English version

repec

Revista de Educação e Pesquisa em Contabilidade
Journal of Education and Research in Accounting

ABRACICON
ACADEMIA BRASILEIRA
DE CIÊNCIAS CONTÁBEIS

Publication date: December 21th, 2017

Editorial

Dear reader,

The Journal of Accounting Education and Research (REPeC) is a scientific journal issued by the Brazilian Academy of Accountancy (ABRACICON), electronically published every three months.

This year, REPeC is completing 10 years since the publication of its first issue, in January 2007, and has published a special edition to celebrate the data. Since then, 11 volumes have been launched, totaling the uninterrupted publication of 41 issues. During that period, REPeC was ranked by Qualis/Capes under level B3 in 2011, rising to B2 in 2013 and conquering B1 at the end of 2016. This demonstrates the commitment of the editorial teams that have served the journal over these years.

Thus, we are concluding the last issue of 2017 by acknowledging everyone who has been part of REPeC in the past years. This synergy has definitely been fundamental for the success of the journal.

In this final issue of 2017 (v. 11, n. 4), we are publishing six papers, summarized below.

The first study, entitled "**Graduate Student Differences in Self-Determined Learning: an Analysis Relating Age Group and Sex to Strategy Use**", by *Raimundo Nonato Lima Filho* and *Silvia Pereira de Castro Casa Nova*, was aimed at exploring and analyzing the Motivated Strategies for Learning Questionnaire (MSLQ), validated using Structural Equations Modeling. In addition, the authors verified whether age or gender affect self-determined learning among Master's and Doctoral students in Brazil. The authors formulated two hypotheses that consider the influence of the "age" and "gender" variables on the study participants' Self-Determination Levels (SDT). The findings showed that the multivariate data analysis results did not support these hypotheses. These results suggest that other variables – such as the course semester they are taking or what type of teaching institution they are studying at – need further analysis.

Talieh Shaikhzadeh Vahdat Ferreira and *Francisco José da Costa* are the authors of the study entitled "**Big Data: Epistemological Reflections and Impacts in Finance and Capital Market Studies**", a theoretical essay aimed at analyzing the conceptual and epistemological aspects of using intensive data and their reflections for the Finance area. The authors consider that the hypothetical-deductive method of empirical research, which is the most recurring, limits the knowledge construction in the so-called "age of Big Data", as this approach departs from an established theory and restricts the research to the test of the proposed hypotheses. The authors argue the appropriation of an abductive approach, as defended in Haig (2005), which converges with the ideas of the grounded theory, which seems to be the most appropriate approach in this new context, as it permits greater capacity to collect information on the value of the data.

"**Presence of Female Gender among Students in Graduate Accountancy Programs in Brazil**" was the third study published, authored by *Daniele Cristina Bernd*, *Marcielle Anzilago* and *Ilse Maria Beuren* to verify the presence of the female gender among graduate Accountancy students in Brazil between 2010 and 2016. Twenty-six academic Master's, 5 professional Master's and 13 doctoral programs in Accountancy were selected, identifying 3,013 new students. The results indicate that the number of female students in the graduate Accountancy programs in Brazil was lower than the number of male students during the research period, with clear regional differences.

The fourth study, entitled "**Characteristics and International Perspectives of Different Stakeholder Groups in IFRS for SMES**", by *Juçara Haveroth*, *Evandro de Nez*, Ângela *Bilk* and *Roberto Carlos Klann* identifies the characteristics and perspectives of the different interest groups concerning the IFRS of Small and Medium-sized Enterprises (SMEs), in addition to two specific objectives: identify and characterize who sent the comment letters to the IASB and characterize the comments to those letters in the pre-implementation phase of the standard. Through the analysis of 57 pre-implementation comment letters forwarded to the IASB, aiming for adjustments in the SMEs standard, it was verified that all continents participated in the comments, but with a concentration in Europe. In addition, Accounting Associations were the main stakeholders in the IFRS of SMEs. Countries with little representativeness participated in the process, while others of global importance did not provide any comment.

"**Capital Structure and Corporate Governance in Companies Listed on BM&FBovespa**" by *Bruno Goes Pinheiro*, *Alessandra Carvalho de Vasconcelos*, *Márcia Martins Mendes De Luca* and *Vicente Lima Crisóstomo* was the fifth study published. In the research, the relation between capital structure and corporate governance is analyzed in Brazil. In their results, the authors observed that the companies that did not participate in the differentiated corporate governance levels presented a higher mean indebtedness. In 2012, the companies received a higher volume of resources funded by BNDES, particularly Petrobras. The results appoint that corporate governance exerted negative influence on the subsidized indebtedness, and that profitability was negatively related with all four types of indebtedness analyzed, confirming the premises of the Pecking Order Theory in the Brazilian market.

The sixth study was written by *António Cariano*, *Fábio Henrique Ferreira de Albuquerque*, *Manuela Marcelino* and *Nuno Rodrigues*, entitled "**Accounting for lease transactions: analysis of possible lobbying in the issuing of IFRS 16**". In the study, the potential existence of lobbying was analyzed in the transition process from the *International Accounting Standard* (IAS) 17 to the *International Financial Reporting Standard* (IFRS) 16, issued by the *International Accounting Standards Board* (IASB) and related to leasing. In total, 641 comment letters were collected, which were submitted to public consultation in the context of the revised Exposure Draft. The results suggest that lobbying exists, based on findings of significant divergences between financial and non-financial entities regarding the main issues the standard refers to, related to the disclosure and the single accounting treatment model of leases.

Finally, the entire editorial team of REPeC hopes you will enjoy your reading!

Prof. Orleans Silva Martins, Ph.D.
Editor in-Chief

Graduate Student Differences in Self-Determined Learning: an Analysis Relating Age Group and Sex to Strategy Use

Abstract

Objetive: discussions about the Self-Determination Theory have been more frequent lately in the field of education. This theory highlights the importance of student motivation as a source of immediate satisfaction in academic tasks. The goal of this study is to explore and analyze the Motivated Strategies for Learning Questionnaire (MSLQ), validated by Structural Equations Modeling and, additionally, to verify whether age or sex affect the level of self-regulated learning of Master's and PhD Accounting students in Brazil.

Method: the operation model of the research outlined the formulation of two hypotheses arguing in favor of the influence of the variables age and sex on the Self-Determination (SDT) levels of the study participants.

Results: these hypotheses, though, were not supported by the results of the multivariate data analysis, which is an interesting diagnosis as the studied variables did not indicate statistically significant relevance. These results suggest that other variables - such as which point in the course they have reached or which kind of educational institution they are studying at – need to be analyzed.

Contributions: important limitations of this research can be seen as opportunities for future research: the sample was taken from a specific public; the survey may exhibit common method bias; and there was low participation of Professional Master's students. Future studies may adopt different methodological strategies and/or engage more diverse samples or follow the students for a longer time. As practical implications, the empirical findings can help teachers, students, researchers, educational institutions and graduate programs understand the aspects of self-determined learning that characterize Master's and PhD students in Accounting.

Keywords: Self-determined learning. Accounting education. motivation.

Raimundo Nonato Lima Filho
Ph.D. in Controllership and Accounting from University of São Paulo (USP) and Adjunct Professor at Faculdade de Ciências Aplicadas e Sociais de Petrolina (FACAPE). **Contact:** Campus Universitário, s/n. Vila Eduardo, Petrolina (PE). CEP.: 56.328-000.
E-mail: rnlfilho@gmail.com

Silvia Pereira de Castro Casa Nova
Free Lectureship Degree in Accounting Education from University of São Paulo (USP) and Associate Professor at University of São Paulo (USP). **Contact:** Av. Prof. Luciano Gualberto, 908, sala 214 – prédio FEA 3. Cidade Universitária. São Paulo (SP). CEP.: 05508-010.
E-mail: silvianova@usp.br

1. Introduction

The Self-Determination Theory (SDT) argues that every person has the innate tendency to grow and develop towards the full optimization of their potential. For that purpose, the fulfillment of three basic kinds of psychological necessity is needed: autonomy needs, competency needs and relationship needs (Deci & Ryan. 2000). SDT arose in the seventies out of studies about motivation in human behavior. It argues that every person has positive traits known as "inherent growth tendencies". That is, each person is intrinsically imbued with proactivity, talents and potentials towards intellectual growth. It is important to note, however, that even if these tendencies are inherent, they are not automatic, which makes it necessary that intrinsic and extrinsic factors promote their development. The theories that preceded SDT indicated that learning can be promoted via motivational stimuli.

The current scenario of professional performance stirs the academic community with the expectation that students (future professionals) become individuals who are adaptable to the transformations and demands of the job market and professional world, as well as critical and participative citizens [AAA] (2012). In the light of the present context involving the accounting profession, accounting education has taken up the challenge of keeping up with the changes in the professional and social context and of contemplating an education that stimulates the adoption of self-determined learning strategies. Thus, paying attention to these students' learning became the main concern in order to reach these goals. For Tuysuzoglu (2011), the purpose of education should not be the mere accrual of knowledge but, most importantly, to increase the awareness of learning abilities.

Educational research in the last decades has defended the promotion of motivational attitudes in students during the teaching-learning process. Particularly in accounting, the changes demanded by the convergence of Brazilian standards toward international regulations have sparked discussions in the educational context. On the other hand, social demands about the profession, in the sense of fulfilling the informational needs of a broader and more diffuse audience, have made the current professional context more complex than the one the "book-keepers" used to experience. Therefore, accounting professionals need to adopt a critical posture and take up the role of apprentices (Smith, 2001). Facing this demand, the accounting profession has required from the scientific community - and especially from educational research in the area - perspectives related to preparing the students for professional life, especially in the activities of learning, judging decision alternatives, retaining abilities and seeking knowledge (Martin & Dowson, 2009; Schleifer & Dull, 2009).

Facing this scenario, the recommendations of the Accounting Education Change Commission [AECC] (1990) and the American Institute of Certified Public Accountants [AICPA] (2000) point to the need for classroom education that leads accounting students to adopt permanent learning attributes and skills. The American Accounting Association [AAA] (2012), in turn, indicates seven recommendations on the teaching of the accounting profession: building a learned profession for the future; flexible pedagogies and faculty formation; critical teaching; curricula involving learning resources; attracting high-potential candidates into the profession; mechanisms for disseminating information about current and future markets; and strategies for converting thought into action. Note that these recommendations are directly related to the discussion in this research, which bases its proposal on continued education with the goal of integrating accounting research, education and practice.

Some educational researchers assert that there are expressive differences between self-determined students and those who need external regulation of their learning (Arias, Lozano, Cabanach, & Pérez, 1999; Richter & Schmid, 2010; Xu, Benson, Mudrey-Camino, & Steiner, 2010). Students who do not self-regulate lack well-outlined educational goals and thus have a greater cognitive dependency (Zimmerman, 2001). Self-determined students, in turn, are motivated and flexible, which provides the necessary profile to develop competencies (Ryan & Deci, 2000). Thus, self-determination in learning is an innate tendency for the pursuit of challenges and the learning of new skills. And accordingly, the lack of self-determination in the learning process results in difficulties to develop and conclude activities and tasks, as well as in dependency on external agents for the conclusion of these tasks.

From this context arises this study's perspective of exploring and analyzing the levels of self-determined learning of Brazilian Accounting students in Master's and PhD programs. This analysis will use the MSLQ, in addition to examining whether age or sex affects the level of self-determined learning. Therefore, the goal is to answer the following research problem: What is the relationship between age and/or sex and the level of self-determined learning? The results of this research are relevant to the teaching of accounting, given the importance of studying knowledge strategies and their transfer to new learning, especially in individuals who will be, in the short term - or already are - developing research and leading the formation of new professionals in the area.

Rausch (2012) discusses the role of postgraduate programs in faculty education from the perspective of trade trainers and of acting in scientific research. The author concludes by highlighting the important role of the teacher-researchers, as they are responsible for making the teacher a producer of knowledge and not merely a replicator. That is, faculty education has to be geared not only towards acting in the educational field, as defended by Fiorentini (2004), but in scientific research as well.

Araújo, Lima, Oliveira and Miranda (2015) mapped the main issues faced by accounting teachers in the beginning of their career and in the subsequent stages of academic career. One of the identified challenges was lack of student motivation. This prognosis justifies the scope of this study's proposal, given not only the impact of the adoption of the international accounting rules (IFRS) on the profession and the teaching/learning of accounting in Brazil, but also the recent growth in the supply of undergraduate and graduate accounting in the country.

This paper is organized as follows: next, we discuss our theoretical framework, positioning the state of the art in the topic. Then, our methodological procedures are presented, as well as the limitations of our study. In the next step, we explore our data, starting with statistical data analysis, using factor analysis and structural equation modeling, and ending with a regression analysis. Finally, we present our final considerations, outlining possibilities of future research.

The sample comprised 516 respondents, being 273 (52.9%) male and 243 (47.1%) female. The average age was 32.5 years old, with a standard deviation of 8.4, median of 31 and a mode of 25 years old. Most students (82.7%) were between 21 and 40 years old. The descriptive statistical analysis shows that females entered academic Master's and PhD programs earlier than males and were the majority in these types of courses up to the age of 30 years old, after which males were more numerous. For the professional Master's courses, male presence was balanced across all age ranges. In this type of program, participants had an average age of 40 years old, significantly superior to the average age of men in academic Master's programs (25 years old). Extrinsic stimulus strategies, anxiety during exams and learning control were the least used learning strategies. From our research outcomes, we highlight the following self-determined strategies as prevalent: interest in the content, extrinsic stimulus and self-confidence. For all the variables related to SDT, PhD students presented higher levels than Master's students. Regarding age, the results were not conclusive for any of the strategies. On the other hand, in relation to sex, women presented themselves as more self determined, showing higher means and lower standard deviations. Based on hypothesis testing results, age does not significantly influence SDT learning scores and the SDT learning strategies scores do not differ significantly between the sexes.

2. Theoretical Framework

Considering the need for a theoretical evolution that enables the handling of newer learning paradigms, the Self-Determination Theory was developed by Deci and Ryan (1985) on the basis of motivation, and highlights that people tend to be stimulated towards learning by needs for satisfaction and personal development. The authors anchored themselves in White's (1975) study to understand a person's need to feel capable, and on DeCharms's (1984) presuppositions that the locus of causality in relation to a certain learning result stems from internal and modifiable factors and therefore depends on the subject themselves.

The initial premise of SDT affirms that people seek activities related to their internal growth process, which leads them to accept challenges and seek new experiences as a form of maintaining the integrity of the self. From this angle, learning would be what makes sense for a maturing subject, as it would be linked to the motivation to take up tasks and activities (Brockelman, 2009). Therefore, SDT is characterized as one of the theories of human motivation.

Motivation is the term used to describe the efforts that people spend to accomplish certain activities (Schermerhorn, 2007). In Pfromm's (1987) understanding, motivation rouses the human organism and guides its actions to achieve pre-established goals. Murray (1986, p.20) explains that motivation represents "an internal factor that begins, guides and integrates a person's behavior." According to Robbins (2005, p.151), motivation may be defined as "the process responsible for the intensity, duration and persistence of a person's efforts towards the achievement of a certain goal."

Warken and Biavatti (2013) studied the motivations of accounting scholars from the perspective of SDT in order to investigate their motivational levels, the difference in motivation between entrants and graduates and the relationship between those and dropout rates. The authors applied an Academic Motivation Scale questionnaire to a sample of 83 students. In addition to identifying their levels of intrinsic and extrinsic motivation, the instrument also measured their demotivation levels, an arguably important aspect for actions that seek to prevent dropout. Weighted averages were calculated, permitting the verification of the consistency in the answers and the differences in motivational levels between the groups of scholars studied. The results showed intrinsically motivated students with a slight drop in extrinsic motivation in students of the sixth and eighth periods, which shows an oscillation in the motivational level from the beginning to the end of the course that, though small, might influence the dropout rates.

In an analogous study, Leal, Miranda, and Carmo (2013) also used the SDT perspective to evaluate the motivation of accounting students from a Brazilian public institution. Their sample comprised 259 students distributed by academic terms. The results were subject to Exploratory Factor Analysis, revealing seven factors that explain 61.1% of the data's total variability. The results were partially convergent with those found in previous studies and, in addition, evidenced a sizable diversity in learning motivation among the sample students. On the one hand, some students showed concerns with deepening their knowledge level or gaining a stable basis to achieve good performance in the exercise of their future profession; on the other, there were students concerned only with obtaining a degree, or who saw class attendance merely as a way to achieve minimum attendance levels. It is relevant to note that the study results evidence the importance of understanding and evaluating students' motivational levels, as that makes it possible to plan ways to encourage and explore motivation in academic environments.

In the same way as the two previous studies, Oliveira, Theóphilo, Batista, and Soares (2010) studied, through the SDT, the motivation levels of 2008 students of the accounting course at a Brazilian public university. They applied the Academic Motivation Scale. The results, presented through descriptive statistics, indicated high levels of motivation among the participants. Note, though, that senior students showed lower averages.

Oliveira *et al.*, (2010), Leal, Miranda, and Carmo (2013) and Warken and Biavatti (2013), highlight the relevance of discussing SDT in Accounting, positioning it as a relevant theme. The outcomes of their research led to the proposition of one of our methodological hypotheses, also helping to establish the boundaries of our study proposal.

Ferreira (2013) described and analyzed the ways in which intrinsic and extrinsic aspirations manifest in the employees of small and medium businesses. The author conducted a field research with 412 industry, commerce and services workers from three capital cities in the Brazilian Northeast (Fortaleza, São Luís and Teresina). The research instrument comprised the Aspiration Index, originally proposed by Ryan (1995); and sociodemographic questions, which were used in the characterization of respondents, providing a database for testing the hypotheses raised. The results indicated that workers in small and medium businesses are more oriented by intrinsic life goals. It was also noted that aspirations are influenced by sex, age group and education level. A negative correlation was found between extrinsic aspirations and monthly family income. Based on the collected data, a motivational profile of the workers was created, which did not show relevant differences in perception regarding aspirations. Generally, the workers ascribe importance to their aspiration, but they do not put as much faith in the idea that they will be able to achieve them.

