, which will not always provide returns. This need to create mechanisms to verify society's satisfaction with a fiscal benefit program is clear in the consultation answered by the Minas Gerais State Court of Auditors, in which a municipal government intends to exempt a company from paying ITBI, under the pretext that it was promoting the creation of jobs.

In fact, the consultation is impressive because the ITBI is a municipal tax, whose taxable event is the transmission *inter vivos*, for any bond, chargeable, of real estate, naturally or by physical accession, and of actual rights on property, except warranties, as well as the assignment of rights on their purchase. Hence, it is hard to believe that the exemption of this kind of tax, charged on such a specific operation like the transmission of real estate *inter vivos*, can create jobs.

This consultation demonstrates how public revenue exemption policies are put in practice in Brazil without planning, without an in-depth analysis of their actual impacts. Therefore, the Minas Gerais State Court of Auditors so strongly appointed that "above all, the Administration should receive the guarantee that, as a result of the tax exemption, a certain and determined minimal number of jobs will be created", emphasizing the responsibility the public manager and the Court of Auditors are assuming towards society by choosing this public policy.

Finally, by granting exemption from the IPI on motor vehicles in December 2008, the federal government was at first unable to prevent car manufacturers from continuing their mass dismissal plans. The manufacturers received incentives for the consumption of their products, but continued downsizing. Then, large factories were obliged to maintain their employees.

Another direct consequence of the federal government's policy was the immediate reduction of states', the Federal District's and cities' revenues. According to the federal constitution, part of the product deriving from the collection of income tax and IPI, taxes collected by the Union, should be transferred to the states, Federal District and cities. These are the Participation Fund of States and the Federal District (FPE) and the City Participation Fund (FPM). Thus, when IPI revenues dropped, FPE and FPM transfers were drastically reduced, which has put many cities in an absolutely delicate financial situation. In the large majority of Brazilian cities, the FPM corresponds to most of their revenues, so that this decrease has aroused protests all over the country. The city has the closest contact with citizens and is responsible for providing health, education and social services, among others. Hence, if this situation continues, the population may be deprived of basic and essential services.

## 7. Final Considerations

The aim in this study was to reflect on the doctrine and jurisprudence of the Federal and Minas Gerais State Courts of Auditors, which set restrictive conditions for revenues foregone. Thus, the researchers looked for foundations in the Federal and Minas Gerais State Courts of Auditors that set restrictive conditions for revenues foregone. The study appointed some advances in the area, a public policy administrators in Brazil have widely used. Supplementary Law 101, issued in 2000, is the first of these advances, setting constraints for the concession of this benefit. Then, after identifying difficulties to measure the amounts of revenues foregone, the National Treasury created the revenue deduction method, thus promoting further disclosure of these amounts. In addition, the Courts of Auditors have been supervising compliance, or not, with the limits set in Supplementary Law 101/00 for revenues foregone.

A long road still lies ahead. First, the Courts of Auditors continue elaborating still very incipient analyses on the theme, without further depth, without any further inquiries. It is interesting that most pronouncements have been issued in the federal sphere, by the Federal Court of Auditors. In the Minas Gerais State Court of Auditors, little material on the theme was found, showing that it has not been thoroughly discussed at state and municipal level in Minas Gerais, nor subject to annual audits, although it is present in State arrangements.

Moreover, it is unknown how Courts will supervise the method the National Treasury has put in practice, which was aimed at further disclosure of the amounts the political entity did not collect. That is so because most of these entities have not complied with this method, which continue elaborating their laws as established before Decree 303, issued on April 28<sup>th</sup> 2005. Now, if not even the amounts of revenues foregone are correctly verified, even less efforts are verified to analyze these policies in qualitative terms. In other words, no initiative are identified to analyze the objectives of these exemption polities, whether they were achieved or not, whether the population is satisfied with the program or particularly benefitted without having produced any large political-social consequences.

As a suggestion for future research, case studies on the socioeconomic outcomes certain revenue exemption policy have actually achieved are recommended, with a view to assessing society's satisfaction level and the effectiveness of this policy.

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## Controllership as a Governance Instrument in the Public Sector

### Abstract

Controllership is considered a Corporate Governance instrument, to the extent that it can contribute to reduce information asymmetry and conflicts of interest, deriving from agency problems between organizational owners and managers, by making available information that permit valuing the organization and the extent to which its goals are achieved. Disclosure and accountability are basic pillars of Corporate Governance as well as Controllership. The Public Sector Committee (PSC) of the International Federation of Accountants (IFAC) developed a study on governance for the public context, considering that governance principles should be present in public entities, reflected in four dimensions, two of which related to control and to the availability of external reports (Federação Internacional dos Contadores [IFAC] (2001). The main goal in this research is to identify which information the Office of the Comptroller General (CGU) makes available on its website comply with the type and contents of IFAC recommendations for control and external reports, as governance dimensions in the public sector. Through a bibliographic and documentary research, it was verified that only information related to budgetary and financial reports comply with the type and contents recommended by IFAC. The research also revealed that information related to internal audit and annual Government accountability partially address the contents recommended by IFAC.

**Key words:** Governance; Controllership; Public sector.

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## 1. Introduction

In a democratic society, it is a duty of the State to accomplish the common good, which is put in practice by attending to the population's needs (Coimbra, 2006). To attend to these needs, the State counts on the Public Administration, which in Brazil involves the three Powers (Executive, Legislative and Judiciary) and the three federal sphere. The responsibility of the Executive Power is to manage public resources and public service delivery, while the Legislative Power is responsible for supervising management.

The "owners" of all resources (the citizens) do not exercise their management directly, which is left to the entities belonging to the Executive Power, representing a potential agency problem, in which no security exists as to the alignment among the parties' interests. In this relation, information asymmetry problems also exist between owners and managers, the latter of who hold a much higher information level than the former. In those situations, Corporate Governance mechanisms can be used to facilitate this convergence of interests and transmit security to the owners with regard to public management outcomes.

Although Corporate Governance has stood out through this expression in a context associated with private corporations, at the end of the 1980's, related to financial scandals, some international entities, like the Organization for Economic Cooperation and Development (OECD) and the Public Sector Committee (PSC) of the International Federation of Accountants (IFAC), extended and adapted their principles and recommendations for practice to public sector entities.

Basic pillars of Corporate Governance include information disclosure and accountability, recommended by the Organization for Economic Cooperation and Development (OECD) as well as the International Federation of Accountants (IFAC). According to Bianchi (2005, p. 72), "the essence of the Corporate Governance concept involves transparency in administration and the means it uses to reduce the information asymmetry that exists among those who produce and use the information as much as possible".

In an environment of insecurity regarding the alignment of interests and information asymmetry between agents (owners and managers), the existence of a Comptroller can represent an important Corporate Governance mechanism. The presence of control as a governance dimension in the public sector is expressed in IFAC (2001) recommendations, which conceive the function as support to the high management levels to permit the achievement of organizational objectives, through operation efficiency and effectiveness, reliability of internal and external reports and compliance in the application of laws and regulations.

In line with Bianchi (2005), the Comptroller area can contribute to mediate conflicts among agents through an information and outcome measurement system, allowing both owners and managers to have access to organizational and management performance information, and to grant transparency about the products of managers' actions, thus reducing information asymmetry among its main users. Two basic Corporate Governance pillars, information disclosure and accountability, are also principles present in Comptroller functions.

The Brazilian federal public administration has a control entity: the Office of the Comptroller General (CGU). In this context, in view of the relevance of the Comptrollership area in complying with the basic governance principles that are also applied in public management, the aim in this research is to answer the following inquiry: **Which information the CGU makes available complies with IFAC recommendations for governance practices in the public sector related to the control and external report dimensions?**

The main goal in this research is to investigate the information the CGU makes available which comply with the type and contents of IFAC recommendations (2001) related to control and external reports as governance dimensions in the public sector.

Therefore, bibliographic and documentary research procedures were adopted, through the study of specialized texts, laws, standards and websites. As regards the nature of the problem, this study is a qualitative analysis of information made available on the CGU website, based on a data collection instrument that classified the information with regard to IFAC recommendations for governance practices in the control and external report dimensions.

It should be highlighted that, every day, discussions about control and disclosure in the public sector gain increasing attention in the Brazilian context, mainly due to the convergence process of the accounting practices in force in the Brazilian public sector towards international accounting standards, based on the Brazilian Ministry of Finance Decree 184, issued on 8/25/2008, and on the set of Brazilian Accounting Standards applied to the Public Sector (NBC T SP), issued by the Federal Council of Accounting. This justifies research to enhance discussions on the theme, analyzing information made available by the CGU on control and external reports as governance dimensions in public management.

This research has been structured in five topics, including this Introduction. Next comes a literature review to contextualize the agency conflict, governance, Comptrollership and control in federal public management. In the third topic, the methodological procedures are described, followed by the presentation of the research results. Finally come the final considerations.

## 2. Theoretical Framework

### 2.1 Agency Conflict and Corporate Governance

Among the foundations of Corporate Governance, the agency conflict stands out, whose conceptual bases are rooted in the work by Berle and Means (1932, as cited in Fontes Filho, 2003), present in organizations due to the separation between property (principal) and management (administrators), which happens when the agents affiliated with organizations present conflicting interests.