Falcão and Rosa (2008) also applied the Academic Motivation Scale to university students from public and private universities in Rio de Janeiro, analyzing variables such as type of institution, school term and student sex. They concluded that private college students are more motivated but that their motivation level decreases as they near the end of the course. The opposite appears in the students of public institutions, who enter the course with low motivation but show an increase over time. Women displayed higher levels of intrinsic motivation, while men had higher extrinsic motivation levels. These results reveal that sex may impact students' levels of motivation and other factors that influence those levels.

Similarly, Castro, Miranda and Leal (2015) considered the adoption of learning strategies, learning motivation, and the relationship between these two variables in accounting students from a Brazilian public university. The study applied Santos, Boruchovitch, Primi, Bueno and Zenorini's (2004) Scale of Learning Strategies and Neves & Boruchovitch's (2007) Scale for the Evaluation of Learning Motivation and concluded, via a factor analysis, that there is a significant relationship between intrinsic motivation and the use of learning strategies or, in other words, that motivated students study of their own accord, which directly influences their academic performance.

Involving the variables of this study and in line with the last two studies cited, McDonough (2006) investigated how age relates to motivation, behavior and affective experiences within the context of SDT. By comparing 558 people based on Deci & Ryan's (1985) presuppositions, the study concluded that age is an excellent predictor of self-determined motivations, indicating that younger people are more motivated. Austin, Senecal, Guay and Nouwen (2011), on the other hand, analysed how sex affects learning. Based on Structural Equations Modeling (SEM), the results indicate that women have higher levels of intrinsic motivation and self-efficacy.

All the results of the previous studies point to the pertinence of our research and anchor the proposition of the hypotheses that we will present.

3. Methodological Procedures

This research is characterized as a survey, that is: the acquisition of data - usually via a survey - or information on the attributes, actions or judgments of a certain group of people that is chosen to represent a target population (Pinsonneault & Kraemer, 1993). As basic properties of the data collection method, we highlight the goal of producing quantitative definitions of a population and the use of a predefined instrument.

Kimura (2015) affirms that, usually, in studies that involve variables of a personal nature like leadership, satisfaction and motivation, answers collected by a data collection instrument may indicate common method bias (CMB). Some recent studies indicate, however, that despite being able to cause discrepancies in data, CMB introduces minimal biases that do not substantially alter the results (Schaller, Patil, & Malhotra, 2015).

In a survey, every respondent is participating of their own accord, which may indicate eventual biases in the answers and the probable non-representation of the target population (self-selection bias). To circumvent the possibility of data limiting, this study sought to frame a large sample and to employ quantitative methods that evaluate the certainty of the inference and analysis of data. For that end, we adopted structural equations modeling, which is a set of techniques and procedures used in conjunction to examine relationships between variables.

The main stages of a survey research result in the definition of the population and of the sample. In this study, the population joins Master's and PhD students associated with accounting programs recommended in 2015 by the Coordination for the Improvement of Higher Education Personnel (Capes), a Ministry of Education (MEC) foundation that plays a fundamental role in the expansion and consolidation of *stricto sensu* (Master's and PhD) postgraduate programs in every Brazilian state.

There are currently 25 Capes-approved and recognized programs operating in the country (one was discontinued and should be extinct after the conclusion of ongoing courses), 24 of those being academic Master's programs, three professional Master's programs and 13 PhD programs.

The population of this study consists of 1,140 students linked to the various postgraduate accounting programs offered by public and private institutions throughout the country, being 752 academic Master's programs, 128 professional Master's programs and 260 PhD programs.

The Motivated Strategies for Learning Questionnaire (MSLQ) was developed by Pintrich & De Groot (1990) through the adaptation of a number of psychometric instruments meant to evaluate students' self-regulation through cognitive and metacognitive strategies. Pintrich, Smith, Garcia, and McKeachie (1993) revised MSLQ with the goals not only of validating it but also testing its reliability. The instrument consists of 31 positive statements, with respondents rating each one through a scale ranging from 1 (completely disagree) to 5 (completely agree), expressing their level of agreement. Figure 1 presents the instrument.

#	Statements
1	In a class like this, I prefer course material that really challenges me so I can learn new things.
2	If I study in appropriate ways, then I will be able to learn the material in this course.
3	When I take a test, I think about how poorly I am doing compared with other students.
4	I think I will be able to use what I learn in this course in other courses.
5	I believe I will receive an excellent grade in this class.
6	I'm certain I can understand the most difficult material presented in the readings for this course.
7	Getting a good grade in this class is the most satisfying thing for me right now.
8	When I take a test, I think about items on other parts of the test I can't answer.
9	It is my own fault if I don't learn the material in this course.
10	It is important for me to learn the course material in this class.
11	The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.
12	I'm confident I can learn the basic concepts taught in this course.
13	If I can, I want to get better grades in this class than most of the other students.
14	When I take tests, I think of the consequences of failing.
15	I'm confident I can understand the most complex material presented by the instructor in this course.
16	In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.
17	I am very interested in the content area of this course.
18	If I try hard enough, then I will understand the course material.
19	I have an uneasy, upset feeling when I take an exam.
20	I'm confident I can do an excellent job on the assignments and tests in this course.
21	I expect to do well in this class.

#	Statements
22	The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.
23	I think the course material in this class is useful for me to learn.
24	When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.
25	If I don't understand the course material, it is because I didn't try hard enough.
26	I like the subject matter of this course.
27	Understanding the subject matter of this course is very important to me.
28	I feel my heart beating fast when I take an exam.
29	I'm certain I can master the skills being taught in this class.
30	I want to do well in this class because it is important to show my ability to my family, friends. employer, or others.
31	Considering the difficulty of this course, the teacher, and my skills. I think I will do well in this class.

Figure 1. *Motivated Strategies for Learning Questionnaire (MSLQ)*

Source: Adapted from Artino Jr. (2005).

Data analysis will involve: (1) descriptive statistical analysis of the sample; (2) exploratory factor analysis and confirmatory factor analysis in Structural Equations Modeling; and (3) for the hypothesis testing, a linear regression analysis, with age and sex being dependent variables and self-regulated learning level, measured by the MSLQ, being the explanatory variable.

It is good to note that Structural Equations Modeling (SEM), the analysis technique used in this study, is not restricted to studying simultaneous data dependency, though it also provides a transition from exploratory analysis to a confirmatory perspective. The variables involved may be grouped via factor analysis to form the latent constructs. According to Mattson (2012), SEM is a multivariate analysis that demands from the researcher keen accuracy in its conduction, spanning from the elaboration of the model to the empirical tests. This is because it is a method conducted in an orderly manner in which every stage is relevant to the study.

According to Kubo and Gouvea (2012), SEM presents methods for ascertaining validity. The convergent validity that analyzes the correlation of two measures of the same concept is demonstrated by the average variance extracted (AVE) – a value above 0.5 being recommended – and the discriminant validity that evaluates the distinction between two constructs, demonstrated as the square root of the AVE – it is desirable for this value to be greater than the internal correlations of the latent variables. The data analysis of this study adopts these validities in the measuring process in order to attest the absence of sampling errors.

4. Data Analysis

4.1 Characteristics of the Sample

The data was collected and processed with the help of the Statistical Package for Social Sciences (SPSS) application. The descriptive analysis of the data revealed that the programs at the institutions Unioeste, UEM and UFPB registered the three highest proportions between participants and enrolled students (80%, 79.4% and 75%, respectively), while the programs of UPM, UFC and UFPE showed the three lowest proportions (26.8%, 21.3% and 19.4%, respectively).

The sample comprised 516 respondents, being 273 (52.9%) male and 243 (47.1%) female. The average age was 32.5 years old, with a standard deviation of 8.4, median of 31 and a mode of 25 years old. The majority of students (82.7%) were between 21 and 40 years old.

Table 1

Representative sample of the population

Institution	Enrolled (A)	Respondents (B)	% B/A	% A/C (E)	% B/D (F)	F – E
UFC	94	20	21.3	8.2	3.9	-4.3
UnB	30	19	63.3	2.6	3.7	1.1
UnB/UFPB/UFRN	68	23	33.8	6.0	4.5	-1.5
Ufes	37	21	56.8	3.2	4.1	0.9
Fucape	62	30	48.4	5.4	5.8	0.4
UFMG	25	14	56.0	2.2	2.7	0.5
UFPB	20	15	75.0	1.8	2.9	1.1
UFPE	31	6	19.4	2.7	1.2	-1.5
UEM	34	27	79.4	3.0	5.2	2.2
UFRJ	44	27	61.4	3.9	5.2	1.3
UFU	34	22	64.7	3.0	4.3	1.3
UERJ	20	9	45.0	1.8	1.7	-0.1
UFRN	10	4	40.0	0.9	0.8	-0.1
Unisinos	78	27	34.6	6.8	5.2	-1.6
FURB	72	31	43.1	6.3	6.0	-0.3
UPM	41	11	26.8	3.6	2.1	-1.5
Unifecap	56	20	35.7	4.9	3.9	-1.0
PUC/SP	53	18	34.0	4.6	3.5	-1.1
UFBA	36	21	58.3	3.2	4.1	0.9
UFPR	47	25	53.2	4.1	4.8	0.7
Unioeste	15	12	80.0	1.3	2.3	1.0
UFSC	59	27	45.8	5.2	5.2	0.0
UFRPE	15	5	33.3	1.3	1.0	-0.3
USP	116	58	50.0	10.2	11.2	1.0
USP/RP	43	24	55.8	3.8	4.7	0.9
Total	**1.140 (C)**	**516 (D)**	**45.3**			
Academic Master	752	336	44.7	66.0	65.1	-0.9
Professional Master	128	47	36.7	11.2	9.1	-2.1
PhD	260	133	51.1	22.8	25.8	3.0
Men	589	273	46.3	51.7	52.9	1.2
Women	551	243	44.1	48.3	47.1	-1.2

Source: elaborated by the authors (2017).

Comparing the proportions enrolled/population and participants/sample, we verified that there were no significant differences among institutions except for UFC, which showed a difference of 4.3% between the percentages of enrolled students and research participants, and the general population for the other institutions, where the difference ranged from -1.6% to 2.2%. In relation to sex, we observed a balance between the proportions males/population (51.7%) and females/population (48.3%). Therefore, it is evident that the chosen sample is representative of the population, given that there was a balance between the proportions males/sample (52.9%) and females/sample (47.1%).

As for the representativeness of the sample by course type, we verified a significant share of students enrolled in academic Master's (44.7%) and PhD programs (51.1%), while the students of professional Master's courses showed a lower share (36.7%).

In Table 2, we observed that the 21-30 and 31-40 age groups totaled, together, 297 of the 336 respondents enrolled in academic Master's courses, with the former age group totaling 196 and the latter 101, corresponding to 57.6% of the sample.

Table 2
Sample distribution by age and type of course

Age group (in years)	21 a 30	31 a 40	41 a 50	51 a 60	60+
Course					
Academic Master	196	101	30	8	1
Professional Master	12	13	18	3	1
PhD	48	57	20	6	2

The aforementioned age ranges comprised, together, 105 out of the 133 respondents enrolled in PhD courses, being 48 in the former and 57 in the latter, totaling 20.3% of the sample. We also verified that the 31-40 and 41-50 age ranges concentrated, together, 31 of the 47 respondents enrolled in professional Master's courses, being 13 in the former and 18 in the latter, totaling only 6% of the sample.

This is, in a way, supported by the graph presented in Figure 2, which shows the distribution of the respondents by sex and age range.
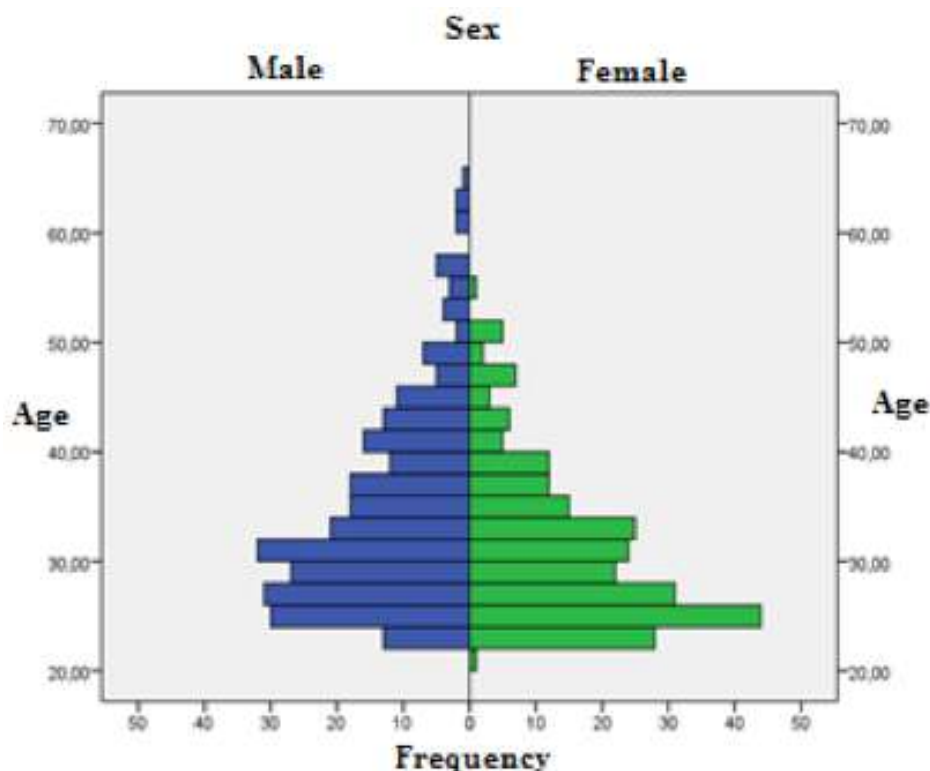
Figure 2. Distribution of research sample by sex and age range

The analysis of Figure 2 shows that females entered Master's and PhD programs earlier than males, and effectively that frequency decreases as age goes up. This did not happen among males, who were more numerous in the 25-40 year-old age range.

The stratified distribution of the respondents in terms of sex and age group by kind of course (academic Master's, professional Master's, PhD) resulted in the graphs presented in figures 3a and 3b.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 1, p. 361-384, Oct./Dec. 2017

369
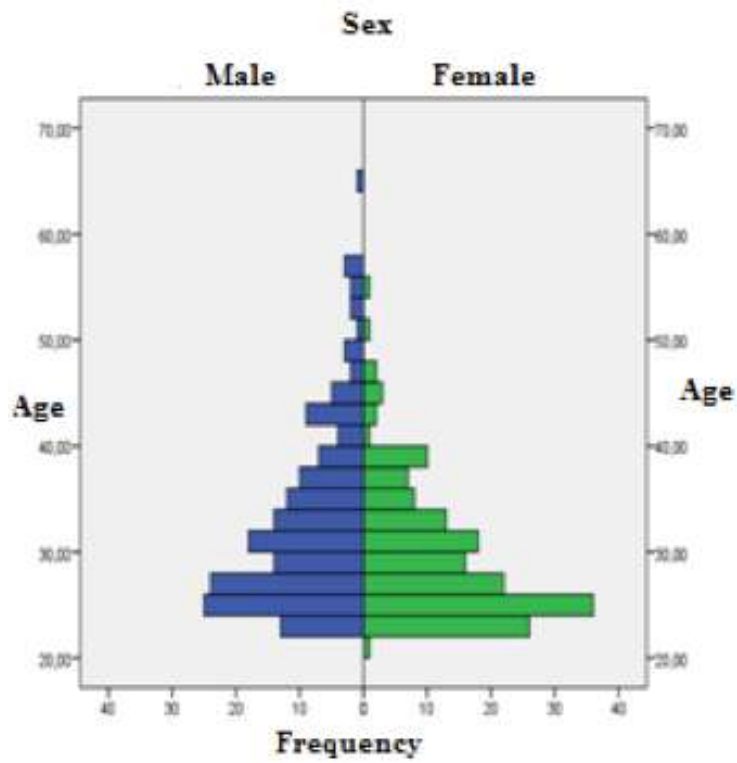
Figure 3a. Distribution of the sample by sex and age range in academic Master's courses
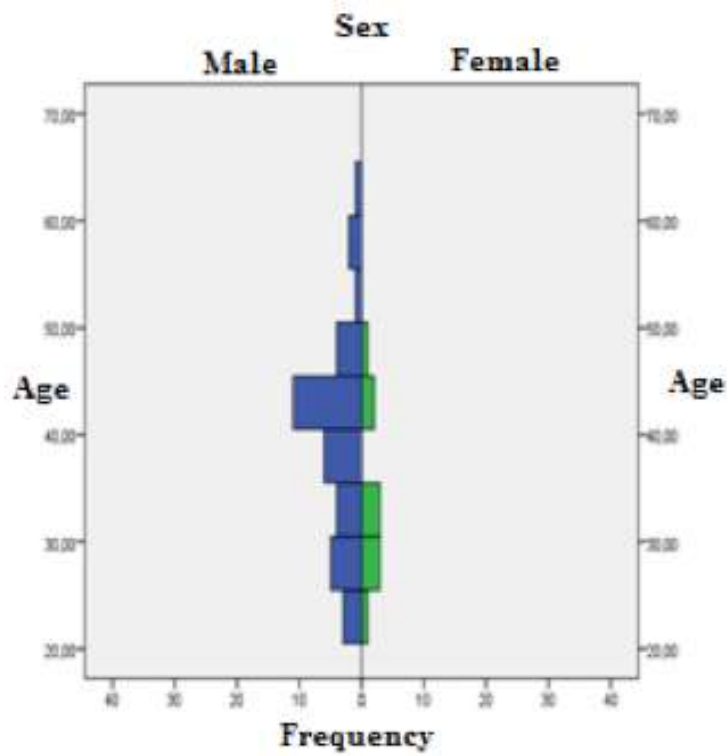
Figure 3b. Distribution of the sample by sex and age range in professional Master's courses
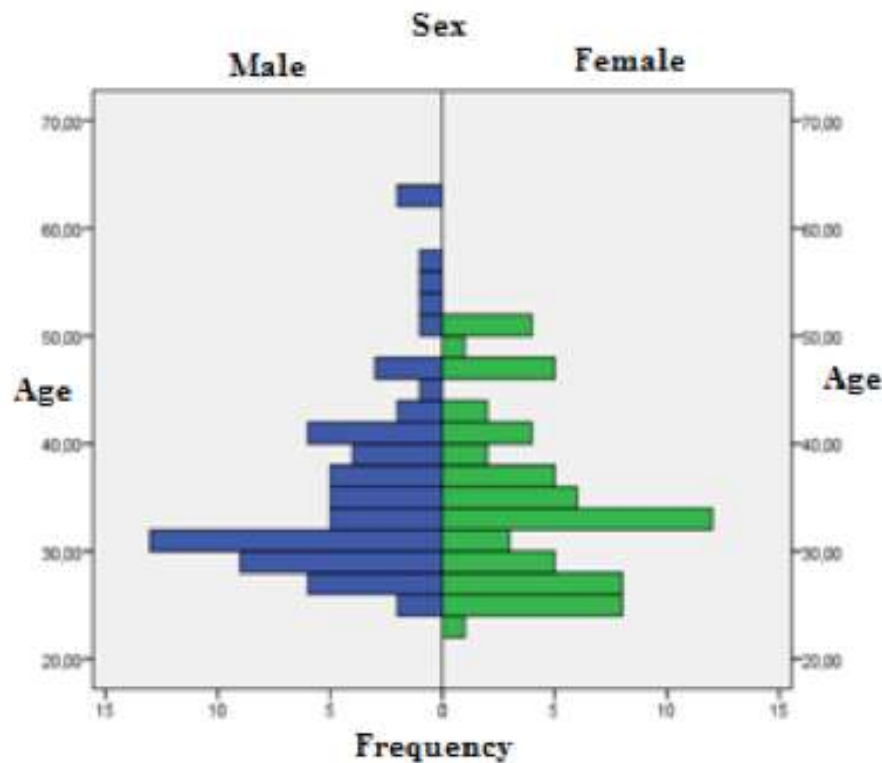
Figure 3c. Distribution of the sample by sex and age range in PhD courses

Source: elaborated by authors

Figures 3a and 3c showed that females entered academic Master's and PhD programs earlier than males and were the majority in these types of courses up to the 30-year-old mark, after which males were more numerous. For the professional Master's courses (Fig. 3b), male presence was balanced across all age ranges. In this type of program, participants had an average age of 40 years old, significantly superior to the average age of men in academic Master's programs (25 years old). This may indicate that professional Master's students await a certain "maturing" of their career before enrolling in that kind of course; academic Master's students, on the other hand, usually enroll just after their graduation.

4.1.1 Characterization of the participants' self-determined learning strategies

Table 3 shows the self-determined learning strategies used by the surveyed graduate students. The last two columns present the sum of the frequencies of responses lower and greater than 3 (the midpoint between 1 and 5).

Table 3

Self-determined strategies

Strategy		1 Never	2	3	4	5 Always	Less than 3	More than 3
E1 Intrinsic Stimulus	Fi	14	17	85	211	189	31	400
	Fi%	2.7	3.3	16.5	22.5	63.4	6.0	85.9
E2 Self confidence	Fi	3	10	46	196	261	13	457
	Fi%	0.6	1.9	8.9	38.0	50.6	2.5	88.6
E3 Extrinsic Stimulus	Fi	125	102	109	122	58	227	180
	Fi%	24.2	19.8	21.1	23.6	11.2	44.0	34.8
E4 Self confidence	Fi	4	11	50	223	228	15	451
	Fi%	0.8	2.1	9.7	43.2	44.2	2.9	87.4
E5 Self confidence	Fi	9	33	92	220	162	42	382
	Fi%	1.7	6.4	17.8	42.6	31.4	8.1	74.0
E6 Self confidence	Fi	11	44	130	220	111	55	331
	Fi%	2.1	8.5	25.2	42.6	21.5	10.6	64.1
E7 Extrinsic Stimulus	Fi	64	116	128	139	69	180	208
	Fi%	12.4	22.5	24.8	26.9	13.4	34.9	40.3
E8 Anxiety about Exams	Fi	79	120	128	113	76	199	189
	Fi%	15.3	23.3	24.8	21.9	14.7	38.6	36.6
E9 Learning control	Fi	44	110	207	102	53	154	155
	Fi%	8.5	21.3	40.1	19.8	10.3	29.8	30.1
E10 Interest in Content	Fi	3	7	31	159	316	10	475
	Fi%	0.6	1.4	6.0	30.8	61.2	2.0	92.0
E11 Extrinsic Stimulus	Fi	145	123	148	79	21	268	100
	Fi%	28.1	23.8	28.7	15.3	4.1	51.9	19.4
E12 Self confidence	Fi	2	12	27	152	323	14	475
	Fi%	0.4	2.3	5.2	29.5	62.6	2.7	92.1
E13 Extrinsic Stimulus	Fi	64	76	126	122	128	140	250
	Fi%	12.4	14.7	24.4	23.6	24.8	27.1	48.4
E14 Anxiety about Exams	Fi	38	87	98	144	149	125	293
	Fi%	7.4	16.9	19.0	27.9	28.9	24.3	56.8
E15 Self confidence	Fi	10	29	94	220	163	39	383
	Fi%	1.9	5.6	18.2	42.6	31.6	7.5	74.2
E16 Intrinsic Stimulus	Fi	1	18	86	190	221	19	411
	Fi%	0.2	3.5	16.7	36.8	42.8	3.7	79.6

Strategy		1 Never	2	3	4	5 Always	Less than 3	More than 3
E17 Interest in Content	Fi	6	23	72	210	205	29	415
	Fi%	1.2	4.5	14.0	40.7	39.7	5.7	80.4
E18 Self confidence	Fi	9	18	88	210	191	27	401
	Fi%	1.7	3.5	17.1	40.7	37.0	5.2	77.7
E19 Anxiety about Exams	Fi	101	143	107	113	52	244	165
	Fi%	19.6	27.7	20.7	21.9	10.1	47.3	32.0
E20 Self confidence	Fi	6	18	83	237	172	24	409
	Fi%	1.2	3.5	16.1	45.9	33.3	4.7	79.2
E21 Interest in Content	Fi	3	7	27	161	318	10	479
	Fi%	0.6	1.4	52	31.2	61.6	2.0	92.8
E22 Interest in Content	Fi	3	8	34	162	309	11	471
	Fi%	0.6	1.6	6.6	31.4	59.9	61.6	91.30
E23 Interest in Content	Fi	4	11	50	209	242	15	451
	Fi%	0.8	2.1	9.7	40.5	46.9	2.9	87.4
E24 Intrinsic Stimulus	Fi	10	29	131	232	114	39	346
	Fi%	1.9	5.6	25.4	45.0	22.1	7.5	67.1
E25 Learning Control	Fi	29	93	145	167	82	122	249
	Fi%	5.6	18.0	28.1	32.4	15.9	23.6	48.3
E26 Interest in Content	Fi	9	43	123	193	148	52	341
	Fi%	1.7	8.3	23.8	37.4	28.7	10.0	66.1
E27 Interest in Content	Fi	7	7	29	172	301	14	473
	Fi%	1.4	1.4	5.6	33.3	58.3	2.8	91.6
E28 Anxiety about Exams	Fi	79	98	124	133	82	177	215
	Fi%	15.3	19.0	24.0	25.8	15.9	34.3	41.7
E29 Self confidence	Fi	5	23	88	242	158	28	400
	Fi%	1.0	4.5	17.1	46.9	30.6	5.5	77.5
E30 Extrinsic Stimulus	Fi	81	92	121	131	91	173	222
	Fi%	15.7	17.8	23.4	25.4	17.6	33.5	43.0
E31 Interest in Content	Fi	8	5	30	217	256	13	473
	Fi%	1.6	1.0%	5.8	42.1	49.6	2.6	91.7

The median of the MSLQ scale corresponded to number three in the scale. This reveals that the learning strategies adopted by students should be above this point. Examining the strategies, extrinsic stimulus strategies (E3, E7, E11, E13 and E30), anxiety during exams (E8, E19 and E28) and learning control (E9 and E25) were the least used. The other responses' sum of frequencies was higher than 50% for responses higher than 3. We highlight the following self-determined strategies: interest in the content (E10 and E21, E22, E27, E31), extrinsic stimulus (E1, E16 and E24) and self confidence (E2, E4, E5, E6, E12, E15, E18, E20 and E29).

These findings were illustrated in Figure 4, which discloses absolute figures indicating the adoption of a specific strategy above the average point (above 3), with values that can vary from 0 (no respondent) to 516 (every respondent). More and less adopted strategies were highlighted, showing that the respondents anchor their motivation for learning in intrinsic stimulus, that is, interest for the content and the faith that they have the ability to learn it, thus moving the self-determination of their learning away from extrinsic stimuli and evaluative criteria.
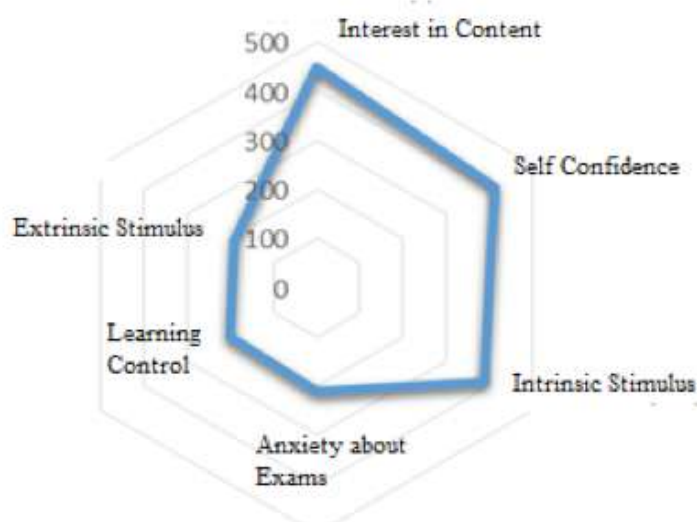
Figure 4. Radar - Self determined strategies

Table 4 presents SDT learning strategies with frequencies above 50%, stratified by course, age groups and sex, showing mean and standard deviation (between parentheses).

Table 4
Stratified Learning Strategies

	SDT				
	Self Assessment	External Help-Seeking	Interest in Content	Extrinsic Stimulus	Self Confidence
Academic Master's Students	4.32 (0.82)	4.25 (0.90)	4.29 (0.59)	3.95 (0.73)	4.08 (0.64)
Professional Master's Students	4.34 (0.91)	4.17 (0.96)	4.40 (0.56)	4.04 (0.66)	4.23 (0.53)
PhD Students	**4.51 (0.67)**	**4.27 (0.95)**	**4.41 (0.40)**	**4.15 (0.57)**	**4.24 (0.54)**
21-30 years old	4.35 (0.80)	4.22 (0.90)	4.27 (0.55)	3.94 (0.67)	4.05 (0.66)
31-40 years old	4.29 (0.88)	4.34 (0.83)	4.36 (0.48)	**4.08 (0.73)**	4.15 (0.54)
41-50 years old	**4.50 (0.63)**	4.15 (1.10)	**4.40 (0.61)**	4.04 (0.70)	**4.20 (0.55)**
51-60 years old	4.38 (1.12)	4.08 (1.04)	4.25 (0.88)	3.89 (0.97)	3.96 (0.83)
Over 60 years old	4.33 (0.57)	**4.67 (0.57)**	4.23 (0.40)	4.01 (0.70)	3.97 (0.54)
Male	4.33 (0.80)	4.12 (0.95)	4.32 (0.53)	4.02 (0.69)	4.05 (0.52)
Female	**4.43 (0.71)**	**4.49 (0.76)**	**4.35 (0.52)**	4.04 (0.70)	**4.18 (0.55)**

For all the variables related to SDT, PhD students presented higher levels than Master's students. Regarding age, the results were not conclusive for any of the strategies. On the other hand, in relation to sex, women presented themselves as more self determined, showing higher means and lower standard deviations. We emphasize that the dynamics adopted in Table 4 are one of the contributions of this study, because none of the referenced papers in the literature review segregated the most used individual strategies, nor did they examine these strategies' relationship with personal profile variables such as age and sex.

4.2 Multivariate data analysis

To identify and validate subjacent factors to self-determined learning strategies of accounting graduate students in Brazil, the research data were processed in two steps: (a) the identification of the factors using Exploratory Factor Analysis (EFA), performed in the *Statistical Package for Social Sciences* (SPSS); and (b) the dimensions identified in the previous step were submitted to validation procedures using SmartPLS software.

The EFA procedure, as shown in Table 5, with the assertions on the self-determined learning strategies, resulted in the extraction of six factors, with total explained variance of 55.73%. This procedure showed an adequacy index of KMO = 0.900 and a Bartlett's sphericity test of $\chi 2$ = 5869.12, sig = 0.000, thus also showing an optimum level of adequacy of the EFA.

The first factor, with an explained variance of 25.13%, included statements related to the student's self-confidence in relation to their learning; the second factor, statements relating to the student's interest in the content, explained 11.27% of the variance; the third factor, statements related to stimuli and external motivations in relation to student's achievement, explained 6.92 % of the variance. The fourth factor, with an explained variance of 4.86%, included statements related to the respondent's anxiety during exams; the fifth factor, with explained variance of 3.94%, included statements related to student's internal stimuli and motivations in the face of new learning challenges; and finally, the sixth factor included statements linked to the perception of students in relation to learning self-control, with an explained variance of 3.61%.

Table 5

Resulting factors of self-determined learning strategies

	Components					
	Self confidence	Interest in Content	Extrinsic Stimulus	Anxiety about Exams	Intrinsic Stimulus	Learning Control
SDT 20. I'm confident I can do an excellent job on the assignments and tests in this course.	.765					
SDT 15. I'm confident I can understand the most complex material presented by the instructor in this course.	.759					
SDT 5. I believe I will receive an excellent grade in this class.	.701					
SDT 29. I'm certain I can master the skills being taught in this class.	.690					
SDT 6. I'm certain I can understand the most difficult material presented in the readings for this course.	.658					
SDT 2. If I study in appropriate ways. then I will be able to learn the material in this course.	.602					

	Components					
	Self confidence	Interest in Content	Extrinsic Stimulus	Anxiety about Exams	Intrinsic Stimulus	Learning Control
SDT 12. I'm confident I can learn the basic concepts taught in this course.	.523					
SDT 18. If I try hard enough. then I will understand the course material.	.489					
SDT 4. I think I will be able to use what I learn in this course in other courses.	.458					
SDT 10. It is important for me to learn the course material in this class.		.763				
SDT 22. The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.		.760				
SDT 27. Understanding the subject matter of this course is very important to me.		.722				
SDT 23. I think the course material in this class is useful for me to learn.		.659				
SDT 17. I am very interested in the content area of this course.		.567				
SDT 21. I expect to do well in this class.		.500				
SDT 26. I like the subject matter of this course.		.471				
SDT 31. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.		.413				
SDT 7. Getting a good grade in this class is the most satisfying thing for me right now.			.776			
SDT 11. The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.			.772			
SDT 13. If I can. I want to get better grades in this class than most of the other students.			.697			
SDT 30. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.			.673			
SDT 3. When I take a test I think about how poorly I am doing compared with other students.			.476			
SDT 19. I have an uneasy, upset feeling when I take an exam.				.807		
SDT 28. I feel my heart beating fast when I take an exam.				.777		
SDT 14. When I take tests I think of the consequences of failing.				.595		
SDT 8. When I take a test I think about items on other parts of the test I can't answer.				.590		

	Components					
	Self confidence	Interest in Content	Extrinsic Stimulus	Anxiety about Exams	Intrinsic Stimulus	Learning Control
SDT 16. In a class like this. I prefer course material that arouses my curiosity, even if it is difficult to learn.					.730	
SDT1. In a class like this, I prefer course material that really challenges me so I can learn new things.					.716	
SDT 24. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.					.431	
SDT 9. It is my own fault if I don't learn the material in this course.						.818
SDT 25. If I don't understand the course material, it is because I didn't try hard enough.						.807