Jensen and Meckling (1976), who presented Agency Theory in a more comprehensive way and defined an agency relationship as “a contract in which one or more people - the principal -, hire another person - the agent - to perform some task on his behalf, involving the delegation of authority for decision making by the agent”. Departing from the premise that individuals cannot desire to maximize a utility function that is not theirs, the environment of the agency conflict is created.

To mitigate these problems, Corporate Governance mechanisms emerged, committed to guaranteeing greater information disclosure and protection to the owners. According to Camargos (2007, p. 4), “historically, Corporate Governance started in the United States, in the framework of the recovery of large corporate managers’ disclosure and responsibility for accountability and monitoring”.

Covering a broad conceptual base, Corporate Governance has been defined as a system, a set of principles, standards, models and practices, involving issues related to control and power structures in organizations, the role of the board of administrators, stockholder value creation and the role of corporations in society. In line with the OECD (2004), Corporate Governance is considered a system that contributes to companies as well as to the economy, so as to reach the level of confidence needed for the appropriate functioning of a market economy.

In Brazil, the first Corporate Governance Code was elaborated in 1999 by the Brazilian Corporate Governance Institute (IBGC). In its fourth edition, the IBGC Code of Best Corporate Governance Practices (2009) is based on the principles established by the OECD, that is, transparency, equity, accountability and corporate responsibility.

Information disclosure and accountability figure as Corporate Governance principles and practice in different Brazilian and international entities’ recommendations, including the OECD (OECD, 2004), IBGC (2009), World Bank (THE WORLD BANK, 2009) and PSC/IFAC (IFAC, 2001).

## 2.2 Governance in the Public Sector

Initiated in the private company context in recent decades, Corporate Governance debates have developed in the context of disclosure and accountability, as bases to guarantee a more protective environment to company owners regarding the achievement of organizational objectives.

Assessments of governments' roles in society, developed in different countries in recent years, have altered definitions of political-administrative relationships in the public sector, which entailed further accountability charges on governments.

In 2005, the OECD presented a proposal for best governance practice guidelines focused on public companies, based on the principles defined for the private sector, incorporating dimensions and needs that are typical of these public companies and the State, as the comptroller. These principles are (OECD, 2005):

- Guaranteeing a legal and effective regulatory framework for public companies;
- the State acting as the owner;
- equitable treatment of stockholders;
- relation with stakeholders;
- disclosure; and
- responsibilities of board of administrators.

The PSC/IFAC extended the analysis of the Corporate Governance theme to the public context through Study No. 13, including orientations on governance principles, guidelines and recommendations for public-sector entities (IFAC, 2001). According to IFAC (2001), in some jurisdictions, the expression "corporate" can be interpreted as a term characteristic of the private sector. To avoid any interpretation problem on its use in the public sector, the study used the expression "governance" to describe what normally refers to the private sector as "Corporate Governance".

IFAC (2001) acknowledges the complexity of applying the governance theme to the public sector and indicates that public sector entities are also subject to accountability to different stakeholders. Public sector stakeholders include ministers, government officials, parliament members, contributors and the public in general, "each of whom takes legitimate interests in public entities, but does not necessarily hold rights" (IFAC, 2001, p.1).

Despite different institutional arrangements among countries, PSC/IFAC (2001) defined three governance principles applicable to public entities, which are: disclosure, integrity and accountability; incorporated some concepts of conduct into these principles which should permeate the public sector, proposed in the Nolan Report, which the Committee for Standards of Public Life in the United Kingdom elaborated in 1995: abnegation, integrity, objectivity, accountability, disclosure, honesty and leadership. The study proposes a set of principles and conducts for public entities, distributed in four governance dimensions (IFAC, 2001):

- Standards of behavior – related to the practice of leadership to determine organizational values, standards of behavior and culture;
- Organizational processes and structure – related to how top management is indicated, responsibilities are defined and the organization gains reliability;
- Control – related to the establishment of controls, so as to support the achievement of the entity's objectives, operational efficiency and effectiveness, reliable reports and compliance with laws and regulations;
- External reports – related to how top management in the organization demonstrates its accountability for public finance management and performance in resource use.

Based on each of these dimensions, IFAC proposed governance recommendations as good practic-

es for public entities to follow. According to IFAC (2001), with a view to efficient service delivery, public entities need to align management flexibility with effective governance and accountability, guaranteeing the achievement of government objectives as a whole and of different stakeholders' legitimate interests.

Like the control dimensions, the “disclosure” and “accountability” principles are permanently present in good governance practice recommendations, for the private as well as the public sector.

In many countries, the responsibility for defining the governance framework in the public sector is shared between the Legislative and Executive Powers, delegated by civil society (IFAC, 2001). The Legislative Power is responsible for standardizing, approving and supervising policies, plans and budgets formulated by the Executive Power, the latter responsible for action management and accountability. According to IFAC (2001), the Executive Power is responsible for:

- Commitment to the economy and efficiency of actions;
- maintenance of an appropriate internal control system;
- application of appropriate public accounting policies;
- safeguarding of public assets;
- measurement of program effectiveness; and
- presentation of performance reports and accountability.

In Brazil, public management rests on determinations established in the Federal Constitution, whose ideological bases are the principles of equality among all men and popular sovereignty, the organization of the State of Right and independence of the Powers in the Republic (Brasil, 1988). Based on democracy and the accomplishment of fundamental rights, it is the task of the Democratic State of Right to accomplish the common good, which takes form in the response to the needs of the people. Clear examples are safety, health, education, justice, housing, food, leisure and culture (Coimbra, 2006).

It is the function of public management to respond to the population's collective needs. In Brazil, public management involves the direct and indirect administration of the three Powers at the three levels of the Federation – Union, states, Federal District and cities –, and has to comply with the principles of legality, impersonality, morality, publicity and efficiency. The Legislative Power is responsible for external supervision, practiced through the National Court of Auditors (Brasil, 1988). As established in Decree-Law 200/67, direct administration involves ministries and secretaries, while indirect administration comprises authorities, foundations, public companies and mixed corporations, entities with a characteristic legal status who deliver services they were attributed by the State.

One illustration of the application of Corporate Governance (private sector) and its extension to public sector entities, in direct as well as indirect administration, is presented in Figure 1.

		Public Entities		
		Private Entities	Direct Administration	Indirect Administration (State)
Agents	Principal	Stockholder/owner	Citizens	Immediate controller: Government
	Managers	Executives	Public policy makers and managers	Executives
Aims	Of the principal	Profit, return on investment, going concern of the company	Social wellbeing	Maximization of value for society
	Of the managers	Remuneration, acknowledgement	Political interests	Political and administrative interests
Instrumentos de GC (to align interests)	a) Incentives	Financial benefits associated with results (participation in profits, bonus)	Difficulty to measure results (complexity of aims) and associate benefits	Difficulty to identify elements to assess the success of entities and managers' performance
	b) Monitoring of managers' behavior	Role of board of administrators (representing owners), with power to nominate and fire directors and define their compensations	Legislative Power and its supervisor (Court of Auditors) – with the institutional role of approving PPA, LDO and LOA and supervise Executive management	Role of board of administrators, with government-indicated representatives, is subordinated to the political orientations of the group that controls the organization

**Figure 1.** Particularities of Corporate Governance in private and public sectors

Source: Elaborated by the authors based on IFAC (2001) and Fontes Filho (2003).

The information in Figure 1 reflect the complexity of governance applied to the public sector, as appointed in the IFAC study (2001), and consider the characteristics of the institutional and legal environment of Brazilian public management.

While the agents involved in the conflict of interests addressed in agency theory are company stockholders/owners and their executives in the private sector, in the public sector, these actors are less personalized, as they comprise citizens as a whole, as “owners”, represented by the governmental controller in state-owned companies, and decision-makers, public managers and executives as managers, in accordance with Figure 1.

The aims also gain further complexity in the public when compared to the private context. While, in private entities, owners seek to maximize wealth, return on their capital and the company’s going concern, the “owner” of public resources aims for social wellbeing and the maximization of public services’ value, objectives that are complex to measure.

In terms of governance instruments to align interests and reduce information asymmetry, quantifiable incentives are used in private companies, such as profit-associated financial benefits. In public entities, on the other hand, due to the complexity of the aims and of the consequent measurement of their achievement, the use of incentives is also difficult. Also, while the board of administrators acts as the owner’s representative in private companies to monitor management, what the government is concerned, citizens delegate this responsibility to their elected representatives, through the constitutional public resource management supervision competency attributed to the Legislative Power. In federal state-owned companies, the board of administrators, indicated by the respective ministry, is subject to the resulting political influences, which also turns monitoring more difficult or questionable.



## 2.3 Comptrollership and Governance

The control function is considered an internal dimension of a governance system (IFAC, 2001). According to Bianchi (2005), organizational control is considered the key to good governance and Corporate Governance practices should be guided by controls that allow the stakeholders in the organization to give preference to the disclosure of administrative actions, guaranteeing that conflicts of interest will not interfere in the organizational capacity to obtain economic results.

One of the basic functions of Comptrollership is to provide information to support the decision process in the context of an organization and to cooperate with managers to achieve effective actions (Mosimann, 1999). Therefore, authors, like Weibenberger (2009) and Maas and Matejka (2009) for example, argue that Comptrollership comprises a set of highly sophisticated tasks.

The functions of Comptrollership involve a wide range of dimensions, highlighting its role to articulate with planning; support the management process; assess organizational results; verify deviations and suggest corrections; practice accounting, financial and equity control; suggest improvements aimed at cutting costs; analyze the appropriateness of material and human resources, internal control, risk control, supervision and internal auditing (Mosimann; Fisch, 1999; Oliveira; Perez Junior; Silva, 2002; Peter, 2007; Suzart; Marcelino; Rocha, 2009).