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

In the second step of the data treatment, we proceeded to the construct validation through Confirmatory Factorial Analysis (CFA), using a partial least squares path modeling to structural equations modeling (PLS-SEM), with a *Path Weighting Scheme* algorithm, mean substitution of missing data (replacing all missing data in a variable by the mean of that variable) and normalization (mean = 0; variance = 1), starting with the dimensions obtained of SRL, as shown in Figure 5.
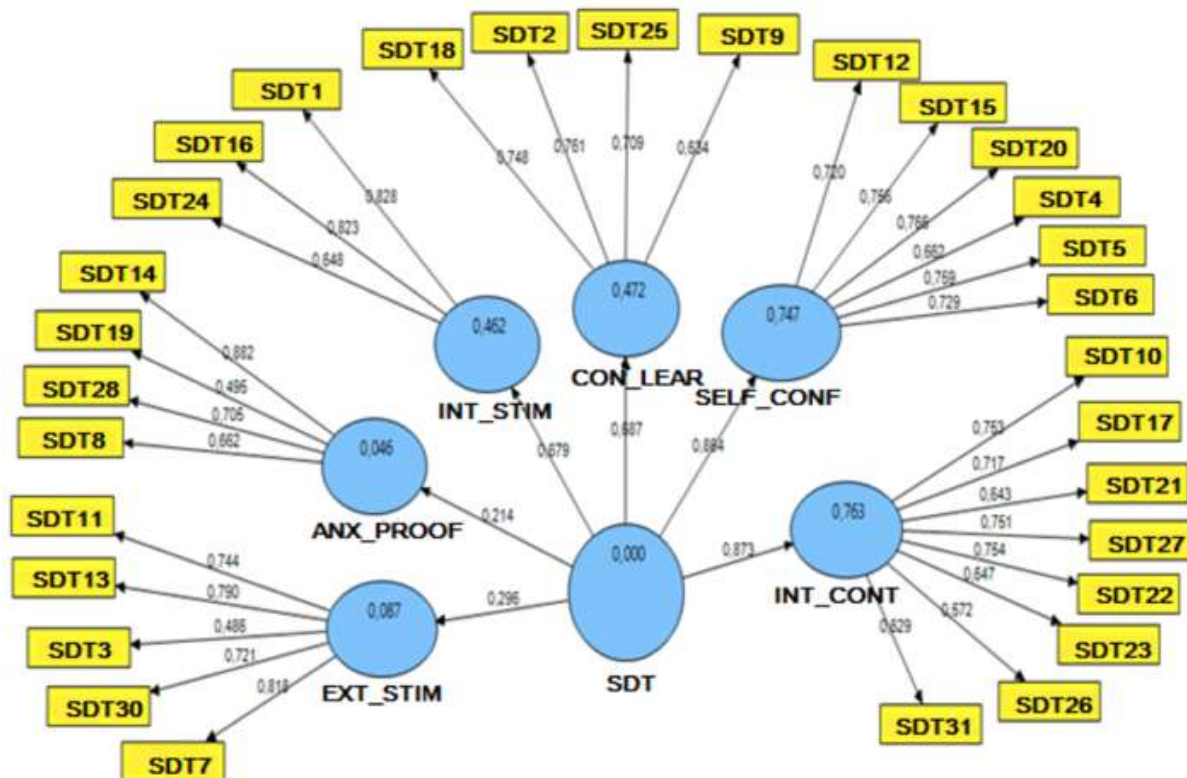
Figure 5. Processing the self-determined learning strategies

The SDT construct dimensions resulted from the PLS-SEM model, showing AVE and Compound Reliability (CR) scores above the levels recommended in the literature, as appointed by Chin (1998), Fornell and Larcker (1981) Hair, Black, Babin, Anderson and Tatham (2009), except the dimensions Anxiety (AVE = 0.4891; CR = 0.7863) and Content_Int (AVE = 0.4711; CR = 0.8759), which presented AVE marginally below the minimum level of 0.50, as shown in Table 6.

Table 6
Variance and compound reliability indicators

	AVE	Compound Reliability	R²	Cronbach's Alpha	Communality	Redundancy
Anx_Proof	0.489073	0.786338	0.045798	0.718388	0.489071	0.015356
Self-conf	0.536977	0.874087	0.747205	0.826788	0.536977	0.397921
Con_Lear	0.510649	0.805983	0.471945	0.689237	0.510648	0.231432
Ext_Stim	0.520274	0.840699	0.087446	0.772333	0.520274	0.041958
Int_Stim	0.594467	0.812947	0.461553	0.654401	0.594467	0.273410
Int_Cont	0.471089	0.875952	0.762936	0.837178	0.471089	0.357231

These results, however, when allied to the factor loads resulting from the PLS-SEM processing, reveal that the dimensions of the self-determined learning strategies construct meet convergent validity and were not excluded from the model.

Correlation loads between constructs and AVE roots of each construct, showed on the main diagonal of Table 7, were organized to evaluate discriminant validity of the dimensions of SDT learning.

Table 7
Correlation matrix of self-determined dimensions of learning

	Anx_Proof	Self-conf	Con_Lear	Ext_Stim	Int_Stim	Int_Cont
Anx_Proof	**0.699338**	–	–	–	–	–
Self-conf	0.018294	**0.732790**	–	–	–	–
Con_Lear	0.091974	0.549435	**0.714600**	–	–	–
Ext_Stim	0.408431	0.173617	0.154390	**0.721300**	–	–
Int_Stim	0.092246	0.485135	0.378031	0.045316	**0.771020**	–
Int_Cont	0.189846	0.624844	0.460469	0.148772	0.560036	**0.686360**

As shown in Table 7, the AVE root in each dimension exceeds the correlation between the dimensions of the construct, showing that the relationship between indicators and their respective dimensions are stronger than correlations between dimensions. Thus, the PLS-model possesses discriminant validity.

4.2.1 Analysis of the associations proposed in this study

After identifying and validating the dimension of the self-regulated and self-determined learning strategies adopted by graduate accounting students in Brazil, in this step, we aimed at testing the association proposed in this research.

In order to investigate the relationship between self-regulated learning strategies and self-determined learning strategies, we first analyzed the descriptive statistics of the scores obtained in the PLS-SME model for outlier detection, normality test and Pearson correlation.

The occurrence of six outliers was detected and, therefore, they were removed from the database,

leaving 510 valid cases. The normality test indicates that the scores of both learning strategies are distributed according to a normal distribution (KS = 1.260; sig = 0.084 and KS = 1.299; sig = 0.069), with a 5% level of significance.

Hypothesis H1 "Age as an influential factor in the level of SDT"

The proposed hypothesis (H1) sought to analyze if older graduate accounting students reported having higher SDT levels than younger students. For this purpose, the tested null hypothesis was the following:

$H1_0$: There is no influence of age in the SDT levels;

The influence of age in the SDT profile was tested with a simple linear regression model. As we can see in Table 8, the impact of differences in age was positive ($\beta a = 0.014$; sig = 0.751), but not significant at a 5% level of significance.

Table 8

Outcomes of the Simple Linear Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlation			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	0.000	0.158		0.002	0.998					
Age	0.001	0.005	0.014	0.318	0.751	0.014	0.014	0.014	1.000	1.000

Thus, age does not significantly influence SDT learning scores, as the p-value was higher than the significance level. As so, the null hypothesis ($H1_0$) was not rejected.

Although previous studies (Castel, Murayama, Fridman & McGillivray, 2013, McDonough, 2006) do corroborate this hypothesis, in our research, we found no evidence of its verification. Our evidences might be influenced by the high level of segregation in the courses (professional master and academic master and PhD) of participants in different age ranges. That is, as there is a concentration of participant from different age groups in each of the three courses analyzed, the age dispersion was compromised, affecting the mean differences, which became non-significant. Besides the possibility of concentration of the respondents in certain age groups, another possible explanation considers that the SDT strategies can only develop until a specific age, that is, after this phase, it is less probable to stimulate those strategies. Based on the literature referenced (Ferreira, 2013; McDonough, 2006), we found evidence that older students displayed better levels of SDT in relation to younger students. We believe that the type of students in our study caused an exception, not being possible, because of this, to find significant differences between age groups and levels of SDT.

Although those findings do not support the hypothesis, they offered excellent evidence, as they indicate that, independently of age, graduate students do not differ in terms of learning strategies.

Hypothesis H2 "Sex as a determinant factor in the SDT levels"

The H2 hypothesis examines if there are significant differences between men and women in relation to SDT levels. The following null hypothesis was formulated for statistical analysis:

$H2_0$: There is no relation between sex and the SDT levels.

The influence of sex in the SDT (cf. Falcão and Rosa, 2008) profile was evaluated through an independent means hypothesis test and the outcomes presented in Table 9 indicate that self-determined learning strategies present variance homogeneity between the sexes (F = 0.2542; sig = 0.615).

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 1, p. 361-384, Oct./Dec. 2017

379

Table 9
SDT Means by sex

		Levene's Test for Equality of Variance		t-test for Equality of Means				Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference		Lower	Upper
SDT Strategies	Equal variance assumed	.254	.615	0.622	508	.534	.04934	.07929	-.10643	.20511
	Equal variance not assumed			0.621	495.58	0.535	0.04934	0.07942	-0.10669	0.20537

We also verify that the SDT learning strategies scores do not differ significantly between the sexes (t = 0.622; sig = 0.534) at a significance level of 5%. Hence, we do not refute hypothesis $H2_0$. As the literature review indicates, there is no convergence in the studies investigating the influence of the sex factor. These results indicate that the effect of sex needs still to be investigated more profoundly to gather conclusive results, also because we consider sex as a binary variable (masculine and feminine) here (and it was the case in the literature review) (Falcão and Rosa, 2008).

5. Final Considerations

This study identified the self-determined learning strategies used by respondents from a sample and the impact of age and sex in the motivational profile of accounting Master's and PhD students in Brazil.

To attain this goal, a data collection instrument was adopted with the scope of measuring the variables and the key-construct of this research: self-determined learning. The instrument applied (MSLQ) presented convergent and discriminant legitimacy based on a Structural Equations Model, which permitted the identification and validation of self-determined learning strategies in accounting graduate students. To answer the research problem and achieve the research goal, it was found that self-determined learning levels are not associated with sex and age.

The implications of the study promote adequate and up-to-date theoretical references for the empirical research the study proposed to address, involving age and sex in the context of self-motivation for learning, thus providing a relevant theoretical and academic advance on the theme. As practical implications, the empirical findings can help teachers, students, researchers, educational institutions and graduate programs understand the aspects of self-determined learning that characterize Master's and PhD students in Accounting.

We emphasize some limitations of our study, which can be perceived as possibilities for future research. Firstly, the sample considered a specific audience: Master's and PhD students from one area of knowledge. Future research engaged in the discussion proposed in this study may develop a horizontal comparative study, with students from different knowledge areas, or a vertical study, involving accounting students from undergraduate up to PhD programs. Secondly, a survey can present common method bias with possible discrepancies in the data. Other methodological strategies, such as for example a quasi-experiment, could be designed aiming to reexamine the associations investigated in our study.

Another relevant limitation was the relatively low participation of professional Master's students in the sample (36.7%). Future studies can select other strategies to attract those types of respondents or just include academic Master's and PhD students in the research design.

References

Accounting Education Change Commission (1990). Objectives of education for accountants: position statement number one. *Issues in Accounting Education*, pp. 307-312.

American Accounting Association (2012). *The Pathways Commission Charting a National Strategy for the Next Generation of Accountants*.

American Institute of Certified Public Accountants (2000). *Core competency framework for entry into the accounting profession*.

Araújo, T. S., Lima, F. D. C., Oliveira, A. C. L. de & Miranda, G. J. (2015). Problemas Percebidos no Exercício da Docência em Contabilidade (Perceived problems in the practice of accounting teaching). *Revista de Contabilidade e Finanças*, *26* (67), pp. 93-105. doi: http://dx.doi.org/10.1590/rcf.v26i67.98101

Arias, A. V., Lozano, A. B., Cabanach, R. G., & Pérez, J. C. N. (1999). Las estrategias de aprendizaje. Revisión teórica y conceptual (Learning strategies. Theoretical and conceptual review). *Revista Latinoamericana de Psicología*, *31*(3), pp. 425-461.

Artino, A. R., Jr. (2005). *Review of the Motivated Strategies for Learning Questionnaire*. (ERIC Document Reproduction Service Nº. ED499083).

Austin, S., Senecal, C., Guay, F., & Nouwen, A. (2011). Effects of gender, age, and diabetes duration on dietary self-care in adolescents with type 1 diabetes: A Self-Determination Theory perspective. Journal of Health Psychology, 16, pp. 917–928. doi: http://dx.doi.org/10.1177/1359105310396392

Brockelman. K. F. (2009). The interrelationship of self-determination, mental illness, and grades among university students. *Journal of College Student Development, 50*(3). doi: http://dx.doi.org/10.1353/csd.0.0068

Castel, A., Murayama, K., Friedman, M., & McGillivray, S. (2013). Selecting valuable information to remember: age-related differences and similarities in self-regulated learning, *Psychology and Aging*, *28*(1). pp. 232-242. doi: http://dx.doi.org/10.1037/a0030678

Castro, J. X. de, Miranda, G. J., & Leal, E. A. (2015). Estratégias de Aprendizagem dos Estudantes Motivados (The learning strategies of motivated students). Anais do V Encontro de Ensino e Pesquisa em Administração e Contabilidade, Salvador, Brasil.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. G. A. Marcoulides (Ed.). *Modern methods for business research, 295*. pp. 295-336. Lawrence Erlbaum Associates. doi: http://dx.doi.org/1010.1016/j.aap.2008.12.010

DeCharms, R. (1984). *Personal causation*. In: R. E. Ames. & C. Ames (Eds). Research on motivation in education. New York: Academic Press. Inc.

Deci, E. L., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: human needs and the self determination of behavior. *Psychological Inquiry*, *11*, pp. 227-268.

Falcão, D. F., & Rosa, V. V. da (2008). Um estudo sobre a motivação dos universitários do curso de administração: uma contribuição para gestão acadêmica no âmbito público e privado (A study about motivation of undergraduate business students: a contribution to academic management in public and private sectors). *Anais do XXXII Encontro da Associação Nacional de Pós-graduação e Pesquisa em Administração,* Rio de Janeiro, RJ, Brasil, 32.

Ferreira, T. C. (2013). *Teoria da Autodeterminação: um estudo com trabalhadores de PMN à luz das aspirações extrínsecas e intrínsecas (Self Determination Theory: a study with PMN workers in the light of extrinsic and intrinsic aspirations)*. Dissertação de Mestrado, Universidade Federal do Ceará, Fortaleza, CE, Brasil.

Fiorentini, D. (2004). A didática e a prática de ensino mediada pela investigação sobre a prática (Didactics and teaching practices mediated through investigation about practice). In: J. Romanowski, P. Martins, S. Junqueira, S. (Org.). *Conhecimento local e conhecimento universal: pesquisa, didática e ação docente* (pp. 243-258). Curitiba: Champagnat.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), p. 39. doi: http://dx.doi.org/10.2307/3151312

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). Análise multivariada de dados (Multivariate Data Analysis). In: Joseph F. Hair, W. C. Black, B. J. Babin, R. E. Anderson, & R. L. Tatham (Eds.). *Analysis* (p. 688). Porto Alegre: Bookman.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). Análise multivariada de dados (Multivariate Data Analysis). In: Joseph F. Hair, W. C. Black, B. J. Babin, R. E. Anderson, & R. L. Tatham (Eds.). *Analysis,* p. 688. Porto Alegre: Bookman.

Kimura, H. (2015). Editorial. *Revista de Administração Contemporânea*, *19*(3), pp. 1-5. doi: http://dx.doi.org/10.1590/1982-7849rac2015150107

Kubo, S. H., & Gouvea, M. A. (2012). Análise de fatores associados ao significado do trabalho (An analysis of the factors associated with the meaning of work). *Revista de Administração da Universidade de São Paulo – RAUSP*, *47*(4), 540-554. doi: http://dx.doi.org/10.5700/rausp1057

Kubo, S. H., & Gouvea, M. A. (2012). Análise de fatores associados ao significado do trabalho (An analysis of the factors associated with the meaning of work). *Revista de Administração da Universidade de São Paulo – RAUSP*, *47*(4), pp. 540-554. doi: http://dx.doi.org/10.5700/rausp1057

Leal. E. A., Miranda. G. J., & Carmo, C. R. S. (2013). Teoria da Autodeterminação: uma análise da motivação dos estudantes do curso de Ciências Contábeis (Self-Determination Theory: An Analysis of Student Motivation in an Accounting Degree Program). *Revista de Contabilidade & Finanças*, *24*(62), pp. 162-173. doi: http://dx.doi.org/10.1590/S1519-70772013000200007

Leal. E. A., Miranda. G. J., & Carmo, C. R. S. (2013). Teoria da Autodeterminação: uma análise da motivação dos estudantes do curso de Ciências Contábeis (Self-Determination Theory: An Analysis of Student Motivation in an Accounting Degree Program). *Revista de Contabilidade & Finanças*, *24*(62), pp. 162-173. doi: http://dx.doi.org/10.1590/S1519-70772013000200007

Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: yields for theory, current issues, and educational practice. *Review of Educational Research*, *79*(1), pp. 327-365.

Mattsson, M. (2012). Investigating the factorial invariance of the 28-item DBQ across genders and age groups: an exploratory structural equation modeling study. *Accident Analysis and Prevention*, *48*, pp. 379-396. doi: http://dx.doi.org/10.1016/j.aap.2012.02.009

McDonough, K. (2006). Action research and the professional development of gratuate teaching assistants. *The Modern Language Journal,* 90(6), pp. 33-47. doi: http://dx.doi.org/10.1111/j.1540-4781.2006.00383.x

Murray, E. J. (1986). Motivação e emoção (Motivation and emotion). Rio de Janeiro: Guanabara-Koogan.

Neves, E.R.C. & Boruchovitch, E. (2007). Escala de Avaliação da motivação para aprender de alunos do ensino fundamental (EMA) (Learning motivation assessment scale for primary education students (EMA). *Psicologia Reflexão e Crítica*, *20*(3), pp. 406-413. doi: http://dx.doi.org/10.1590/S0102-79722007000300008

Oliveira, P. A., Theóphilo, C. R., Batista, I. V. C., & Soares, S. M. (2010). Motivação sob a perspectiva da Teoria da Autodeterminação: um estudo da motivação de alunos do curso de Ciências Contábeis da Universidade Estadual de Montes Claros (Motivation from the perspective of Self Determination Theory: a study on the motivation of the State University of Montes Claros accounting students). *Anais do Congresso USP de Controladoria e Contabilidade*, São Paulo, SP, Brasil.

Pfromm. S. N. (1987). *Psicologia da aprendizagem e do ensino* (Psychology of learning and teaching). São Paulo: EPU.

Pinsonneault. A. & Kraemer. K. L. (1993). Survey research in management information systems: an assessment. *Journal of Management Information System*, *10*(2), pp. 75-103. doi: http://dx.doi.org/10.1080/07421222.1993.11518001

Pintrich, R. R., & DeGroot, E. V. (1990). Motivational and Self-Regulated Learning components of classroom academic performance. *Journal of Educational Psychology*, *82*, pp. 33-40. doi: http://dx.doi.org/10.1037//0022-0663.82.1.33

Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1993). Reliability and predictive validity of the Motivational Strategies for Learning Questionnaire (MSLQ). *Educational and Psychological Measurements, 53,* pp. 801-813. doi: http://dx.doi.org/10.1177/0013164493053003024

Rausch, R. B. (2012). Professor-pesquisador: concepções e práticas de mestres que atuam na educação básica (Teacher-researcher: conceptions and practices of teachers in basic education). *Revista Diálogo Educacional*, *12*(37), pp. 701-717.

Richter, T. & Schmid, S. (2010). Epistemological beliefs and epistemic strategies in Self-Regulated Learning. *Metacognition Learning*, *5*, pp. 47-65. doi: http://dx.doi.org/10.1007/s11409-009-9038-4

Robbins, S. P. (2005). *Comportamento organizacional: administração de empresas* (Organizational behavior: business administration), 11. ed. São Paulo: Pearson Prentice Hall.

Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, *63*, pp. 397-427. doi: http://dx.doi.org/10.1111/j.1467-6494.1995.tb00501.x

Ryan, R. M. & Deci, E. (2000). Self-Determination Theory and the facilitation of intrinsic motivation, social development, and wellbeing. *American Psychologist*, *55*(1), pp. 68-78. doi: http://dx.doi.org/10.1037110003-066X.55.1.68

Santos, A. A. A., Boruchovitch, E., Primi, R, Bueno, J. M. H. & Zenorini, R. P. C. (2004). Escala de Avaliação de Estratégias de aprendizagem para universitários (EAP-U): Aplicação do modelo de Rasch de Créditos Parciais (Assessment Scale of learning Strategies for college students (EAP-U: Application of the Rasch Model of Partial Credit). *Psicologia: Teoria, Investigação e Prática*, 9(2), pp. 227-242.

Schaller, T. K. Patil, A. & Malhotra, N. K. (2015). Alternative techniques for assessing common method variance: an analysis of the theory of planned behavior research. *Organizational Research Methods*, *18*(2), pp. 177-206. doi: http://dx.doi.org/10.1177/1094428114554398

Schermerhorn, J. R. Jr. (2007). *Exploring management in modules*. United States of America: Courie-Kendallville. Inc.

Schleifer, L. F., & Dull, R. B. (2009). Metacognition and performance in the accounting classroom. *Issues in Accounting Education*, 3, pp. 44-68. doi: http://dx.doi.org/10.2308/iace.2009.24.3.339

Smith, P. A. (2001). Understanding Self-Regulated Learning and its implications for accounting educators and researches. *Issues in Accounting Education*, *16*, pp. 663-700.

Tuysuzoglu, B. B. (2011). *An investigation of the role of metacognitive behavior in self-regulated learning when learning a complex science topic with a hypermedia learning environment*. Dissertação de Mestrado. Universidade do Norte da Carolina, Carolina do Norte.

Warken, I. L. M., & Biavatti, V. T. (2013). A motivação do acadêmico sob a ótica da Teoria da Autodeterminação: um estudo no curso de Ciências Contábeis da Horus Faculdades de Pinhalzinho/SC. *Anales del Colóquio Internacional de Gestión Universitaria en América del Sur*, Buenos Aires, Argentina, 12.

White, W. R. (1975). Motivation reconsidered: the concept of competence. In: P. H. Mussem, J. J. Conger, & J. Kagan (Orgs.). *Basic and contemporary issues in developmental psychology* (pp. 266-230). New York: Harper & Row.

Xu, M., Benson, S. N. K., Mudrey-Camino, R., & Steiner. R. P. (2010). The relationship between parental involvement. Self-Regulated Learning and reading achievement of fifth graders: a path analysis using the ECLS-K database. *Social Psychology Education*, *13*, pp. 237-269. doi: http://dx.doi.org/10.1007/s11218-009-9104-4

Zimmerman, B. J. (2001). *Theories of Self-Regulated Learning and academic achievement: an overview and analysis*. NJ: Lawrence Erlbaum Associates.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 1, p. 361-384, Oct./Dec. 2017

384

Big Data: Epistemological Reflections and Impacts in Finance and Capital Market Studies

Abstract

Objective and method: Access to data series plays a central role in the area of Finance. The increasing availability of large volumes of data, in different formats and at high frequency, combined with the technological advances in data storage and processing tools, have created a new scenario in academic research in general, and in Finance in particular, generating new opportunities and challenges. Among these challenges, methodological issues emerge, which are widely discussed among researchers from different areas, but also epistemological issues that deserve greater space for discussion. Thus, the objective of this theoretical essay is to analyze the conceptual and epistemological aspects of the use of intensive data and its reflec-tions for the area of Finance.

Results and contributions: We consider that the hypothetical-deductive method of empirical research, which is the most recurrent, limits the construction of knowledge in the so-called 'Big data era', as this approach starts from an established theory and restricts research to test-ing the hypothesis(es) proposed. We advocate the use of an abductive approach, as argued in Haig (2005), which converges with the ideas of grounded theory and which seems to be the most appropriate approach to this new context, as it permits greater capacity to collect value information for the data.

Key Words: Big Data, Abductive Method, Epistemology, Finance.

**Talieh Shaikhzadeh
Vahdat Ferreira**
M.Sc. in Business Administration from
Universidade Federal da Paraíba (UFPB) and
Ph.D. candidate in Business Administration
from Universidade Federal da Paraíba
(UFPB). Contact: UFPB, Cidade Universitária,
s/n, CCSA/PPGA, Castelo Branco, João
Pessoa (PB). CEP.: 58051-900.
E-mail: taliehv@gmail.com

Francisco José da Costa
Ph.D. in Business Administration from
Fundação Getúlio Vargas (FGV/SP) and
Professor, Department of Business
Administration, Universidade Federal
da Paraíba (UFPB). Contact: Cidade
Universitária, s/n, CCSA/PPGA, Castelo
Branco, João Pessoa (PB). CEP.: 58051-900.
E-mail: franze.mq@gmail.com

1. Initial Considerations

The advances of the Internet and the expansion of the use of mobile communication technologies have resulted in a substantial increase in the quantity and storage of data. Taking into account the year 2016, according to International Business Machines (IBM), 90% of all data produced in the world had been created in the previous two years. Concurrently, the same company projected that this volume would double every two additional years (IBM, 2016). It was this growing volume of data, combined with the technological advances in processing and storage tools, that have laid the foundations for what is being called 'Big Data' among academics, businessmen and governments (Ekbia et al., 2015).

The advent of Big Data established a new frontier for the development of research (Chen & Zhang, 2014), entailing opportunities and challenges. Opportunities arise as data accessibility increases in a massive way, which drives the continuous improvement of technologies and uses in the most different areas of human life (Demchenko, Grosso, De Laat & Membrey, 2013) . Among these areas that benefit from Big Data, we can mention Finance, an area in which data plays a central role in its academic and professional development (Seth & Chaudhary, 2015).

On the other hand, the 'Big Data era', due to its particularities (which we shall discuss later), brings new dilemmas, primarily associated with technological and statistical questions, and secondly with the epistemological dimension of research and knowledge production (Ekbia et al., 2015). This theoretical essay aims to analyze this last (epistemological) aspect and its reflexes in the area of Finance, discussing possible developments in the capital market.

For this, the paper is divided into five sections, including this introduction. In the second section, we seek to characterize Big Data and point out changes in knowledge construction and in the choice of research method due to epistemological issues that emerge. In the third section, some of the methodological challenges and alternatives to the knowledge production process are explored. In the fourth section, we focus on some issues the use of the Big Data approach brings to Finance. Finally, some considerations are exposed and other challenges are identified that we consider more relevant to the new academic and professional setting.

2. Big Data: characteristics and challenges of knowledge construction

In this item, we present and briefly discuss the conceptual elements and implications of Big Data. Initially, we present its concepts, following the steps defined in the specialized literature, which has not exactly defined 'Big Data', but appointed characteristics associated with the data that are collected and stored. In the second part, and in view of this first construction, we present the discussions about the consequences of a Big Data approach for the academic and professional knowledge construction process.

2.1. Characteristics of Big Data

With the opportunities for research and decision-making that emerge from the enormous volumes of data, the possibilities for using this data have been widely debated both inside and beyond the academy, which contributes to constant advances in its understanding and use (Ekbia et al. al., 2015). No consensus has been established yet on the very definition of Big Data itself though, which has been evolving and maturing over time. Initially, the term was characterized by its association with so-called "3 V's": volume, velocity and variety. The main contributors were technology companies, such as IBM and Oracle. In more recent studies, this form of definition was refined, adding two attributes - value and veracity - to characterize Big Data, constituting the "5 V's" (Demchen-ko et al., 2013; Lau, Zhao, Chen, & Guo, 2016).

The first crucial characteristic of Big Data is thus related to the **volume** of data. Initially, this discussion may be limited to quantifying terabytes, pentabytes, or zettabytes (Kitchin, 2014), but the data production capacity is expected to continue to expand, which may limit the usefulness of this initial definition. Lau et al. (2016) propose a broader discussion on this issue when stating that the volume of Big Data are expected to reach such an extent that current technologies find it difficult to store, recollect, analyze and use.

Speed is related not only to the data production capacity, but also to the processing and analysis capacity of the computer systems involved. In fact, mass data production, such as a national census, for example, is not new. The costs of its processing and the time required for data collection and analytical elaboration have been high though (Miller, 2010). Thus, Big Data is characterized by the continuous production of data, sometimes associated to multiple events, at the detailed level, with great flexibility to analyze its scope, through tools with increasing agility of real-time processing (Kitchin, 2014).

Considering the versatility that Big Data bases may present, the third feature is associated with the **variety** of formats and data sources. With the development of Web 2.0 and Web 3.0, data can be captured not only in its conventional format, such as tables or spreadsheets, but also in semistructured or unstructured formats, or in a mixed way, such as images, sounds, among other possibilities (Demchenko et al., 2013). This heterogeneity of formats demands a new generation of techniques and methods for processing and storage that are constantly being improved.

Value is a key feature when dealing with data in general, since all processing and investment effort is only justifiable when these data add value to the activity or analysis in question (Demchenko et al., 2013). Thus, insofar as the processing tools can transform the collected data in order to produce knowledge, the benefits obtained with this type of technology can reach higher levels of value (Lau et al., 2016).

And, finally, **veracity** is related to the quality and validity of the data. This implies both the consistency that the data must possess, being reliable in terms of its measurement and validity, and the quality of the data itself in terms of integrity, which depends on an entire chain, from its collection to the processing and storage methods (Demchenko et al., 2013). In this context, according to Lau et al. (2016), new technological challenges emerge in the quest to maintain the quality and consistency of the data in enormous bases and that are being updated in real time. In close connection with this challenge of quality and data consistency, the issue of knowledge production based on Big Data emerges, a subject we will discuss in the next section.

2.2. Knowledge construction based on Big Data

The growing application of Big Data in research has altered the conventional forms of knowledge construction (Demchenko et al., 2013, Chen & Zhang, 2014 and Kitchin, 2014). For this essay, we take the view of Chen and Zhang (2014) for reference, who assert that, historically, the construction of scientific knowledge was based on three great paradigms: Empirical Science, Theoretical Science and Computer Science. Hundreds of years ago, science was built on empirical experiments that aimed to test possible intuitions and prove their veracity, constituting the first paradigm. As this evidence grew, theories could be developed, reaching the second paradigm, with the theoretical construction of knowledge.

The complexity of the phenomena under analysis was widening though and researchers needed to use new scientific simulation tools to validate their outcomes. Thus, the concept of the 'Third Paradigm' emerged, which are the computer sciences, which permitted large-scale scientific simulations, creating 'sufficiently robust' results (Hey, Tansley & Tolle, 2009). The case is that the nature of 'Big Data' for the elaboration of simulations and tests demands techniques and technologies completely distinct from the other three paradigms. This gave rise to the idea of the 'Fourth Paradigm', which would be the science of intensive data (Miller, 2010; Hey, Tansley & Tolle, 2009). In this context, more and more researchers and market players need to combine advances in technology with the efficient processing of large volumes of data and the use of more conventional scientific methods to benefit from the collection of desirable data (Demchenko et al., 2013) because, in this scenario, there is plenty of data available. But for these to add value, they need to be processed, transformed into bases to permit the identification of patterns, and finally be interpreted in order to broaden the knowledge about what one is trying to understand (Seth & Chaudhary, 2015). In another perspective, Haig (2005) points out an organization of the evolution of scientific research in two prevailing methods or paradigms, which are the inductive and the hypothetic-deductive. According to Lakatos and Musgrave (1979), the distinction between knowledge and speculation is based on the premise that, while the former was proved by the force of knowledge or the senses, the latter was not. For the inductivists, this evidence starts from an observation that provides the secure basis upon which knowledge can be constructed, so that propositions can be made by induction, from the particular to the whole. On the other hand, the hypothetical-deductive method starts from an established theory, generates hypothesis, and then seeks to test them to broaden their knowledge or identify possible inconsistencies in the theory. In general, the inductive perspective is more associated with qualitative empirical procedures; and the hypothetical-deductive more with quantitative methods, mainly statistical methods that involve inferential estimation techniques and hypothesis testing.

The use of large volumes of data creates a new complexity though, which does not seem to be fully encompassed by these analysis methods. This assertion is based on the possibility of the analysis departing from the data itself, that is, not necessarily starting from a specific hypothesis or theory. Considering the operation of large volumes of data, quantitative techniques will be necessary for procedures that are characteristic of qualitative research. We then approach the inductive view of quantitative procedures typically applied in the hypothetical-deductive view.

Thus, we understand that Big Data entails an effective change in relation to traditional approaches, which requires a different epistemological approach in the development of science in comparison to the current hypothetical-deductive method (Kitchin, 2014). In our view, the best alignment comes from the rescue of a debate that has been ongoing for some decades about grounded theory and the so-called abductive method. In the next item, this discussion will be detailed.

3. Epistemological and methodological changes of the age of Big Data

In this section, we discuss the methodological and epistemological consequences of a real-age research based on abundant data. Initially, we describe the abductive perspective as an appropriate framework of knowledge production in this scenario. Next, we present the methodological and tool challenges most frequently cited in the specialized literature.

3.1. Abductive Method and Big Data

Given the advent of Big Data, it seems to be the appropriate time to rethink the epistemological issues and the research methods in larger units that permit the expansion of knowledge by new perspectives from the data and not by a specific hypothesis. This is justified by the fact that the inductive and hypothetico-deductive method, although presenting different logics, share one fundamental characteristic: they focus on a limited part of the data to perform their analyses (Haig, 2005), so that they can leave important data on the phenomenon or object of research beyond the analysis of results.

It is important to note that the well-structured attempt to construct knowledge from the data is not a new concept in the academy. In 1967, Barney Glaser and Anselm Strauss began discussions on the grounded theory, which is considered to be one of the purest forms of qualitative research (Glaser & Strauss, 1967, Bianchi & Ikeda, 2008). In this method, the researcher does not seek to verify or depart from a specific theory for the elaboration of his research. On the contrary, the researcher is invited to break free from his already established theoretical assumptions and 'moorings' to seek to understand the data, so that questions and knowledge are drawn from them (Glaser & Strauss, 1967).

The main purpose of grounded theory is the construction of theories and, for this, researchers assume two core assumptions: a) researcher, reality and theory are continuous and intrinsic entities and can thus interact continuously; b) the theory evolves throughout the research process, resulting from several interpolations of data and analyses (Bianchi & Ikeda, 2008). Thus, the idea is to ensure that not only the researcher investigates the reality from the data, but that this is a continuous process and that can change at any time, since the data are continuously being re-accessed and analyzed.

Haig (2005) proposed for quantitative research the abductive method (or paradigm, as Haig called it), following the same fundamentals the grounded theory presents as a qualitative method. This method follows the same epistemological logic of grounded theory, that is, it seeks knowledge based on the data, but follows a different methodological execution protocol. The abductive method can be considered a combination of the inductive and hypothetical-deductive methods in the context of quantitative research, as it enables the researcher to discover the empirical facts (by induction) to construct theories that explain these facts (by deduction) (Haig, 2005). Figure 1 illustrates the research dynamics of the abductive method:
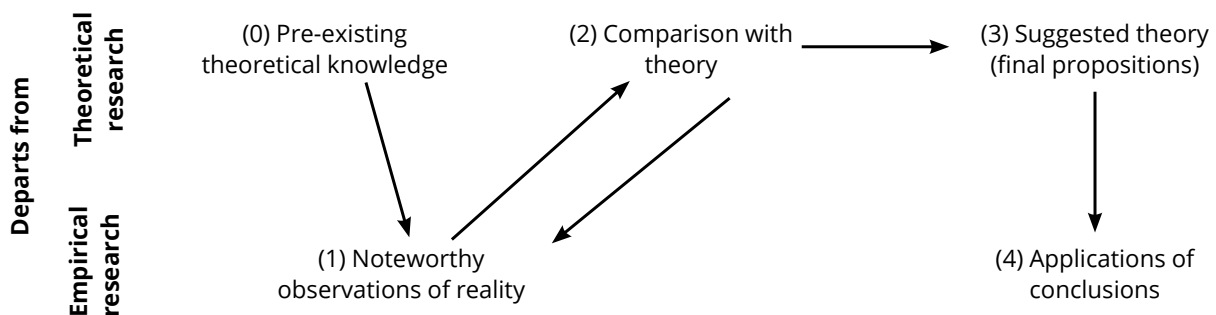
Figure 1. The view of research through the abductive process.