According to Borinelli (2006), Comptrollership is that entity in the organization's formal system responsible for controlling the management process and providing operational, economic, financial and equity information, demanded to advise other organizational units, in the attempt to integrate the managers' efforts to achieve a synergetic and optimized organizational result, as well as for the external agents who relate with the company with a view to decision making. In that sense, Comptrollership is closely related with the principles and practice of good governance.

Roehl-Anderson and Bragg (2004) appoint that control is one of the essential functions of Comptrollership, and is responsible for measuring and correcting the institution's performance, so that plans and objectives can be accomplished. According to the authors, the function of control is not just to give information feedback to different company areas, in a retrospective perspective, but also to map systems, examine operational issues and put in practice improvement processes to eliminate problems, in a prospective organizational view, adopting preventive activities to correct the organization's trajectory.

According to IFAC (2001), to serve as one of the governance dimensions in the public sector, control should adopt practices that involve the following areas:

- a) Risk Management: defined as a measure of uncertainty on the achievement of organizational objectives. Risk should be identified, evaluated, corrected and monitored. Risk management involves the understanding of organizational objectives; the identification of risks associated with the accomplishment of these objectives; the assessment of the probability and potential impact of specific risks; the development and implementation of programs and procedures to correct the identified risks; and the monitoring and assessment of the risks and related programs.
- b) Internal Audit: responsible for guaranteeing the systematic review, evaluation and report on the appropriateness of management, financial, operational and budgetary control systems, mainly including:
  - relevance of the policies, plans and procedures established and their financial effects;
  - review of operations and programs, in order to verify whether the results are consistent with the objectives and targets sets and whether the operations and programs are being performed as planned;
  - extent of asset safeguards with regard to waste, administrative inefficiency, frauds or other causes;



- reliability and integrity of financial and management information and measures to identify, measures, classify, register and act on this information;
  - economy and efficiency in the application of resources; and
  - integrity of computer systems.
- c) Audit committee: which should be held responsible for the independent review of control structures and external audit processes.
- d) Internal controls: need to be established in organizations, be operative and have their activities declared in the organization's annual reports. These controls are responsible for reasonably guaranteeing the achievement of organizational objectives in terms of operational effectiveness and efficiency (involving basic operational objectives, performance measures and resource safeguards); reliability of financial reports and compliance with applicable laws and regulations.
- e) Budget: represents an essential element of financial planning, process control and assessment in public-sector entities, as an instrument for resource allocation with a view to achieving the established objectives.
- f) Financial management: should support managers to administer the limited resources and use them economic and efficiently to deliver services.
- g) Training: activity that contributes to the performance of the workforce. It influences financial statement quality to the extent that it is directly related to the ability to obtain and maintain qualified professionals.

In addition to the control functions, IFAC (2001) also appoints external reports as a dimension of public-sector governance, and recommends the following related practices:

- a) Annual report: governmental entities need to publish annual reports, within a reasonable deadline after closing off the financial year, including objective accountability on their accomplishments, in comparison with forecasts, and performance perspectives. The reports should also contain:
- declaration of decision makers' responsibility for financial resource management and its statements; for the maintenance of an effective control structure and adherence to applicable accounting standards;
  - declaration about the adoption of governance standards or codes;
  - audited financial statements and auditors' opinion.
- b) Use of appropriate accounting standards: it should be guaranteed that the financial statements included in the annual reports are prepared according to the International Public Accounting Standards – IPSAS or other accounting standard frameworks, besides relevant laws.
- c) Performance measures: entities need to establish and report performance measures to guarantee and demonstrate that the resources were applied economically and used efficient and effectively. Performance measures are useful management and accountability instruments and need to permit the cost measurement of governmental programs. They are necessary for internal and external users, who need this information to assess the achievement of the entity's objectives, the way the resources were employed and investment needs. This information should be audited.

- d) External audit: governmental entities need to maintain an objective and professional relationship with external auditors. Discussion is needed between the audit committee and external auditors about the extent of confidence in the internal audit and significant issues, including financial statement review and some other activities attributed to or supervised by the audit committee.

## 2.4 Public Management, Control and the Office of the Comptroller General (CGU)

The redemocratization of Brazil as from 1985 entailed civil society's increased democratic pressure on the State's actions and, due to the redefinitions of the Modern State that took place in other countries, the administrative reform gained a place on the Brazilian public agenda (Cardoso, 2006). Efficiency principles in the administration of public management entities, the use of planning instruments and result assessment were aspects incorporated in the Federal Constitution (Brasil, 1988).

Some governmental planning instruments were established by the Federal Constitution (FC), particularly the Pluri-annual Plan (PPA), Budgetary Guidelines (LDO) and Annual Budgets (LOA). The PPA represents the four-year government program, which objectives and values proposed for the period, indicating resource sources and economic expense categories, per program, with targets and indicators to verify the target. The aim of the LDO is to direct the elaboration of budgets and attempts to align the LOA with the public management guidelines, objectives and targets established in the PPA. The LOA, which comprises the tax, social security and investment budgets of state-owned companies, distinguishes between annual revenues and expenses, disclosing the government's work program according to the aims and targets proposed in the PPA, in line with the LDO guidelines established in the Federal Constitution (Brasil, 1988).

Fiscal-financial control started to incorporate principles like disclosure, accountability and fiscal responsibility after the Fiscal Responsibility Act (LRF) was issued (Complementary Law 101, issued on 5/4/2000), which regulated the constitutional article on public finance. The LRF establishes the following main axes to strengthen public administration: planning, disclosure, control and responsibility in the fiscal management of public resources and accountability. As fiscal control instruments, the LRF established fiscal target monitoring instruments, financial programming and spending limits. As a measure of disclosure, the LRF determine the large-scale disclosure, during public hearings, of plans and budgets; accountability; the Summarized Budget Execution Report; and the Fiscal Management Report (Brasil, 2000).

The FC functions of supervision and internal control in public management were also reformed, incorporating more managerial aspects, including the perspective of economical public spending, besides more traditional aspects like legality and legitimacy, management efficiency and assessment of governmental targets and programs. Art. 70 in the Federal Constitution (Brasil, 1988) determines that the accounting, financial, budgetary, operational and equity supervision of the Union and direct and indirect management entities will be practiced by the National Congress, through external control, and through each Power's internal control system.

The National Court of Auditors practices external control, which the National Congress is responsible for at the federal level. As regards internal control, in Art. 74 (Brasil, 1988), the FC determines that the Legislative, Executive and Judiciary powers need to maintain an integrated internal control system.

The organizational structure of Brazilian public management control went through different phases. In 1986, the National Secretary of the Treasury (STN) was created, which started to command the financial movements of the Union and the Internal Control Secretaries (Ciset). By subordinating the central control entity to the STN, this model broke with one of the basic principles of any control system, which is the segregation between the accounting and audit functions and the financial function (Silva, 2003). In 1994, the Federal Control Secretary (SFC) was created, affiliated with the Ministry of Finance. In 2003, the Office of the Comptroller General (CGU) was funded, whose structure the SFC was integrated in.

The competency of the CGU is to direct and immediately assist the President of the Republic with regard to themes that, in the context of the Executive Power, are related to the defense of public equity and the enhancement of management disclosure, through internal control, public audit, correctness, prevention, fight against corruption and an ombudsman (CGU, 2009). Its structure comprises four entities that serve as the integrity systems of the Federal government (CGU, 2009):

- Federal Control Secretary (SFC), responsible for the Internal Control System;
- Office of the Comptroller General, responsible for the Correctness System;
- Office of the Ombudsman General, responsible for the ombudsman units; and
- Secretary for the Prevention of Corruption and Strategic Information, responsible for the prevention and fight against corruption in the Executive Power.

Through the SFC, the CGU is responsible for audits and supervisions, aimed at checking how public money is applied. Its responsibility is to evaluate the execution of the Union's budgets, the supervise the implementation of governmental programs and audit the management of the federal public resources public and private organizations and entities are in charge of. In addition, it is responsible for elaborating the President's annual accountability, to be submitted to the National Congress (Brasil, 1988).

The branches of disclosure and responsibility for accountability to citizens (owners), as the pillars of governance and Comptrollership, are expressed in the legal, regulatory and program texts about control in federal public management in general and the CGU in particular.

### 3. Method

Considering the study objective, in this exploratory research, bibliographic and documentary procedures are adopted, with a qualitative data approach which, according to Richardson (2008), involves understanding the characteristics of a certain phenomenon or situation, through in-depth analyses, instead of producing quantitative measures.

During the exploratory research, contact with the topics *Controllership and governance in the public sector* served as the base to accomplish the study. Thus, through a bibliographic survey, the concepts of Controllership, governance in the public sector, and particularly the recommendations of the Public Sector Committee (PSC) of the International Federation of Accountants (IFAC) were explored.

In this research, information is used that was obtained based on public sources published by the CGU. Therefore, it is a documentary research, based on the information disseminated on the CGU website and in public documents; as well as a qualitative study, to the extent that it uses content analysis to investigate the information published on control and external reports, in accordance with IFAC recommendations (2001).