Source: Spens and Kovács (2006).

In this view, phenomena exist to be explained, so that they are not simply understood as objects of prediction or confirmation of theories and hypotheses. In practical terms, this means that, after identifying a phenomenon based on the quantitative and exhaustive exploitation of the data, abductive inferences are used, that is, the best explanation is sought for its occurrence, which is understood as the probable true explanation. Thus, different methods or combinations of them can be used to select the 'best explanation' that, when identified, can serve as the basis for the elaboration of a theory, if it does not fit into any existing theory (Haig, 2005).

Thus, the abductive method can be an interesting alternative as a study method that enables the construction of knowledge from large volumes of data. With the use of the abductive approach, the exhaustive exploration of large databases can foster the generation of knowledge that until then was not available to verification-based methods. As mentioned above, verification methods have the limitation that the research hypothesis itself imposes, so that they are potentially restricted to verifying the data necessary for the analysis of the hypothesis and do not benefit from other information that could be obtained from this same database to enable the understanding of more complex themes in contemporary science (Miller, 2010). Additionally, the abductive method permits that, in the same sample, more than one phenomenon can be identified and that theories can be constructed in a way that better explains reality, using analogies to seek answers to themes that are sometimes subjective or about which no census data are available (Ekbia et al., 2015).

The use of this approach for Big Data analysis also solves one of the pitfalls that may arise when dealing with 'data-intensive science', which means giving exaggerated importance to the data and their causal relationships (e.g. data brokers and data analysis providers). This trap can lead to the false impression that the simple identification of the causal relationship would be sufficient for the production of knowledge, which is, in general, an exaggerated simplification of the phenomenon under analysis (Kitchin, 2014). It is important to keep in mind that the construction of knowledge is guided by concerns, giving shape to the 'research problem', which permit theorizing about why these relationships occur and what their theoretical and practical implications are.

A related issue of this discussion that also raises relevant reflections for academic and professional researchers concerns the methodological decisions of research, which we discuss in the following item.

3.2. Methodological challenges for using Big Data

Research approaches based on large volumes of data entail methodological challenges of two kinds: the first, regarding the technological capacity of data accumulation and processing; and the second on the statistical analysis of these data.

Regarding the first challenge (processing), new processing techniques have been developed, such as data mining, artificial intelligence, statistical learning, machine learning, predictive analytics. These techniques also allow the detection of standards without the need to provide the system with a specific question, which enables the identification of information that might not be easily observable. The capacity of the mentioned techniques comes from computer schedules that permit real-time learning from the data as they are collected. From these 'new' lessons, then, prediction models are constructed that can be constantly reformulated in order to continually improve their results and improve decisions (Seth & Chaudhary, 2015).

Additionally, between 80 and 90% of the data are available in a non-standardized and unstructured form, a fact that creates integration difficulties and quality gaps that increase the challenges for the processing and analysis with the agility needed to add value (Oracle, 2012). There is, therefore, a need for robust database structures that permit the accumulation of data and cross-over possibilities for interdisciplinary research and collaboration (Demchenko et al., 2013).

The Big Data view as accelerated data accumulation alone does not necessarily have value. Analysis tools also need to advance at the same speed. The volume of information and its different formats have affected multiple dimensions of research, since traditional technologies and models fail or present major inconsistencies when accessing such a large volume of data (Einav & Levin, 2014).

It is in this context that the need arises to develop robust techniques that are adapted to this type of situation. In other words, new methods should emerge, including statistical assumptions that consider the use of samples that are very close to the study population (Einav & Levin, 2014), or that are more consistent in informative terms than conventional estimation methods and hypothesis tests. For example, in interval-estimation procedures that involve standard error, this standard error is an inverse function of the sample size, so that, in very large samples, the standard error tends to zero, which makes the interval estimation meaningless. A consequence of this finding is the possibility of an effective return to (or re-validation of) data analyses based on 'magnitude of effect' and less on significance analyses (or p-values, according to Gigerenzer & Marewski, 2015).

Also concerning the analyses, another question emerges from the restrictions that will come in modeling analyses, which, in traditional research, use rigid assumptions, such as normality or homoscedasticity of errors in regression models. With the introduction of large volumes of data, these assumptions are potentially broken, invalidating confidence-building tests of the results, also because the conventional procedures for verifying these assumptions are based on statistical tests, which come with utility problems when the samples are very large, given the tendency to always reject the null hypothesis.

In addition, if not globally, in certain data segments of some variables, it will always be possible to verify spurious correlations, given the large data variance. This results in the need for a distinguished interpretative capacity for users of both the correlation technique and other correlation-based techniques, such as factorial analysis for example.

In short, having the Big Data approach as a driver of technologies and statistical methods, a large number of technological infrastructure components are rethought to overcome related challenges, mainly the increasing volume of data collected from different sources and formats. In addition, multidisciplinary joint effort is needed among areas, such as Administration, Economics, Mathematics, Statistics and Computer Science, in order to redefine the models used for such analyses.

The perspective of academic and professional impacts resulting from this perspective is broad and will find repercussions in several areas of study and research. For this article, and as already indicated in the introduction, we aim to analyze the implications in the specific context of Finance and Capital Markets, as shown in the following item.

4. Big Data and its contribution to Finance and Capital Market studies

Transaction data and activities from the Finance universe, their processing and access play a central role in the area of Finance (Seth & Chaudhary, 2015). Capital markets, as the main source of data for analysis in this area, have significantly changed since the start of the 21st century by reaching increasingly high levels of High-Frequency data (HFD) production, such as the US market, which has about 70% of all HDF trading data (Zervoudakis, Lawrence, Gontikas & Al Merey, 2017). In this context, one can observe a typical configuration of Big Data, given the almost continuous registration of activities, the different forms of manifestation of those activities and the high volume of records.

All areas of finance (investment analysis, econometrics, fraud detection, behavioral finance, etc.) can benefit from this scenario, as the analysis of intensive data enhances the ability to measure both the systematic risks, which cover the market as a whole - and the non-systematic risks - related to each of the companies (Fan, Han & Liu, 2014). In this essay, we chose to restrict the comments to the potential impacts of the Big Data view in the analyses, involving three areas of Finance that have a direct relationship to the capital market: volatility, portfolio development and risk analysis and market transparency. The essay design and our intention to provide a more illustrative than exhaustive reference led us to a brief exposition, limited to pointing out generic implications and potential ramifications.

Volatility is commonly defined as the dispersion of the price of an asset over a certain period of time and historically is an area of significant relevance in Finance surveys, as the measurement and projection of asset volatility are crucial for activities such as asset allocations, derivative pricing, and investment management and analysis options (Seth & Chaudhary, 2015). Indeed, studies that measure market volatility in the context of Big Data can advance in the accuracy of their prediction models by manipulating large volumes of data (Louzis, Xanthopoulos-Sisinis & Refenes, 2013) in order to generate more reliable analyses that provide gains to their investors.

More accurate financial assessments can minimize the likelihood of failures, especially in periods of crisis, when volatility can significantly expand. In addition, volatility presents high explanatory power due to high persistence and conditional dependence, being non-stationary and predictable (Louzis, Xanthopoulos-Sisinis & Refenes, 2013). Given their relevance, many models were developed to estimate volatility, Engel's autoregressive conditional heteroscedasticity model (ARCH) and its variations being one of the most popular in the field (Seth & Chaudhary, 2015). These models were designed to use low frequency data though, with daily returns, losing intraday information that may be valuable in increasing the accuracy of these estimates.

Access to high-frequency data, which is typical of Big Data, has the potential to alter this scenario significantly as statistical models and theories are developed, considering the adequacy necessary for the use of these data (Cartea & Karyampas, 2011). In sum, as far as volatility is concerned, the Big Data approach influences the improvement of measurement, prediction processes and models, based on both the large data volume and the continuity characteristics of the data production.

With regard to the **elaboration of investment portfolios and risk analysis** for the selection of assets, the Big Data perspective has also broadened horizons. Until the early 2010s, asset valuation models have relied heavily on specific data from the company under review or from the economy it is exposed to, basically providing a fundamentalist analysis (Damodaran, 2012). As data availability grew along with the possibility of processing and quantification, business valuation models began to consider a much larger range of information sources than ten years ago, expanding their ability to identify the best opportunities (GSAM, 2016). These innovations include the analysis of texts, images, audios of meetings with shareholders, presentations, and other information in unstructured formats.

The development of machine learning techniques and statistical learning tools (James, Witten, Hastie & Tibshirani, 2013) has also contributed to the creation of more dynamic assessment models, which adapt and learn from the constant processing of large data volumes, speeding up the time it takes for the information to become available for investors or analysts' decision making (GSAM, 2016). In addition, in emerging markets, such as Brazil, where information asymmetry is more pronounced, information deficiencies may lead to increased uncertainty and erratic asset pricing (Martins & Paulo, 2014). Thus, data-intensive models can create an additional advantage for investors by reducing interest rates and directing capital more clearly to the best investments.

In addition to the monetary and financial efficiency benefits these advances can offer to the different market players, there is an area of finance that should be of particular relevance in this context, which is the area of **market transparency**. The use of Big Data tools, such as business intelligence or business analytics, brings a new perspective to the studies and efforts related to increased transparency and, consequently, allows the increase of liquidity, market efficiency (Ye, 2010) and a more stable and reliable environment for its development.

Capital market demands for higher levels of transparency gained momentum especially after the financial scandals of the early 2000s, which involved large corporations such as Enron and WorldCom, prompting different discussions about their content and regulation (Chong & Lopez-de-Silanes, 2007). These events unleashed unprecedented government intervention in the United States capital market, followed by most countries, with a focus on the establishment of the Sarbanes-Oxley Act (Aksu & Kosedag, 2006). More recently, the US housing credit crisis in 2008 revealed that there were still significant limitations and inadequacies of the information disclosure system within the financial system. The lack of standard procedures, quality gaps in information disclosure and a lack of data processing capacity in a timely manner have led regulators not to have the ability to process that information, which has made proactive measures or the more precise identification of what information was missing impossible (Seth & Chaudhary, 2015).

Thus, in this crisis scenario, regulatory demand has played a key role in accelerating the development of Big Data processing solutions in the search for higher degrees of transparency (Oracle, 2012). This movement was not restricted to the capital market of course, as all the companies operating in it have been forced to increase the volume of data disclosed and to redesign their technological infrastructure to support this demand.

These advances make it possible to monitor and identify frauds and other actions that can jeopardize market transparency and reliability more quickly and accurately (Louzis, Xanthopoulos-Sisinis & Refenes, 2013), which would preserve and enhance the market liquidity and efficiency. Thus, the Big Data view offers new possibilities for innovation and growth in the area, which, in view of the increasing accessibility characteristic, allows regulators, companies and researchers to collaborate to obtain solutions together, extracting the maximum of value from the data.

In this scenario, transparency-related discussions have changed their data volume requirement focus, as they are more abundant, to reflect on how to overcome the challenges of their processing (Seth & Chaudhary, 2015). Some examples of such challenges could be: How to process an increasing data volume in a timely manner? How to overcome the absence of standard disclosure protocols? How to define schedules that can fraudulently identify frauds? The search for answers to these and many other questions related to transforming market data into knowledge can generate regulatory tools that are increasingly effective for markets to achieve a new level of transparency and efficiency.

These three aspects we have briefly discussed can benefit not only from the expansion of data the access to Big Data provides, but also from a new epistemological perception of how those data can be analyzed, especially at the academic level. It is here that the use of more abductive methods would permit the expansion of the scope of information the researcher focuses on to know the reality, stimulating the observation of phenomena not restricted to a set of proposed hypotheses for confirmation or rejection. This new look, which at first considers an inductive movement, can create a revolution in an area that has historically departed from purely hypothetical-deductive methods for the construction of knowledge.

5. Final Considerations

The incorporation of the Big Data perspective, in the academy as well as in the professional world, seems to be an inevitable and irreversible move. The possibility of basing the analysis on data with quasi-census magnitudes extends the possibilities of minimizing information asymmetry in all fields of science and business by changing the concerning with data collection to the search for processing and analysis tools. A 'new multidisciplinary language' should emerge to encompass this growing complexity, redesigning and adapting methods and protocols to obtain the maximum value from the data.

This new panorama raises even deeper issues related to the construction of knowledge as it has traditionally taken place. With the establishment of data-driven science (data-drive science, according to Kitchin, 2014), the more traditional epistemology, strongly based on the hypothetical-deductive method, seems to be limited to reach the full value of the data the Big Data perspective provides.

The Big Data discussions on improving the method, the processing and methodological protocols for extracting the largest possible data value are important for the various dimensions of Finance, which is an area where data plays a central role for knowledge production and for managerial and regulatory decisions. We highlight here the studies related to volatility, portfolio elaboration and risk analysis and market transparency, which are areas that have already begun to develop the tools needed to benefit from intensive data, but still present many processing challenges in order to be able to extract the maximum value.

We aimed to analyze how the characteristics of Big Data, particularly volume, speed and variety, reach the research and management practices in these fields. Even for a generic and restricted view of these three themes, we were already able to observe how these areas need improvements as they get hold of more data, with access that is approaching continuity, and with the use or development of better tools to manipulate these growing volumes and greater diversity of data types and formats. The deeper analysis of the implications of Big Data in these fields and in other specialties in the area of Finance which we do not address represent challenges for further research.

This scenario does not yet require a paradigm shift in methodological and epistemological terms. Therefore, we have suggested throughout the text and again emphasize that the incorporation of an abductive approach in the field of Finance research could increase the capacity to extract valuable information and will enable more complete knowledge construction, without limiting the analyses to what is asked as previously defined hypotheses, but accessing all possible information available in the data. The search for a solution to these challenges has required not only a multidisciplinary viewpoint, but also an approach to different actors in society, who are sometimes far from solving challenges, especially governments (regulators), companies and academics. Therefore, we suggest that empirical studies analyze concrete views, challenges and experiences involving these interest groups in the professional field of Finance, in order to generate an increasingly complete and consistent view of best practices and best decisions in the field of Finance in Brazil.

References

Aksu, M., & Kosedag, A. (2006). Transparency and disclosure scores and their determinants in the Istanbul Stock Exchange. *Corporate Governance - an International Review*, *14*(4), pp. 277-296. DOI: https://doi.org/10.1111/j.1467-8683.2006.00507.x/abstract

Bianchi, E. M. P. G., & Ikeda, A. A. (2008). Usos e aplicações da *grounded theory* em administração. *Revista Eletrônica de Gestão Organizacional*, *6*(2), pp.231-248.

Cartea, A., & Karyampas, D. (2011). Volatility and covariation of financial assets: a high-frequency analysis. *Journal of Banking and Finance*, *35*(12), pp.3319-3334. DOI: https://doi.org/10.1016/j.jbankfin.2011.05.012

Chen, C. L. P., & Zhang, C.Y. (2014). Data-intensive applications, challenges, techniques, and technologies: a survey on Big Data. *Information Science*, *27*(5), pp. 314-374. DOI: https://doi.org/10.1016/j.ins.2014.01.015

Chong, A., Lopez-de-Silanes, F. (2007). *Investor protection and corporate governance:* intra-firm evidence across Latin-America. Palo Alto: Stanford University Press.

Damodaran, A. (2012). *Investment valuation*: tools and techniques for determining the value of any assets. 3rd edition. New Jersey: Wiley&Sons.

Demchenko Y., Grosso, P., De Laat C., & Membrey, P. (2013). Addressing Big Data issues in scientific data infrastructure. *Collaboration Technologies and Systems* (CTS), International Conference on 2013.

Einav L. & Levin J. (2014). Economics in the age of big data. *Science*, *346* (6210), pp. 12430891–12430896. DOI: https://doi.org/10.1126/science.1243089

Ekbia, H., Mattioli, M., Kouper, I., Arave, G., Ghazinejad, A., Bowman, T., Suri, V. R., Tsou, A., Weingart, S., & Sugimoto, C. R. (2015). Big Data, bigger dilemmas: a critical review. *Journal of the Association for Information Science and Technology*, *66*(8), pp. 1523-1545.

Fan, J., Han, F., & Liu, H. (2014). Challenges of Big Data Analysis. *National Science Review*, *1*(2), pp. 293–314. DOI: https://doi.org/10.1093/nsr/nwt032

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 2, p. 385-395, Oct./Dec. 2017

394

Gigerenzer, G., & Marewski, J. N. (2015). Surrogate science: the idol of a universal method for scientific inference. *Journal of Management*, *41*(2), pp.421-440. DOI: https://doi.org/10.1177/0149206314547522

Glaser, B, G., & Strauss, A. L. (1967). *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine de Gruyter.

GSAM – Goldman Sachs Asset Management (2016). Perspectives: the role of Big Data in investing. Recuperado em 26 de abril, 2017, de: https://www.gsam.com/.

Haig, B. D. (2005). An abductive theory of scientific method. *Psychological Methods*, *10*(4), pp. 371-388. DOI: https://doi.org/10.1037/1082-989X.10.4.371

Hey, T., Tansley, S., & Tolle K. (2009). *Jim Grey on eScience: A transformed scientific method.* In: Hey T, Tansley S and Tolle K (eds) The fourth paradigm: data-intensive scientific discovery. Redmond: Microsoft Research, pp. xvii–xxxi.