The survey on the CGU website was undertaken in September 2009, by consulting the following reports:

- About the evaluation of the execution of governmental programs; annual accountability audits; special audits and operations; special account seizure processes;
- Supervisions based on drafts, related to 2008;
- CGU management, 2008;
- Evaluation of the PPA 2008-2011, related to CGU actions;
- Fiscal management for the first four months of 2009; and
- Accountability to the President of the Republic (government actions and General Balance Sheet of the Union), 2008.

The application of content analysis considered the three phases of the method, in accordance with Bardin (2004): (1) pre-analysis; (2) exploration of the material; and (3) treatment of results. In the pre-analysis, the documents were read superficially. In the more detailed exploration, information was analyzed in two phases: in the first phase, CGU information was analyzed, involving: a) the general structure of its presentation form, in terms of classification per area; b) the type of information presented in each topic group; and c) the scope of the respective information contents and approaches that are pertinent to the theme of this paper. The second phase involved the analysis of the information in comparison with IFAC governance practices in the public sector, considering the dimensions of control and external reports. Those recommendations were considered whose practices can be verified through the information available on the CGU website, regarding risk management, internal audit, budget and financial management and external reports.

To treat the data (phase 3), the information was mapped in a data collection instrument, which first registered the available reports. Then, in the available reports, the information contents were analyzed and registered, related to those aspects of governance practices recommended by IFAC, in the dimensions of control and external reports. The use of content analysis permitted identifying the absence and presence of information.

#### 4. Analysis of Results

The information presented on the CGU website are arranged according to the area corresponding to each of the four organizational structure entities: audit and supervision; prevention of corruption; correctness; and ombudsman.

This research focuses on the information concentrated in the audit and supervision and prevention of corruption areas, which are presented on the website, addressing the following basic scope:

- a) Assessment of government programs – summarized comments are presented about aspects addressed in the supervision of thirteen federal programs, but the reports are not presented.
- b) Special audits and operations – relate to control actions applied to selected objects, in which a patterns of deviations and irregularities is identified, which can be shared with other defense entities of the State, such as the Federal Police and the Public Prosecutor. The information presented provides short comments on the nature of the actions performed.
- c) Accountability audit – aimed at checking the information provided by federal public administrators and at analyzing the management acts and facts, with a view to instructing the annual accountability process that is to be submitted to the National Court of Auditors' judgment. The information published refers to the legislation and evolution in the number of audits performed, between 2002 and 2008. The reports of each federal public management entity were not available, except for the CGU report.
- d) Special seizure of account processes – refer to the processes analyzed by the CGU involving accounts that are considered irregular, and are therefore forwarded to the National Court of Auditors for judgment. A report is made available with the following information: the name of the entity and the person responsible for executing the resources; values to be returned to the National Treasury; and the reason for the establishment of the special seizure of account process.
- e) Accountability of the President of the Republic – presents the annual performance of the federal Executive Power, accompanied by reports and financial statements. Addresses aspects of

the federal government's economic-financial policy, budgetary execution, actions of each ministry, measures taken with regard to the National Court of Auditors' recommendations and to the analysis of the main aspects contained in the General Balance Sheet of the Union.

- f) Fiscal management report – this report was established by the LRF and should be consolidated every four months, which information on total expenses on staff, consolidated debt, concession of guarantees and credit operations. The reports are consolidated by the STN and the Federal Internal Control Secretary of the CGU assesses the consistency of their data.
- g) Supervision reports based on public drafts – special supervisions undertaken in states and cities, related to the application of federal public resources. These reports are available on the CGU website.
- h) Access to the Transparency Portal – any citizen can consult information about the transfer of federal public resources to each of the states and cities and directly to the citizen, without the need for a password, like the benefits of the *Bolsa Família* program, as well as the federal government's own spending on purchases or the hiring of works or services.

	Areas/Information	Information Availability		
		Yes	Partially	No
A. Governance Dimension: Control	<b>I. Risk Management</b>			
	1. Risks of uncertainty regarding the achievement of government objectives are identified and informed			X
	<b>II. Internal Audit</b>			
	1. Internal audit reports		X	
	<b>III. Audit Committee</b>			
	1. The existence and activity of the committee are informed			X
	<b>IV. Internal Controls</b>			
	1. Its activity is informed			X
	<b>V. Budget and Financial Management</b>			
	1. Budgetary execution reports	X		
2. Financial execution reports	X			
<b>VI. Training</b>				
1. Accomplishment of staff training is informed			X	
B. Governance Dimension: External Report	<b>I. Annual Report</b>			
	1. Annual government accountability report	X		
	<b>II. Use of Appropriate Accounting Standards</b>			
	1. The adoption of international accounting standards is informed			X
	<b>III. Performance Measures</b>			
	1. Cost measurement and economy measures in the application of public resources are informed			X
<b>IV. External Audit</b>				
1. Relationship between audit committee and external audit is informed			X	

**Figure 2.** Summarizes the information made available by the CGU, grouped in the governance dimensions Control and External Reports, in accordance with IFAC recommendations (2001)

Source: Elaborated by the authors.

The content analysis of the information the CGU publishes in compliance with IFAC recommendations (2001) demonstrates that:

a) Regarding the control dimension:

- Risk management – no specific report is available that adopts the approach recommended by IFAC towards to risk exposure related to the uncertain achievement of government objectives as a whole, in annual and multi-annual terms, in this case based on the priorities and targets defined in the PPA and LOA. The annual accountability of the President presents the results of each entity's programs and actions in comparison with the targets set in the LOA, but the level of achievement of the government objectives assumed towards citizens (owners) is not assessed, neither in global nor multi-annual terms; nor are any risks that may jeopardize them made explicit. This is not an audit report that maps risks of uncertainty regarding the achievement of objectives. Some indication of resource application risks is found in the reports on supervisions accomplished in states and cities selected through a public draft, although their scope is the verification of punctual aspects. This is not a specific risk approach report, in line with the dimension and perspective recommended by IFAC (2001).
- Internal audit – the availability of internal audit reports partially complies with the IFAC recommendations (2001), as not all reports are published, but only supervision reports on the application of federal resources in states and cities, based on public drafts. Other internal audit reports, like the management accounts of each federal entity, the assessment of governmental programs and special audits, are not available on the CGU website.
- Audit committee – the information is not made available, nor is the existence of this committee in the CGU structure identified in the terms proposed by IFAC (2001).
- Internal control – the information published by the CGU does not mention the appropriateness of the structures and internal control activities of the federal executive power's entities, in line with IFAC recommendations (2001), in the sense that governmental entities should establish and put in practice internal control guidelines and report on their effectiveness in annual reports.
- Budget and financial management – the CGU complies with recommendations in this area through the information published in the annual accountability of the President of the Republic and in the four-monthly fiscal management report, one of the reports required by the LRF.
- Training – IFAC recommends staff training as a contribution to the quality of control activities. Information on the CGU website do not specify staff training activities.

b) As regards the external report dimension:

- Annual report – IFAC recommendations (2001) are complied with through the publication of the annual accountability reports of the President of the Republic. Although the individual management reports of each entity are not published, the information is addressed in the accountability report as a whole.
- Appropriate accounting standards – no reference is made to compliance with international public accounting standards. The only information provided is that the financial statements comply with the determinations of Law 4.320/64, which sets standards for the elaboration of public balance sheets, and Federal Accounting Council Resolution 750/93 on compliance with accounting principles.
- Performance measures – no specific report exists with this approach, in line with IFAC recommendations (2001), that is, which contains the measurement of governmental program costs and demonstrates the economic application of public resources.



- External audit – no information is available on the existence of the audit committee and its relation with external audit, in line with IFAC recommendations (2001). The information available on the CGU website indicates that recommendations by the National Court of Auditors, an external control entity, are treated in the internal audit reports.

Therefore, the information made available by the CGU that fully or partially complies with the information type recommended by IFAC (2001) relates to internal audit reports; budget and financial management; and to the government's annual report. The range of content aspects IFAC recommends is not addressed through, in each of its respective dimensions, in accordance with Figure 3.

	Reports/Aspects analyzed	Information complies with aspects recommended by IFAC		
		Yes	Partially	No
A. Governance Dimension: Control	<b>I. Internal Audit – reports inform:</b>			
	1. relevance of policies, plans and procedures and their financial effects			X
	2. program review to verify whether the results are consistent with established objectives and planned performance		X	
	3. extent of asset safeguards regarding waste, administrative inefficiency, frauds etc.	X		
	4. reliability/integrity of management and financial information and measures to identify, measure, classify, reports and act on the information	X		
	5. economy and efficiency in resource use		X	
	6. integrity of computer systems			X
	<b>II. Budget and Financial Management – reports evidence:</b>			
	1. application of allocated resources in relation to established objectives	X		
2. balance in public finance	X			
B. Governance Dimension: External Report	<b>I. Annual Report – the government's annual report informs on:</b>			
	1. the annual results of entities' management	X		
	2. the persons responsible for budgetary, financial and operational management			X
	3. the appropriateness of the entities' internal control structure			X
	4. the adoption of governance standards or codes			X
	5. the audit report in the financial statements			X

**Figure 3.** Appropriateness of information published by CGU in comparison with IFAC recommendations (2001).

Source: Elaborated by the authors.

As regards internal audit, IFAC recommends that the reports inform on the relevance of the established policies and plans and their financial effects; the results of programs and actions and their consistency with the established aims and targets; the extent of asset safeguards against waste, administrative inefficiency, frauds or other causes; the reliability and integrity of financial and management information; audit measures to identify, measure, classify, register and act on this information; economy and efficiency in the application of resources; and the integrity of computer systems.