Big Data, New Epistemologies and Paradigm Shift (PDF Download Available). Recuperado em 15 de setembro, 2017, de: https://www.researchgate.net/publication/271525133_Big_Data_New_Epistemologies_and_Paradigm_Shift.

IBM, 2016. Recuperado em 08 de abril, 2107, de: https://www-01.ibm.com/software/data/bigdata/what-is-bigdata.html.

James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). *An introduction to statistical learning*. New York: springer. DOI: https://doi.org/10.1007/978-1-4614-7138-7

Kitchin, R. (2014). Big Data, new epistemologies and paradigms shift. *Big Data & Society*, April-June, pp. 1-12. DOI: https://doi.org/10.1177/2053951714528481

Lakatos, I., & Musgrave, A. (1979). *A crítica e o desenvolvimento do conhecimento*. São Paulo: Editora da Universidade de São Paulo. DOI: http://dx.doi.org/10.11606/issn.2447-9799.cienciaefilosofi.1980.107354

Lau, R. Y.K., Zhao, J.L., Chen, G., & Guo, X. (2016). Big Data commerce. *Information & Management*, *53*, pp. 929-933. DOI: https://doi.org/10.1016/j.im.2016.07.008

Louzis, D.P., Xanthopoulos-Sisinis, S., & Refenes, A.P., (2013). The role of high-frequency intra-daily data, daily range and implied volatility in multi-period value-at-risk forecasting. *Journal of Forecasting*, *32*(6), pp. 561–576.

Martins,O. S. & Paulo E. (2014). Assimetria de informação na negociação de ações, características econômico financeiras e governança corporativa no mercado acionário brasileiro. *Revista Contabilidade & Finanças (Online)*, *25*(64), pp. 33-45. jan./fev./mar./abr. 2014

Miller, H. J. (2010). The data avalanche is here. Shouldn't we be digging? *Journal of Regional Science*, *50*(1), pp. 181-201. DOI: https://doi.org/10.1111/j.1467-9787.2009.00641.x

Oracle (2012). Financial services data management: Big Data technology in financial services. Oracle Financial Services, *An Oracle White paper.*

Seth, T., & Chaudhary, V. (2015). "Big Data in Finance". In: Li, K.; Jiang, H.; Yang, L. T.; Cuzzorea, A. (Eds) "Big Data: algorithms, analytics and applications". Chapman and Hall/ CRC, pp. 329-356.

Spens, K. M., & Kovács, G. (2006). A content analysis of research approaches in logistics research, *International Journal of Physical Distribution & Logistics Management*, *36*(5), pp. 374-390. DOI: https://doi.org/10.1108/09600030610676259

Ye, G. (2010). *High frequency trading models*. NJ: John Wiley & Sons Inc.

Zervoudakis, F., Lawrence, D., Gontikas, G., & Al Merey, M. (2017). *Perspectives on high-frequency trading*. Recuperado em 30 de março, 2017, de: http://www0.cs.ucl.ac.uk/staff/f.zervoudakis/docs/hft.pdf.

Presence of Female Gender among Students in Graduate Accountancy Programs in Brazil

Abstract

Objective: Despite the existence of movements towards gender equality concerning the access to education and opportunities in the job market, the scarce presence of women in professions that used to be predominantly male may still continue. This study aims to verify the presence of the female gender among students in graduate Accountancy programs in Brazil between 2010 and 2016.

Method: In the Sucupira Platform, we selected the 26 academic Master's, five professional Master's and 13 Doctorate programs in Accountancy accredited by the Coordination for the Improvement of Higher Education Personnel that had available data for the research until 2016. In total, 3,013 new students were identified, being 2,058 academic Master's, 530 professional Master's and 451 Doctorate students.

Results: The research results indicate that the number of female students who started the graduate Accountancy programs in Brazil is lower than that of male students in the period analyzed, with visible regional differences.

Contributions: In conclusion, the presence of the female gender among the students in the investigated programs has evolved, but a long road remains ahead to achieve gender equality, which is particularly relevant when considering that this can influence further work opportunities, a research gap that needs investigation.

Keywords: Female gender. Graduate Programs. Accountancy.

Daniele Cristina Bernd
Ph.D. Candidate in Accounting, Graduate Accounting Program at (UFSC). **Contact:** Universidade Federal de Santa Catarina, Campus Reitor João David Ferreira Lima, Centro Socioeconômico, Trindade, Florianópolis/SC, CEP.: 88040-970.
E-mail: dcbernd@hotmail.com

Marcielle Anzilago
Ph.D. Candidate in Accounting, Graduate Accounting Program at (UFSC). **Contact:** Universidade Federal de Santa Catarina, Campus Reitor João David Ferreira Lima, Centro Socioeconômico, Trindade, Florianópolis/SC, CEP.: 88040-970.
E-mail: marcianzilago@gmail.com

Ilse Maria Beuren
Ph.D. in Controllership and Accounting from FEA/USP and Professor at Universidade Federal de Santa Catarina (UFSC). **Contact:** Universidade Federal de Santa Catarina, Campus Reitor João David Ferreira Lima, Centro Socioeconômico, Trindade, Florianópolis/SC, CEP.: 88040-970.
E-mail: ilse.beuren@gmail.com

1. Introduction

The discourse promoted by the media and society is that women are gaining more and more positions in organizations, politics, economics and other prominent places, in an attempt to reinforce the search for equality between men and women (Andrade, Macedo & Oliveira, 2014). This naturalized discourse is in dissonance with reality, however, when analyzing the equal gender division in the different work environments (Araújo, 2005).

Despite the trajectory of women's professional insertion into the labor market throughout history, they still face a predominantly male market (Rothwell, 1985). Advances have occurred in the last decades regarding discussions and studies on gender differences, but a discrepancy remains in the positions held by men and women. This is particularly so with regard to the management process, because prejudice and discrimination are still visible and hinder the female presence in business management (Gomes, 2005). According to Jurkus, Park and Woodard (2011), women are underrepresented in many professions, maintaining relatively few positions of decision-making. Madalozzo (2011) reinforces the low representation of women in high-ranking positions. This is also observed in politics, public administration and the academic world (Unmüßig, 2007).

Women still face prejudices and barriers in many areas of knowledge. Hence, universities are commonly characterized by a masculinized culture (Bagilhole & White, 2011), as the structures and values of the workplace tend to be patriarchal, masculine and elitist (Caplan & Caplan, 1994). Nevertheless, the reduction of gender differences is appointed in all fields of knowledge, the underrepresentation of women in higher education teaching is a persistent phenomenon (Husu, 2001), especially in opportunities for promotion, access to leadership roles and administrative responsibilities. For Husu (2001), from the earliest moments of the academic career, women face experiences of sexism and gender discrimination, lasting until the doctorate and establishing after its termination.

Multiple factors may contribute to the option of women not to enter the scientific midst and academic careers, especially in the low interest for *stricto sensu* graduate education. Backlund (2017) highlights that the journey towards a doctorate can be considered problematic and heavy for students. Many are the expectations they have, but there are also many challenges, as stated by Franke and Arvidsson (2011), such as: high efficiency in terms of goals, time pressures and relevant results, requirement of a level of personal maturity, independence and autonomy. The study by Flynn, Feild and Bedeian (2011) shows that women tend to evaluate some factors differently from men in relation to academic selections, which may derive, according to Durso, Cunha, Neves and Teixeira (2016), from divergent motivational factors.

These factors, alone or in conjunction with other elements, represent barriers to their careers. In this perspective, Tabak (2002) point out the following: prejudices, family, low wages, lack of opportunities to reach high positions and social pressures. Others also prevent conciliation with training programs, as Casa Nova (2014) points out, as difficulties will exist even in programs that promise the possibility of reconciling life, family and work. According to the author, some problems are known and expected, however, while others will be implicit, resulting from the insertion in the environment that was not thought for them and their leadership.

Despite the challenges of attending a graduate course, in addition to the challenges related to gender differences, women increasingly choose graduate education and the teaching career. This may be associated with the search for better living conditions or, moreover, it may be due to the changes that have occurred in recent years in education. This is also observed in graduate courses in Accounting, which used to be attended almost exclusively by the male gender. This movement is also observed in the accounting profession, with a growing insertion of women. As Haynes (2017) points out, however, even if women have already achieved progress in developing their presence in the accounting profession, inequalities still remain. According to the author, the admission of women in this profession is the result of decades of struggle, as it has always been considered a masculine practice.

Until the last decade, there was a greater predominance of males in the accounting area, but this has been decreasing substantially in undergraduate courses. According to Fogarty and Goldwater (2010), the academic performance of women in higher education and graduate studies has been equally good, if not superior to the male performance. Mota and Souza (2013) alert that an even greater growth of women's participation in the accounting area is expected in the coming years, due to the intellectual conditions and dedication to the profession, as well as social changes in the view on women in the professional scope. While this does not happen, they still account for only about a third of those earning a doctorate (Fogarty & Goldwater, 2010). This factor may be reflected in a widespread lack of women in accounting teaching and a continuing lack of gender diversity in the academy.

Based on what we have exposed so far, this study adopts the following research question as a guiding focus: is the presence of the female gender among *stricto sensu* graduate students, specifically in Brazilian academic master's, professional master's and doctorate programs in Accounting, proportional to the male gender in the period from 2010 to 2016? The objective of this study is to verify the presence of the female gender among the students in the Brazilian graduate programs in Accountancy from 2010 to 2016. The debate is thus broadened, also favoring the search for actions aimed at reducing inequality, not only in terms of access to graduate education, but also of continuity in the teaching career.

Backlund (2017) argues that enrollment in graduate programs increases day by day. Therefore, the coordinators need to supervise students more than in the past. One of the factors to be observed is the distributive equality of opportunity to a wider spectrum of people, whether in gender, racial or sexual diversity. With equal opportunities, according to Haynes' study (2008), women are more susceptible than men to being excluded or oppressed. Thus, it is necessary to address gender inequalities, around the world and in various contexts, as the perpetuation of inequalities in gender lines continues (Haynes 2017).

Brazilian studies, such as Velloso and Velho (2001), Tabak (2002), Brandão and Teixeira (2003), Melo, Lastres and Marques (2004), Godinho, Ristoff, Fontes, Xavier and Sampaio (2005), Pinto (2007), Cunha, Cornachione Jr. and Martins (2008), Nascimento and Beuren (2011), Reina, Reina, Silva and Ensslin (2012), Silva, Anzilago and Lucas (2015) and Durso et al. (2016), who explored the insertion of women in graduate studies in other areas, represent contributions to the subject and indicate the need for studies also focused on the accounting area. Further investigation is needed of how women's insertion in Accounting takes place, initially by their entrance in graduate education. Therefore, this research is relevant because it investigates both the inequality and the presence of female students in graduate programs in Accounting, with possible further reflections in the job market.

2. Theoretical Framework

2.1 Gender equality

According to Scott (1995), the term "gender" is used to indicate the social relations between the sexes, thus representing a way of indicating social constructions, the entirely social creation of ideas about the appropriate roles of men and women. In line with the author, it is a way of referring to the exclusively social origins of the subjective identities of men and women. In addition, "gender" can be understood as an empirical or analytical and historical category (Tilly, 1994; Scott, 1995; Saffiotti, 1997; Araújo, 2005; Tedeschi, 2007). When covered by empirical reality, it propagates the historical relations and forms of existence of social reality (Araújo, 2005), serving as a means to produce consequences in society (Tedeschi, 2007).

The use of the term "gender" appeared as a cultural counterpart of biological sex as from the second half of the 1970s, with substantial changes in the judgments of studies on the relationships between men and women in society (Tedeschi, 2007). At the beginning of the feminist movement, the struggle for equality overcame the question of difference, but it was only in the second half of the 1970s and in the 1980s that the debate on equality versus difference occupied the midst of discussions (Araújo, 2005).

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 3, p. 396-417, Oct./Dec. 2017

398

Considering difference as a positive legitimacy, the movement directed its struggle for equality towards difference; then, cultural diversity, female culture, female experience and recognition of cultural gender diversity became articulated (Araújo, 2005).

The grammatical sense of gender, according to Araújo (2005), indicates beings of different sexes (male / female) but, in the last decades, it has been used for other purposes, highlighting cultural and social elements, differing from the concept of sex with a biological approach. In addition to the historical view, the term "gender" can be used as a political category to analyze the issue of equality and difference, therefore, a new perspective on the interpretation and transformation of social reality (Rothwell, 1985; Araújo, 2005). The difference between human beings is part of the history of humanity, present in a wide range of discourses (philosophical, religious, biological / scientific, psychological, anthropological and social), gaining more relevance as the object of analysis (Araújo, 2005).

Louro (1996) argues that "gender" is characterized as a social construction built on social differences. It is, therefore, the way in which these sexual differences are understood in a given society, in a group, in a context determined by a historical process. For Alvez and Pitanguy (1985), gender can be treated as a sociocultural construction, taking into account the daily experience of individuals, their family and political organizations, and the assignment of different roles within society to men and women in accordance with the customs of each place.

As pointed out, the gender theme can be perceived within the relational (man versus woman), contextual / situational (gender and its socio-cultural constructions) and historical perspective (gender as a result of its historical-social context) (Scott 1995). According to Meyers-Levy and Loken (2014), "a theoretical approach to gender differences proposes that gender differences emerge from social, cultural, psychological, and other environmental forces". Among other gender theories, the authors highlight the sociocultural theories of recognizing biological roles and learning their influences.

Several theories are also being incorporated into women's research, such as Critical Mass, Role Model and Glass Ceiling. The Critical Mass theory, according to Granovetter (1978), indicates that the nature of group interactions depends on their size and the size of their subgroups when a subgroup reaches a threshold. The Role Model theory, according to Buck, Clark, Leslie-Pelecky, Lu and Cerda-Lizarraga (2008), proposes that people are more prone to choosing careers in which they can identify a model in the career plan (female and male careers). The Glass Ceiling theory emphasizes the difficulty of women's career progression, resulting in under-representation in strategic positions and, consequently, in decisions (Weyer, 2007; Nascimento & Alves, 2014).

The problems related to the glass ceiling phenomenon hit women who work in the job market, and are mainly explored by questions related to the presence of women in the upper layers of the organizational hierarchy, and can even be observed in the academy (Silva, 2016). According to Ott (1989), male-dominated environments can generate stress and cause women to perform poorly. Thus, female graduate students can seek programs considered more feminine, with a teaching staff composed of women. The amount of female teachers can influence the choice of institutions, in graduate education and in pursuing a teaching career, considering that the diversity women perceive can indicate a more balanced institution and a greater opportunity for career development (Flynn, Feild & Bedeian, 2011).

Many may even feel more comfortable working with teachers of the same gender. The study by Durso et al. (2016), based on a Self-Determined Motivation Index (SMI) of Accountancy and Economics students in relation to the search for a stricto sensu graduate course, identified, among other factors, that women tend to have more self-determined motivation for graduate education than men. In the study by Flynn, Feild and Bedeian (2011), involving Ph.D. students in Administration from the USA, exploring the association of gender and race / ethnic origin, in the academic selection, women tend to evaluate some factors as more important than men, with respect to the diversity of a university and its surrounding community, the familial sympathy of a department / institution, the support for research and the clarity of performance criteria. In addition, they seek to study in more nearby universities than men, by trying to reconcile academic, family and personal activities.

Casa Nova (2012) reports that the presence of women in accounting in Brazil has been little explored, and phenomena such as critical mass, role model, glass ceiling or pipeline may be present. The same author highlights that one possibility of modifying the gender inequality framework in the accounting area is to raise awareness and establish policies to support the less favored class. The study by Gomes, Corrêa and Domingos (2010) reveals that the female participation in scientific production in the accounting area in Brazil is significantly lower than that of men. The exclusively female publications are reduced and, to a large extent, they involve male authors.

In this sense, the investigation of the presence of the female gender among graduate Accounting students and their participation in the scope of scientific production can indicate the trend in these phenomena, which may even entail repercussions for the academic career.

2.2 *Stricto sensu* graduate education in Accounting in Brazil

Drucker (1999) studied the need for advances in knowledge, from the point of view of meeting market demands. Specifically, the Ministry of Education has published the National Graduation Education Plan (PNPG), which "assigns to graduate education the task of producing professionals capable of working in different sectors of society and capable of contributing, through the education received, to the country's modernization process" (CAPES, 2004, p.8). In common, both emphasize the need to produce knowledge in the face of market needs.

In this sense, the relevance of the activities of the academy is revealed. According to CAPES (2004, page 8), "the available data demonstrate, above all, that it is within the Brazilian Graduate Education System that, basically, Brazilian scientific and technological activity takes place". According to CAPES (2004), the responsibilities and relevance of the action have particularly been related to the evolution of the Graduate Programs (PPGs).

The discussion, analysis and evaluation of academic activities at the graduate level have been the subject of discussions and analyses over time. Tavares (2000), when discussing the university reform in the 1970s, emphasizes that its pillars were the organization in departments, the overthrow of the chairs, the adoption of the exclusive dedication regime and the implementation of the graduate programs (Souza, Machado & Bianchi, 2011).

For Tavares (2000), the creation of graduate courses with an integrated role in scientific research may have been the most relevant fact in the evolution of the Brazilian university since its inception. Furthermore in the general context of graduate education, Borges (2008) emphasizes that the quantitative and qualitative training of specialized human resources is one of the most important stages for the maturation of a certain area of knowledge, as it plays a strategic role.

Stricto sensu graduate education in Brazil has shown a clear growth in recent years. In 1976, the year when CAPES (2004) started to evaluate the Graduate Programs, the recommended courses increased from a total of 673 (183 doctorates) to 2,993 (1,034 doctorates) (Cunha, Cornachione Jr & Martins, 2008).