Aspects related to the way assets are used to safeguard against waste, inefficiency and frauds and to the verification of information reliability and management measures comply with IFAC recommendations (2001). As regards aspects related to program performance, compliance is only partial, as the program evaluation reports are not available on the internet, restricting the analysis of this aspect to the supervision reports of resource applications in states and cities chosen through a draft. In these super-

vision reports, although they are not focused on the performance of specific program, related management acts are verified. Compliance with IFAC recommendations (2001) is also partial with regard to the evaluation of economical and efficient resource use. The reports about supervisions in states and cities verify management actions and appoint possible anti-economical measures deriving from non-compliance with regulations, like management acts in public tenders, in which it should be kept in mind that these audits are not focused on the evaluation of economical resource application, based on cost measurement standards.

As for the budgetary and financial execution reports, IFAC recommends (2001) that reports be published that disclose the application of the resources allocated in relation to established aims and the situation in terms of public finance balance. This aspect of the recommendations is complied with in the reports made available by the CGU, established by the LRF, and in the budgetary and financial statements included in the government's annual accountability.

Concerning the government's annual report, it is verified that only the aspect related to reports on the entities' management results complies with IFAC recommendations (2001). The remaining aspects – indication of people responsible for budgetary, financial and operational management; appropriateness of entities' internal control structure; adoption of governance standards or codes; and presentation of the audit report in the financial statements – are not complied with.

The confrontation between the information published by the CGU and IFAC recommendations (2001) on governance practices in the public sector, considering control and external reports, reveals variations in the degree of compliance, whether in terms of type or contents.

## 5. Final Considerations

In this study, the information was investigated which the Office of the Comptroller General publishes on its website and complies with the type and contents of IFAC recommendations (2001) related to control and external reports, as dimension of governance in the public sector.

In public organizations, the application of Corporate Governance mechanisms, originally conceived in the context of private companies, gains increasing complexity due to the multiple range of its political, economic and social objectives, to different types of external constraints and to the variety and particularities of its stakeholders. The PSC/IFAC developed a study in which the analysis about the Corporate Governance theme was extended to the public context. Control and the availability of external reports were considered dimensions of public sector governance.

The research revealed the Office of the Comptroller General' explicit acknowledgement of the government's responsibility for disclosure and accountability, and a comprehensive information disclosure level related to public spending, such as information published on the Transparency Portal and in supervisory reports developed in states and cities, chosen through a public draft.

Nevertheless, the study showed variations in the compliance level of the information the CGU discloses with the type and contents of IFAC recommendations (2001). Information related to internal auditing, budgetary and financial reports and annual government reports complete or partially complies with the information type in IFAC recommendations (2001). The information that does not comply with the type recommended by IFAC (2001) is related to risk management, to the audit committee, to internal control activities, to training and the use of international public accounting standards.

Information that complies with the recommended type and with content aspects relates to budgetary and financial reports. Information related to internal audit and annual government accountability reports partially address the contents recommended by IFAC (2001).

It should be highlighted that, although in an initial form, this research signals relevant aspects of information disclosure on the CGU website, regarding to the type and contents of IFAC recommendations (2001) related to control and external reports, while governance dimensions in the public sector reveal

the importance of the theme as future research foci. Thus, with a view to future studies, a similar analysis of the information disclosed by Brazilian state and municipal Comptrollership Offices is recommended. In addition, a broader study of the information disclosed by indirect administrative entities is suggested.

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# Public Governance and Governability: Accountability and Disclosure permitted by Accounting Applied to the Public Sector as a Sustainability Instrument for the State

## Abstract

In an accounting-financial perspective applied to business organizations, the Going-Concern Principle presupposes their sustainability towards perpetuity, influencing and guaranteeing investors' returns. In Public Management, this is no different, underlining the existence of the Going-Concern Principle of the State. This describes the State as a political society that, like the company, should be perennial and sustainable, always aiming for the promotion of the common good and the development of its people. In line with the expected contribution, this paper is aimed at discussing the importance of Accounting Applied to the Public Sector as a useful tool for effective Public Governance and Governability, in accordance with a sustainability view that is applicable to the management of the State. What the method is concerned, regarding the ends, it was an exploratory and explanatory research and, regarding the means, bibliographic and documentary research and theoretical-empirical observation were used, focusing on compliance with Public Management disclosure (transparency) and accountability (social responsibility to render accounts to society). As a result, a strong interrelation between the terms was verified, as Accounting evidences governments' results and actions based on governance (the means/ the how) related to governability (political power and actions), and also that both are oriented towards the sustainability of the State. As regards the latter, it was also verified that it is more comprehensive than the term "sustainability" itself, which is often narrowed down to the eco-environmental view and ignores important financial (equilibrium) and economic-social variables inherent in the social function of the State Como.

**Key words:** accountability; disclosure; public governance; State; governability.

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## 1. Introduction

The foundations of public management are based on the principles of legality, which is fundamental with regard to public managers' actions, determining that they are only allowed to do what the law describes, and not what the law does not prohibit, as applicable to private managers' actions.

In that sense, Fiscal Responsibility Law (FRL) (Complementary Law 101/2000) sets the limits of public action, with a view to strengthening the main public management axes which according to Santos (2002, apud Slomski, Mello, Tavares & Macêdo, 2008, p.174) are: planning, transparency, control and responsibility in public resource management and accountability.

In accordance, Accounting, as an Applied Social Science with a method that has been especially conceived to capture, register, accumulate, summarize and interpret the phenomena that affect any entity's equity, financial and economic situation ([...] even public entities like: state, city, Union, local authority, etc.) have a very broad activity area.

With regard to public persons, in Iudicibus (2006, pp.22-24), among the groups of "people" and "interests" that need financial information, the Government and public economists are highlighted, which take a double interest in financial information, as they support the state's taxation practices (in the broad sense), and even contribute to the sustainable foundation of public policies directed at the wellbeing of society.

Likewise, Horngren, Sundem and Stratton (2004, p.4), in accordance with Marion (2010, p.145), contribute to the discussion, highlighting the importance of Accounting in decision making, describing that "[...] the basic objective of financial information is to help someone make decisions". Nevertheless, independently of who makes the decision, understanding financial information enhances its quality, security and foundations. Therefore, compliance with one of the fundamental principles of governance (in this case public governance) is highlighted: accountability, articulated with other extremely important principles for the management of the public good: disclosure, equity and responsibility. According to Marques apud Slomski *et al.* (2008, p.51), articulated compliance with these principles represents a great challenge for the public sector.

Linking the accounting view with public governance, Matias-Pereira (2010, p. 164) underlines that public accounting is also aimed at "applying accounting concepts, principles and standards in budget management, (...) of Public Management, with a view to offering society comprehensive knowledge on public affairs".

In the strict sense, Mota (2009), aligned with the view by Kohama (2006), Matias-Pereira (2010) and Slomski *et al.* (2008), contributes to the theme, highlighting that the main function of Accounting for public entities is to study, register, control and disclose equity and its variations. In that sense, this task imposes the use of a large number of accounting techniques and procedures that turn it into a complex branch of Accountancy.

Also, Accounting Applied to the Public Sector is subject to compliance with legal standards that address control requirements on the public budget and administrators' actions that can affect equity. According to Mota (2009), Financial Law principles also fit into this context.

In view of the fact that the public sector is totally regulated, in compliance with the general principles of Law, mainly Administrative Law, Law 4.320/64 is the most important standard in force to define specific disclosure procedures for public entities. Other requirements are addressed in Complementary Law 101/00 (the renowned Fiscal Responsibility Law), as well as in other laws and normative acts, including: Decrees, Resolutions and Normative Instructions.

In addition, the regulator and supervisor of accounting practice – the Federal Accounting Council (CFC) – "legislates" on the use of Accountancy in the Public Sector. In that sense, the Council issues CFC Resolution CFC 1.111/07 especially to address the Fundamental Accounting Principles from a public-sector perspective and, more recently, published the Brazilian Accounting Standards Applied to the Public Sector (NBC T SP), which have been established in a set of ten resolutions (CFC-1.128/2008 to 1.137/2008).



In view of the above, the aim in this research is to discuss the importance of Accounting Applied to the Public Sector as a useful tool for the effectiveness of Public Governance and Governability, in accordance with a sustainability perspective applicable to the Management of the State.

Thus, the study proposal is justified as it adds up to the development of knowledge in the area (Public Management and Governance), in view of the valuation of the principles of disclosure, equity, accountability, social responsibility and the going-concern of the State, with a view to the development of the state and its people in the broad sense.

In that direction, according to the study objective and justification, the authors do not intend to exhaust the theme, which represents a fertile area for future research. Respecting the limitations to reach the proposed objective, in line with the method applied, classified as an exploratory and explanatory bibliographic and documentary research with theoretical-empirical observation (Vergara, 2004, pp. 46-50), this study is divided in eight parts, including this introduction and the bibliographic references.

In the first part, the importance of Accounting is discussed as a Public Management Information System, showing that Accounting as a science can also be understood as a fertile database that can be transformed into useful information for the decision process, departing from planning and control actions.

In the second part, the financial information system is situated in the public management context, defining the initial and final limits for its effective use. In the third part, the inter-relation is discussed between the State as a political-social entity, governance as a means, governability as political power and sustainability as the going-concern principle of the State, in search of the common good of its people.

The methodological procedures employed in the study are addressed in the fourth part, where the methods' possible limitations are acknowledged, given the understanding that they are not finite and finished, but always (depending on the "analyst") open to inquiries (like allocation criteria and valuation procedures) and constant improvement. Closely connected is the fifth part, which presents references observed in other studies with similar or approximate designs.

In part six, reference is made to suggestions for further research on the theme, highlighting it as fertile ground for further exploration, acknowledging this excerpt as a contribution to other studies that emerged from the concerns of researchers who look for answers and solution to the "endless" demands of modern society, broadening the frontiers of science to an invisibility to the eyes of the researchers who nurture it and provide feedback.

At the end, the final considerations, followed by the bibliographic references that sustained the study, confirm the healthy interrelation between the terms studies, applied to public management with a view to contributing to the sustainability of the State, covering its component triad: (i) its people and (ii) its territory, administered under the political auspices of the (iii) government.

## 2. Accounting as an Information System in Public Management

Objectively, Accounting is an information and evaluation system aimed at providing its users with economic, financial, physical and productivity analyses, related to the entity that is being accounted for. Therefore, the aims of Accounting should in some explicit or implicit way adhere to what users consider as important elements for their decision process (Padoveze, 2004, pp.51-52).

What Accounting Applied to the Public Sector is concerned, also called Public Accounting, Kohama (2010, p.25) highlights it as "the branch of Accounting that studies, directs, controls and demonstrates the organization and execution of the Public Treasury; public equity and its variations".

Thus, Public Accounting is one of the most complex branches of Accountancy and is aimed at capturing, registering, accumulating, summarizing and interpreting the phenomena that affect the budget, financial and equity situations of internal public entities, that is, the Union, States, Federal District and Cities and respective local authorities (Kohama, 2010, pp. 25-26), acting on the budget, financial, equity and compensation system.

Similarly and in addition to Kohama's view (2010), Mota (2009, p.222) highlights that, "to establish an appropriate Public Accounting concept, knowledge is needed about all relevant legal determinations, particularly Law 4.320/1964". Hence, according to the author:

[...] Public Accounting is that branch of Accountancy that applies the registration techniques of administrative acts and facts to Public Management, determining results and elaborating periodical reports, in view of Financial legal standards (...), general public finance principles and Accounting principles (Mota, 2009, p. 222).

Based on the interpretation of articles 29 and 89 of the same Law, it is observed that Accounting (in this case Public Accounting) is responsible for monitoring the execution of budgetary revenues, according to its exegesis, describing that "Accounting entities are responsible for organizing monthly income statements to support revenue estimates in the proposed budget..." and also that "Accounting discloses facts related to budget, financial, equity and industrial management".

In addition, in compliance with Law 4.320/64, Mota (2009, p.223) shows that:

Public Accounting registers revenue forecasts and determined expenses, as established in the public budget approved for that year, records the budgetary execution, compares estimated and actual revenues and expenses, reveals equity variations, demonstrates equity values and controls: credit operations; active debt; credits and obligations (...). According to article 85 in Law 4.320/64, Accounting should be organized to permit: the monitoring of the budgetary execution; knowledge about the equity composition; determination of industrial service costs; survey of general balance sheets; and the analysis and interpretation of economic and financial results.

Thus, "(...) Accounting will disclose, before the Public Treasury, the situation of all to the extent that, in any way, they collect revenues, incur expenses, administer or store goods belonging or trusted to it" (Art. 83 of Law 4.320/64).

Besides Law 4.320/64, the Brazilian Accounting Standards Applied to the Public Sector (NBC T SP) are highlighted, issued by the Federal Accounting Council (CFC) through Resolutions 1.128 to 1.137/2008, according to which "Accounting Applied to the Public Sector is that branch of Accountancy that applies, in the information production process, the Fundamental Accounting Principles and accounting standards directed at the equity control of public entities".

As regards the object of Accounting as a science, although it is expressively defined as (private) equity in the private sector; the same is true for Public Management, expanding it to the public equity level, which is exegetically defined in CFC Resolution 1.129/2008 as:

the set of rights and goods, whether tangible or intangible, taxed or not, purchased, constituted, produced, received, maintained or used by public entities, which hold or represent a present or future flow of benefits, inherent in the delivery of public services or the economic exploration by public entities, and its obligations (Mota, 2009, p. 223).

As one of the objectives of Accounting is to provide information on the changes that occur in (public and private) entities' equity, Accountancy should not be considered, as many do, as a mere information instrument. It should be kept in mind that all knowledge areas produce information.

Accounting not only produces information, but also permits explaining equity phenomena, constructing prosperity models, elaborating analyses, controlling, also serving to forecast and project future years, among so many other functions. In that context, accountability and disclosure are included, as the transparent, timely and comprehensible rendering of accounts to society.

From a systemic viewpoint, Accounting is integrated in the environment. This evidences the view of Accounting as an open system, that is, which depends not only on internal information, but also on the link with and filtering of information external to the organization.

Regarding the systemic view applied to Accounting, elevating it to the situation of a system, Kroetz, Mattos and Fontoura (1998, pp. 20-28) mention that:

the likelihood between the company and a living organism is known to everyone. In this organism, we can distinguish a brain, in charge of decisions; the limbs, in charge of action; the nervous system, in charge of transmitting the command of the brain to the limbs, and information from the senses to the brain.

Departing from this organization focus, which extends to public organizations and the political entities of the State, by analogy, Accounting Applied to the Public Sector (Public Accounting) is considered as a nervous system that serves as a link between the Administration (the decision power at the political and planning level: governability and the execution areas (governance) and vice-versa. In fact, there is a dependence on the parts (governance/governability), as all of them are intentionally connected to keep the organism functioning and in line with the going-concern principle.

Hence, it is not enough to have a good nervous system if the brain does not respond to stimuli and vice-versa. A functional public service depends on good management, with the advice of Public Accounting as a useful information source for management processes, highlighting the need for managers to use the information the accounting information system produces.

### 3. Environment of the Accounting Information System Applied to the Public Sector

In practice, Accounting Applied to the Public Sector can be understood as a subsystem within the macrosystem (Public Management – the State). This, in turn, is part of a broader system, which is the environmental system.

Users of the statements provided by the financial information system are considered as any private or public person interested in evaluating the situation and progress of a given entity, whether a company or public entity.

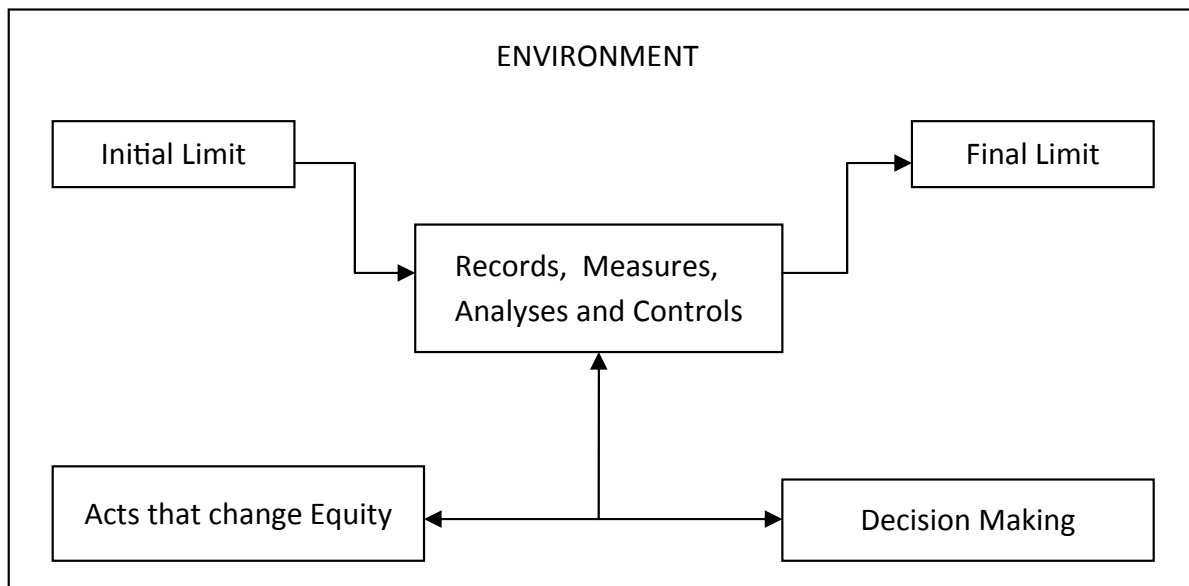
This is the perspective adopted to approach Accounting Applied to the Public Sector and the environment, that is, how it contributes to the global environment and how it captures the external inputs to process them and transform them into useful information (outputs) for the decision process.

Using a systemic focus, it is highlighted that the environment interferes directly in (public and private) equity variations, which are registered and studied by Accounting. As an example, one may say that part of governmental actions cause equity variations, and also that natural events can cause damage to the same equity, which Accounting should register and disclose.

Receiving and processing internal and external data, public accounting is responsible for complying with its social responsibility (accountability), informing society and demonstrating how administrative actions can interfere in the global system (disclosure).

Thus, as a system that is inserted in the broader system and considering that the public sector has a relationship level between the internal and external environments (Nakagawa, 1993; Oliveira, 2004; Padoveze, 2000), the accounting information system, by analogy, assumes the same relationship.

This means that the accounting information system extends to the borders of the public sector which, by analogy with the “company system” described by Riccio (1989, p.62), is initially limited by: the occurrence of any transaction that results in a public equity change, that is, any act practiced by the administration that can be valued in monetary terms, and can therefore be registered and controlled by Accounting and, as the final limit: whenever any decision has to be made, whether at operational, tactical or strategic level, resulting in any change in the equity covered. Figure 1 graphically represents the limits of the accounting information system applied to the public sector.



**Figure 1.** Limits of the accounting information system

Source: The authors (2010).

Although the importance of Accounting is understood as a useful information source for the planning, control and decision process, the activity of Accounting Applied to the Public Sector depends on the actions of the State, within a public governance philosophy linked with political governability action, aiming for sustainability. The following part permits understanding the importance of the theme.

#### 4. State, Governance, Governability and Sustainability

The State (Dallari, 2003, apud Cruz, Marques & Ferreira, 2009, pp. 10-23) “is a sovereign legal order that aims for the common good of a people in a given territory”, resulting in the conventional goal of the emergence of the State according to Dallari: the common good.

The authors highlight that:

(...) in general, people tend to believe that the State exists to promote the common good, to guarantee people’s access to basic rights defined in the constitution of each territory, so as to guarantee that private and public interests do not overlap (Cruz, Marques & Ferreira, 2009, p. 10-23).

Ratifying the people’s expectation (people in a given sovereign territory), especially in Brazil, the constitution of the republic, as the fundamental primary source of the Brazilian legal order, regulates that the fundamental goals of the Brazilian State are to guarantee the exercise of social and individual rights, freedom, wellbeing, development, equality and justice, raising them to the level of supreme social values.

Thus, according to Cruz, Marques and Ferreira (2009), in accordance with Botelho (2004, p.36), “the action of the State to respond to the demands of the group is conditioned to the availability of public resources”. That is where Accounting gains force as a useful instrument for the management process, at the level of public governance, governability and sustainability, with a view to acting, as demonstrated, on the Public Budget (elaboration, execution, control and evaluation, including the quality of public spending), which is the instrument used to define the quantity and destination of the State’s resources.

To promote the common good of its parts, the State necessarily practices executive actions and government policies, particularly governance and governability, currently studied in a contemporary public

management view as New Public Management (NPM), which presupposes administering the public sector in the light of the management models applied in private initiative, in line with strategic management and even entrepreneurship concepts (aiming for public entrepreneurship, which is still incipient in Brazil, in view of the still deep-rooted characteristics of Patrimonial and Bureaucratic Administration).

Regarding Public Governance (Kissler & Heidemann, 2006, pp. 479-499), considering the current debate about the modernization of the German public sector, the authors underline that “it has turned into a key concept everyone uses without knowing exactly what it is”, and also that:

(...) its original meaning contained an understanding associated with the political-developmental debate, in which the term was used to refer to development policies that were guided by certain premises on structural elements – such as management, responsibilities, transparency and legality of the public sector – considered necessary for the development of all societies (at least according to the models idealized by international organizations like the United Nations Organization [UN] or the Organization for European Cooperation and Development [OECD] (Kissler & Heidemann, 2006, pp. 479-499).

Nevertheless, when transferring the discussion to the Brazilian public sector, Fonseca and Bursztyn (2009, pp.17-46), in accordance with Kissler and Heidemann’s view (2006), consider public governance as “a key term in the implementation of environmental and developmental policies” and that:

(...) the strengthening of governance represents a possibility to establish a broader, more efficient and fair political process. The idea of governance promotes political pluralism (McFarland, 2007), efficiency and transparency in public choices and decisions, with a view to including a wide range of social actors and processes (Fonseca & Bursztyn, 2009, pp.17-46).

In the same sense, the authors reveal Grindle’s relevant view (2004, pp. 525-548) for whom, in a more substantial approach:

(...) governance involves: distribution of power between governmental institutions: the legitimacy and authority of these institutions; the rules and standards that determine who holds power and how decisions about the exercise of authority are made; accountability relations between representatives, citizens and agencies of the State; the government’s ability to make policies, manage administrative and tax issues of the State, and provide for goods and services; and the impact of institutions and policies on public wellbeing.

In this tone, it is inferred that the public governance process involves multiple categories of stakeholders. These refer to the people, the government, institutions and their interrelations, aiming for the interest of the group and the prevalence of the common good – the principle of the supremacy of public interest –, and for sustainable continuity, the reason why the State exists as a public entity.

Governability, in turn, is related to the action of the government, that is, the “governing” action as a verb. Hence, one may infer that governability befits more the political-state dimension and refers to the “systemic and institutional conditions under which power is exercised, including the characteristics of the political system, the form of government, the relations among the Power, the intermediation system of interests” (Santos, 1997, p. 342).

Thus, an interrelation is implied between Public Accounting, governance and governability, converging towards a focal point, which is the common good of the people. Therefore, the State, in its political (governability) and executive-operational actions – the means/the how (governance) – should act by envisaging the essence of the going-concern principle, whether in the accounting view or even in a substantial state view, related to the going concern of the State to the benefit of its people.

Compliance with the going-concern principle of the State is directly related with the public sustainability view. In that context, this study considers sustainability as going beyond the eco-environmental



perspective as, in the public sector, besides environmental variables, substantially, variables related to legality, public finance (financial health) and economic-social policies should also be considered.

Thus, to discuss public sustainability, trends and discourse free-riders should be (dis) considered, which according to Fonseca and Bursztyn (2009) reproduce the “good” discourse of governance and sustainability without the need for compliance in practice, which broadens the distance between discourse and reality in public management issues.

Hence, public sustainability can be understood as the public entity’s ability to subsist over time and across governments (governability) – the going-concern principle of the State –, promoting, despite free-riders, the continuity of the state, based on accountability and disclosure actions, aiming for the common good of the people.

## 5. Method

The research method used in this study, in line with the taxonomy described by Vergara (2004, pp. 46-50), was based: in terms of ends on exploratory and explanatory research; and in terms of means on bibliographic and documentary research and the theoretical-empirical approach. It is important to observe the author’s highlight that exploratory research (not to be mixed up with exploratory reading) is undertaken in an area whose knowledge production is dynamic in view of social changes (therefore, little knowledge is accumulated) and which, due to its inquisitive nature, does not accept hypotheses, which may however emerge during or at the end of the research. Then, further research is suggested.

Regarding explanatory research, in turn, Vergara (2004, p.47) shows that its main aim is to make something intelligible, justifying its reasons. It is therefore aimed at clarifying what factors somehow contribute to the occurrence of a given phenomenon. This explains the research developed here about the overlapping, interdependence and importance of Accounting Applied to the Public Sector with regard to Public Governance, Governability and sustainability of the State, aiming for the common good of its people.

In the same research classification, considering the means used, bibliographic research (Vergara, 2004, p. 48) represents systemized studies, developed based on published material that is accessible to the public in general, as an important analytic instrument for any other research type. Thus, in this study, this bibliographic research logically focused on the research theme (Accounting Applied to the Public Sector, Public Governance, Governability and Public Sustainability), in books, dissertations, theses and relevant scientific papers published in specialized print and/or electronic journals, available on the Internet.

In the same classification, considering the means, the research is also considered as documentary and involving theoretical-empirical observation (Vergara, 2004, p. 57). Documentary because it is based on surveys taken from official regulatory documents published: Laws, Decrees, Regulations, Resolutions, etc.; theoretical-empirical observation, in view of the authors’ daily academic experiences in a research group, which gave rise to the concern that originated in the development of this study.

Also, regarding bibliographic research (including documentary research), Vergara (2004), according to Koche (2003), despite the highlight that this is a fundamental instrument in any research type, also acknowledges the problem of its possible exhaustion by itself. Hence, obviously, this study neither makes any claim on, nor is it able to exhaustively treat such a relative and extensive theme as addressed here. That means that this is an excerpt from a fruitful area for further research.

Exploratory essays, undertaken through bibliographic, documentary and observation research, have been valued and widely accepted in the academic world, in view of their range, relevance and contributions to the theme studied, for which the strictly positivist and parametric application that used to rule academic studies is not necessarily justified.

Hence, to avoid talking about the theme as a mere theoretical hypothesis, distant from its application, in view of the possibilities envisaged in the bibliographic extent of the studies, this study particularly addressed, is based on and supports results verified in other similar or related studies, as observed next.



## 6. Highlights Observed in Other Similar or Related Studies

As observed based on the theoretical framework that sustains the discussion presented here, the theme addressed is highly relevant, as it discusses important topics that are applied to better public management nowadays, mainly the study of disclosure and accountability, sustained by Accounting as the science that joins useful data for the information process which, if well used, can support different decisions.

In this standard, considering this study's possible contributions to scholars and anyone interested in the theme, these contributions actually add up to the highlights presented in other studies, like what Silva (2007) demonstrates about the standardization of Governmental Accounting, highlighting that:

(...) it is essentially a continuous process for decision making, and these decisions gain complexity to the extent that accounting and control entities need to obtain information rapidly for different management levels.

Therefore, a good accounting information system needs to join the following fundamental characteristics:

- a) focus on information production for distinct executive levels in all Government areas;
- b) function as an independent unit of the entity it is integrated in;
- c) be a system adapted to the management needs of the organization.

Considering the expectation of a better public governance without addressing the binomial "cost information in the public sector" and "quality of public spending" as a possible weakness, Machado and Holanda (2010) present a valuable contribution by affirming that "cost information provides fundamental contents to support governmental decision about more efficient allocation, facilitating sustainability and economic development". Thus, for the authors, it is both necessary and healthy to increase the debate (further studies) about cost measurement and to underline its importance to improve the quality of public sector spending and qualify the discussion about perspectives and challenges in cost information management in public administration.

In the same contributive tone, highlighting Public Management and Accounting as support for its practice, the study by Oleiro, Mendes and Quintana (2008) contributes to the theme about the contribution of Governmental Accounting and Auditing towards better disclosure in Public Management, with a view to fighting corruption. That study shows that, particularly in Brazil, given its continental dimension, to fight corruption, the joint actions of accounting and internal and external control entities are fundamental.

In the same sense, in Castro and Garcia (2004), the authors look for the explanation that "in an objective view, the information Accounting produces offers greater credibility, not only because it is based on a supportive document, but mainly because of a professional who assumes responsibility and can be punished if it is incorrect".

Despite the importance and possible contributions of other studies, one more is mentioned here: Cruz, Ferreira, Silva and Macedo (2010) offer a dense and relevant empirical study about the disclosure of Public Management in large Brazilian cities, in the attempt to prove it by the existence or not of an association between the analyzed cities' socioeconomic conditions and public management information disclosure.

In line with its objectives, that study, considering Brazilian tax management disclosure, also discussing accountability, highlights that:

(...) it has become a legal requirement, which can be periodically monitored and supervised by competent entities, as well as by the population. However, transparent public management goes beyond the disclosure of fiscal transparency instrument and involves the concretization of the **accountability concept, when it allows citizens to monitor and effectively participate in the public management acts that affect all of society** (*our italics*). (Cruz *et al.*, 2010).

What regards the proof of whether an association exists or not between the analyzed cities' socioeconomic conditions and the disclosure of public management information, those authors' study para-

metrically considers that the cities' socioeconomic conditions are associated with the public management disclosure levels observed on the websites of large Brazilian cities, and that this association is generally positive, that is, better socioeconomic conditions tend to imply a greater disclosure level in the cities.

Among the studies addressed here and the present study, a focal point, a core is underlined, culminating the importance attributed to accounting, in this case accounting applied to the public sector, as a useful “database” for the production of information (“processed” data) to support decision making, control, disclosure and accountability of public actions on public management, in line with the sustainability of the State, which can be addressed or supported in other and further research on the theme, as observed next.

## 7. Suggestion for Further Research

Departing from what was observed in this study, as mentioned, it is acknowledged that this research does not fully cover the research theme (knowledge and science are not finite), in view of its extent and “fecundity” – as a theme – for a wide range of punctual concerns, which give rise to studies that enrich the academic world.

Therefore, in view of the fertile ground for further research, among other studies, the following possibilities are suggested: (i) public governance as a management philosophy applied to Public Management; (ii) disclosure and public sustainability, considering not only eco-environmental, but also financial, economic and social variables extracted from Accounting; (iii) governability and governance applied to municipal public management, (iv) Contributions of Accounting Applied to the Public Sector to New Public Management (NPM) and to Public Management Administration, etc.

Other positive parametric studies can also be developed, which can measure, among other statistical tests, (in)existing (cor)relations/regression between: users' perception about the information the cost system produces in the public sector and the quality of public spending; political party in power and the governance/governability level the population perceives, etc.

## 8. Final Considerations

Despite legal requirements (Law 4.320/64), Accounting as an applied social science can be considered a useful tool for the public “management” process, allowing managers to transform data (arranged in the form of a database) into information for decision making that feeds and gives feedback to the system.

Thus, Accounting acts systemically, linking governance and governability actions with a view to supporting decisions and accomplishments that contribute to the sustainability of the State, providing substantial feedback in a virtuous circle of continuity.

The sustainability of the State addressed in this study moves further than the commonly used term sustainability as, therefore, the researchers went beyond the (often reductionist) view of sustainability as a “philosophy” applied to the eco-environment, also considering legal, financial, political and economic-social variables.

The aim of the study was to encourage discussions about commonly used terms in the public sector (although some can still be considered contemporaneous, like governance and public sustainability for example), which agents (politicians, the public or public administrators) often do not know and use like Fonseca and Bursztyn's discursive free-riders (2009), reproducing the “good” discourse of governance and sustainability without the need to use them in practice.

In conclusion, the studies cited here in the exploratory, bibliographic, documentary and theoretical-empirical contexts are closely linked. The same is true for the terms focused on, in view of the operational link found (accounting – public governance – governability – public sustainability), as Accounting modifies and is modified by the environment.

Public governance (means/how) directs the actions Accounting registers, while governability, represented by the government's political actions (legitimated in power by the administered subjects who elected it), results in decisions and actions that, when put in practice (executed), turn into "raw material" for Accounting records and control. All of this is aimed at the sustainability of the State, closely complying with the going-concern principle in an accounting-financial perspective, and with the supremacy of public interest and the continuity of the State in a political-social view, aiming for the common good of its people.

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To submit articles to the *Revista de Educação e Pesquisa em Contabilidade* - REPEC, authors should follow the standards and criteria set by REPEC. From January 2013 the guidelines of the American Psychological Association (APA) with regard to citations and references should be followed. Submissions not complying with the standards will be rejected.

Articles submitted to the journal must be original, i.e., cannot have been published or submitted to another journal.

Articles may be written in Portuguese, English or Spanish, with at least 5,000 and maximum 10,000 words, including tables, figures, notes and references. A maximum of 5 (five) authors are allowed per article. All papers accepted will be translated and published in three languages: Portuguese, English and Spanish.

Articles containing tables or figures, they [the tables and figures] should be in a format that allows them to be edited. In case some of these Figures or Tables have been imported from other programs such as Excel, Power Point etc., the source file must also be sent as Supplementary File.

Do not use expressions like id., ibid., op. cit., loc. cit. and the like, or reference notes and footnotes. Notes at the end of the text are acceptable, but should be avoided.

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At the moment of submission, the articles should contain:

- The **title** in the language of origin of the article (Portuguese, English or Spanish) without identifying the author(s);
- An **abstract** written in the language of origin of the article (Portuguese, English or Spanish) with at least 150 and at most 250 words, single space between lines, in a single paragraph and without paragraph input. At the end of the abstract should be placed **three to five** keywords;
- The article itself, written in Portuguese, English or Spanish, with at least 5,000 and at most 10,000 words, including tables, figures, notes and references.
- The pages of the articles should be properly numbered in the upper right corner, typed with Word for Windows, under the following conditions:
  - A4 paper (210 x 297 mm);
  - Times New Roman, size 12;
  - Spacing: single;
  - Paragraph input: 1.25;



- Margins: 3cm top, 2cm bottom, 3cm left, 2cm right;
- Tables and figures in Times New Roman, size 10;
- Citations and references must comply with current standards of the APA (American Psychological Association).

### 3. Tables and Figures<sup>1</sup>

Tables and figures should be used in articles whenever their information make text comprehension more efficient, without repeating information already described in the text.

#### 3.1 Tables

The table should usually show numeric or textual information organized in an orderly exposition of columns and rows. Any other statement should be characterized as textual figure.

The table should be displayed with its information visible and sufficient for their understanding and should be formatted as follows:

Table editor	Word for Windows 97 or superior. In case authors have drawn their tables in Microsoft Excel or in a similar program, please remake the tables using the feature in Word.
Font	Times New Roman, size 10.
Line spacing	Simple.
Spacing before and after paragraphs	3 pt.
Table colors	Use only black and white (grayscale).
Title	The table title must be brief, clear and explanatory. It should be placed above the table, in the top left corner, and on the next line, just below the word Table (with a capital initial), followed by the number that designates it. The tables are presented with Arabic numerals in sequence and within the text as a whole. Eg: Table 1, Table 2, Table 3, and so on.
Citation of tables	When citing tables in the text, type only the number referring to the table, for example Table 1, Table 2, Table 3 and so on. (the word 'Table' should be presented with the first letter capitalized). Never write 'table below', 'table above' or 'table on page XX' because the page numbers of the article may change while formatting.
Table notes	The font used in the notes of the table should be Times New Roman, size 10, single spaced. The notes should be described in the footnote of the table, and they serve to indicate the Source of the information of the table, and other information important to understanding the table.

#### 3.2 Figures

The figure should show a flow chart, a chart, a photograph, a drawing or any other illustration or textual representation.

The figure should be displayed with its information visible and adequate for its understanding, and should be formatted as follows:

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Font	Times New Roman, size 10.
Figure colors	Use only black and white (grayscale).
Format	Figures should be submitted in an editable format.
Title	It explains the figure concisely, but discursively. The title should be placed under the figure and numbered with Arabic numerals in sequence, preceded by the word Figure (with initial capital). Eg: Figure 1, Figure 2, Figure 3, etc.. After the title, any other information necessary for clarification of the figure or source must be added as a note.
Captions	The caption is the explanation of the symbols used in the figure and must be placed within the limits of the figure.
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Citations in the main text	When citing a figure in the text type only the number referring to the figure, e.g. Figure 1, Figure 2, Figure 3 and so on. (the word 'Figure' should be presented with the first letter capitalized). Never write 'figure below' figure above ', or even 'figure on page XX' because the page numbers of the article can be changed during formatting.

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