According to CAPES (2013), the National Graduate Education System grew by approximately 23% in the triennial evaluation of 2013. The development of the system occurred in all regions of Brazil, being 40% growth in the North, followed by the Midwest with 37% and Northeast with 33%. The South and Southeast, regions with the highest number of postgraduate programs, grew 25% and 14%, respectively.

In the area of Accountancy, according to data from the Sucupira Platform (2016), currently, there are 26 academic Master's degree courses, 5 professional Master's degree courses and 16 recognized and active Doctorate courses. The graduate programs in Accounting are distributed in several regions of the country, but with a greater concentration in the Southeast and South. In addition, the first doctorate in accounting in Brazil appeared in 1978 at the School of Economics, Administration and Accounting (FEA) of the University of São Paulo (USP), in São Paulo, and was the only program in the accounting area in Brazil for 30 years. Therefore, the other Doctorate courses in Accounting are more recent.

In the study by Casa Nova (2014), it was observed that the 21 graduate programs in Accounting in Brazil, which existed at the time of the research, based on the information provided by CAPES for the period from 2010 to 2012, had granted about 68 Doctorate and 925 Master's degrees. In 2012, of the 244 teachers, only 61 were women (25%).

3 Methodological Procedures

A descriptive study was carried out based on data from the graduate programs in Accountancy, related to the period from 2010 to 2016, extracted from the Sucupira Platform, CAPES, which were categorized and arranged quantitatively for the sake of analysis.

3.1 Population and sample

The study sample consists of the new students of the graduate programs in Accountancy, offering academic Master's, professional Master's and Doctorate courses between 2010 and 2016. The six-year period was chosen to follow the evolution in the presence of the female gender among the students in the programs during the expansion period of graduate courses in Accounting in Brazil, besides the information feasibility mentioned.

The data were extracted from the Sucupira Platform (2016), which, according to CAPES (2014), "is a new and important tool for collecting information, conducting analyses and evaluations and serving as the reference base for the National Graduate Education System (SNPG)". Thirty-three institutions were listed, established in different regions of Brazil, with different designations of their programs. The professional Master's programs were considered in isolation, due to the distinguished student profile in comparison with the academic Master's programs. In total, 26 academic Master's, 5 professional Master's and 13 Doctorate courses were investigated. In Picture 1, the list of Graduate Accountancy programs in Brazil offered until 2016 is displayed.

Institution	Program	Master's Year of implementation	Doctorate Year of implementation
University of São Paulo (USP)	Controllership and Accounting	1970	1978
Pontifical Catholic University of São Paulo (PUCSP)	Accounting and Actuarial Sciences	1978	–
Rio de Janeiro State University (UERJ)	Accountancy	1984	–
Federal University of Rio de Janeiro (UFRJ)	Accountancy	1998	2014
University of the Sinos River Valley (UNISINOS)	Accountancy	2000	2013
Fucape Business School (FUCAPE - ES)	Accountancy	2001	–
Álvares Penteado University Center (UNIFECAP)	Accountancy	2002	–
Federal University of Santa Catarina (UFSC)	Accounting	2004	2013
Federal University of Paraná (UFPR)	Accounting	2005	2014
Regional University of Blumenau (FURB)	Accountancy	2005	2008
Universitu of São Paulo/Ribeirão Preto (USP/RP)	Controllership and Accounting	2005	2013
Federal University of Minas Gerais (UFMG)	Accountancy	2006	Planned
Federal University of Bahia (UFBA)	Accounting	2007	–
Federal University of Amazonas (UFAM)	Accounting and Controllership*	2006***	–
Federal University of Pernambuco (UFPE)	Accountancy	2007	2016
Mackenzie Presbyterian University (UPM)	Accountancy*	2008	–
Fucape Business School (FUCAPE - ES)	Accountancy	2009	2009
Federal University of Ceará (UFC)	Administration and Controllership*	2009	–
Federal University of Ceará (UFC)	Administration and Controllership	2009	2015
Federal University of Espírito Santo (UFES)	Accountancy	2010	–
Federal University of Uberlândia (UFU)	Accountancy	2013	2016
University of Brasília (UNB)	Accountancy	2014	2014
Maringá State University (UEM)	Accountancy	2014	–
Federal University of Rio Grande do Norte (UFRN)	Accountancy	2014	–
Federal University of Paraíba (UFPB)	Accountancy	2014	2014
Federal Rural University of Pernambuco (UFRPE)	Controllership	2015	–
West of Paraná State University (UNIOESTE)	Accounting	2015	–
Community University of the Region of Chapecó (UNOCHAPECÓ)	Accountancy and Administration	2015	–
Fucape Business School (FUCAPE - RJ)	Accountancy	2015	–
Foundation Institute for Accounting, Actuarial and Financial Research (FIPECAPI)	Controllership and Finance*	2016	–
Federal University of Goiás (UFG)	Accountancy	2016	–
Federal University of Mato Grosso do Sul (UFMS)	Accountancy	2016-2017**	
Fucape Business School (FUCAPE - MA)	Accounting and Administration	2016-2017**	–

Legend: *Professional Master's, **Courses monitored, ***Discredited course

Picture 1. List of Graduate Programs offering Master's and/or Doctorate Courses in Accounting

Source: research data (2016).

As shown in Figure 1, the precursor institution for graduate programs in Accounting in Brazil was the University of São Paulo (USP), created in 1970. The other programs were implemented 30 years or more after the creation of the first, mainly after the year 2000, except for the *Pontifícia Universidade Católica de São Paulo* (PUC-SP), whose program was created in 1978, the year when USP implemented the Doctorate course in Controllership and Accounting.

Of the 31 institutions with a graduate program in Accounting functioning in 2016, two institutions (UFC and FUCAPE - ES) offer both an academic and a professional Master's degree, and FUCAPE (ES) also offers a doctorate degree. Thirteen programs have Master's and Doctorate courses in Accounting and 13 have only an academic Master's degree. The programs of UFMS and FUCAPE (MA) are being monitored and no data for enrolled students until 2016 are available in the Sucupira database (2016). They were therefore not included in the analyses due to lack of information. UFAM was not considered either in the sample because the program was discredited in the triennial evaluation 2010-2012.

In total, 26 academic Master's, 5 professional Master's and 13 Doctorate courses were investigated. A total of 3,013 incoming students were identified in the period from 2010 to 2016, being 2,058 from academic Master's, 530 from professional Master's and 451 from Doctorate courses, as shown in Table 1.

Table 1

New students in academic and professional Master's and Doctorate courses (2010 till 2016)

Abbreviation of HEI	State	Macroregion	Professional Master's	Master's	Doctorate	Total
UFC	CE	Northeast	170	128	–	298
UFBA	BA		–	76	–	76
UFPB	PB		–	30	14	44
UFRN	RN		–	20	–	20
UFRPE	PE		–	29	–	29
UFPE	PE		–	81	6	87
UnB*	DF	Central-West	–	80	70	150
UnB	DF		–	32	22	54
UFG	GO		–	18	–	18
UFMG	MG	Southwest	–	62	–	62
UFU	MG		–	65	8	73
FUCAPE	ES		122	41	14	177
UFES	ES		–	85	–	85
UERJ	RJ		–	113	–	113
UFRJ	RJ		–	99	20	119
FUCAPE	RJ		18	–	–	18
PUC/SP	SP		–	175	–	175
USP	SP		–	95	119	214
USP/RP	SP		–	82	30	112
UNIFECAP	SP		–	139	–	139
FIPECAFI	SP		35	–	–	35
UPM	SP		185	–	–	185
UEM	PR	South	–	48	–	48
UFPR	PR		–	118	18	136
UNIOESTE	PR		–	30	–	30
FURB	SC		–	83	52	135
UFSC	SC		–	117	24	141
UNOCHAPECÓ	SC		–	33	–	33
UNISINOS	RS		–	179	28	207
Totais			530	2,058	451	3,013

Legend: *partnership among UnB, UFRN and UFPB

Source: research data (2016).

As shown in Table 1, the investigated HEIs come from 14 states. The states with the highest number of graduate programs in Accounting are: São Paulo, 4 HEIs with programs (PUC / SP, USP, USP / RP and UNIFECAP). The distribution of the Programs by regions is as follows: Southeast (13), South (7), Northeast (6) and Midwest (2). The North did not register any graduate program in Accounting functioning in 2016.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 3, p. 396-417, Oct./Dec. 2017

404

3.2 Data processing

Initially, all graduate programs in Accounting with academic Master's, professional Master's and Doctorate courses were identified until the year 2016. Then, each HEI was investigated individually in the three-year periods 2010-2012 and 2013-2016, in order to verify the number of students enrolled. These data were collected in the Sucupira (2016) Platform, CAPES.

We looked for or confirmed some data in isolation, per year, in the Sucupira platform or on the website of the programs, mainly in 2010. After selecting the students entering each HEI in their respective years, they were categorized by gender and quantified per period according to each entry modality in the courses (academic Master's, professional Master's degree and Doctorate). Their evolution was analyzed in terms of years and their concentrations according to the Brazilian macroregions. Descriptive statistical analyses of the data were also performed.

4. Description and Analysis of Results

4.1 Students by gender in graduate programs in Accountancy

Table 2 shows the number of new students in the period from 2010 to 2016, in the professional master's courses in Accounting, classified by gender.

Table 2

Number of new students in professional Master's courses according to gender (2010 till 2016)

HEI	2010		2011		2012		2013		2014		2015		2016		General Total		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
UFC	1	0	12	16	25	30	22	16	*	*	10	12	14	12	**84**	**86**	49%	51%
UPM		5	1	19	11	24	10	27	7	19	7	24	14	17	**50**	**135**	27%	73%
FUCAPE/ES			9	22	8	20	8	14	1	10	5	11	5	9	**36**	**86**	30%	70%
FUCAPE/RJ											8	6	3	1	**11**	**7**	61%	39%
FIPECAFI													8	27	**8**	**27**	23%	77%
General Total	1	5	22	57	44	74	40	57	8	29	30	53	44	66	**189**	**341**	36%	64%
Total %	17%	83%	28%	72%	37%	63%	41%	59%	22%	78%	36%	64%	40%	60%	36%	64%		

Legend: *not found in Sucupira Platform

Source: research data (2016).

Table 2 shows the number of female and male students in the professional Master's degree courses, most of which are concentrated in the Southeast, except for the UFC, located in the Northeast. The data reveal differences in the number of women enrolled (36%) when compared to men (64%), particularly emphasizing the male supremacy at UPM (73%) and FUCAPE / ES (70%).

According to the Federal Accounting Council (CFC, 2016), in the national average, 57% of the active registers in the Regional Accounting Councils (CRCs) are male. In the Northeast, about 59% are men; in the South and Southeast, 57%; in the Central-West, 58%; and in the Federal District, 54%. As there are more men working in the accounting area, these professionals' demand for graduate courses in the area is also higher.

Table 3 shows the number of students enrolled in academic Master's courses between 2010 and 2016.

Table 3

Number of new students in academic Master's courses according to gender (2010 till 2016)

IES	2010		2011		2012		2013		2014		2015		2016		General Total		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
UFC	8	6	9	5	12	6	7	9	5	6	10	16	16	13	**67**	**61**	52%	48%
UFBA	1	2	3	4	5	6	7	7	4	10	3	9	6	9	**29**	**47**	38%	62%
UFPB											7	8	9	6	**16**	**14**	53%	47%
UFRN											6	4	5	5	**11**	**9**	55%	45%
UFRPE											5	8	7	9	**12**	**17**	41%	59%
UFPE	0	1	5	3	5	9	5	11	6	6	6	7	7	10	**34**	**47**	42%	58%
UnB*	1	1	1	4	16	19	8	9	10	11					**36**	**44**	45%	55%
UnB											7	8	9	8	**16**	**16**	50%	50%
UFG													8	10	**8**	**10**	44%	56%
UFMG	1	4	2	2	2	9	3	6	6	2	6	6	6	7	**26**	**36**	42%	58%
UFU							8	8	5	3	12	8	10	11	**35**	**30**	54%	46%
FUCAPE			2	1	1		2	1	3	6	8	14		3	**16**	**25**	39%	61%
UFES	2	2	2	5	4	10	2	10	6	4	5	10	11	12	**32**	**53**	38%	62%
UERJ			4	11	7	11	9	11	11	9	13	7	5	15	**49**	**64**	43%	57%
UFRJ	6	2	2	5	5	7	8	10	7	16	4	7	4	16	**36**	**63**	36%	64%
PUC/SP	0	2	3	21	15	21	7	20	7	14	14	28	6	17	**52**	**123**	30%	70%
USP	4	11	4	13	10	8	9	9	2	3	3	5	6	8	**38**	**57**	40%	60%
USP/RP	2	2	3	7	5	13	6	9	11	1	4	5	5	9	**36**	**46**	44%	56%
UNIFACAP	1	1	3	6	20	23	6	19	5	15	8	14	6	12	**49**	**90**	35%	65%
UEM									13	1	6	11	11	6	**30**	**18**	63%	38%
UFPR	5	5	6	9	7	9	10	8	11	9	5	9	11	14	**55**	**63**	47%	53%
UNIOESTE											6	9	9	6	**15**	**15**	50%	50%
FURB	2	5	8	3	3	9	11	4	4	5	7	7	13	2	**48**	**35**	58%	42%
UFSC	8	5	13	5	6	9	13	8	8	6	12	8	8	8	**68**	**49**	58%	42%
UNOCHAPECÓ											6	9	12	6	**18**	**15**	55%	45%
UNISINOS	9	4	17	24	10	10	8	23	5	8	20	21	7	13	**76**	**103**	42%	58%
General Total	50	53	87	128	133	179	129	182	129	135	183	238	197	235	**908**	**1150**	**44%**	**56%**
Total %	49%	51%	40%	60%	43%	57%	41%	59%	49%	51%	43%	57%	46%	54%			**44%**	**56%**

Obs.: Institutions grouped in gray tones per Brazilian macroregions: Northeast, Central-West, Southeast and South.
Legend: * partnership among UnB, UFRN and UFPB

Source: research data (2016).

Table 3 shows that the total number of female participants (44%) was lower than that of male ones (56%), with a percentage difference of 12%. The academic Master's degree courses that presented a larger number of female new students in comparison to men in the period from 2010 to 2016 were: UEM (63%), FURB and UFSC (58%), UNOCHAPECÓ (55%), UFRN), UFU (54%), UFPB (53%) and CFU (52%). The others had a larger number of male new students, with emphasis on PUC / SP (70%), UNIPECAP (65%), UFRJ (64%) and FUCAPE (61%). If the annual differences of female participants are observed, changes are noticed throughout the period. Figure 2 shows the evolution, over the years (2010-2016), of student enrollments in the academic Master's courses for the programs listed in Table 3, by gender.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 3, p. 396-417, Oct./Dec. 2017

406
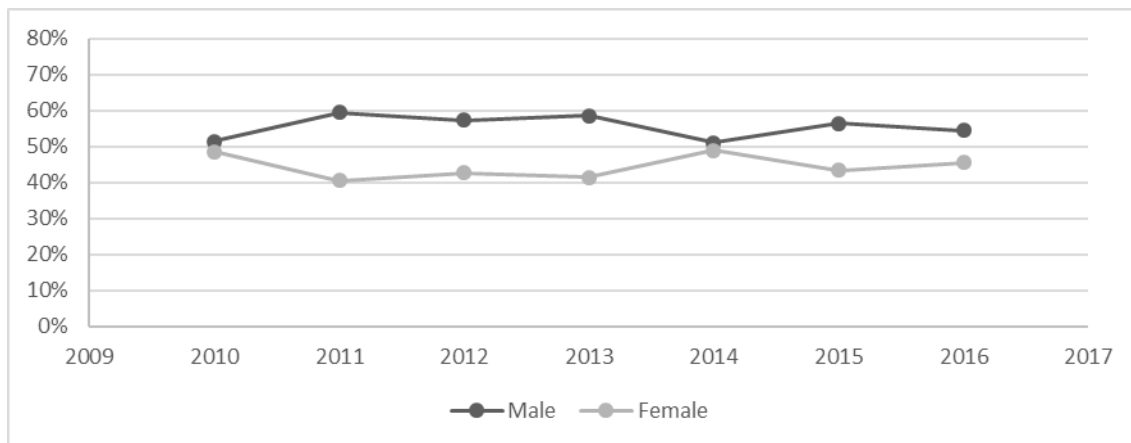
Figure 1. Evolution in percentage enrollments of students in academic Master's courses (2010-2016)

Source: research data.

In Figure 1, the proximity between the number of new female and male students in 2010 is observed, followed by its reduction in the subsequent years. In 2010, the male gender occupied 51% of the places and the female 49%. This almost equilibrium mainly derives from a larger number of female enrollments at UNISINOS, UFSC, UFRJ and UFC, as shown in Table 2. These percentages were not maintained though, as from 2011 to 2013, on average, 58% of the participants were male. In 2014, the percentages were almost the same (49% women and 51% men), but returned to 57% of male entrants in 2015 and 54% in 2016. In 2014, several institutions had higher female inflows, particularly USP / RP with 100% women. In that year, the South region also had a greater female inflow (59%).

The survey conducted by AICPA (2015) revealed that, in the period 2010-2014, the gender distribution of B.Sc. and Master's degrees in the accounting area remained on average 52% for males and 48% for females in the USA. Research data also showed that the number of male participants in the same period (2010-2014) was, on average, 56%. In Brazil, the difference is higher than that indicated by AICPA, with a lower admission of women nationally than in the United States. To verify if this occurs in an equivalent way in all Brazilian regions, Figure 2 is presented.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 3, p. 396-417, Oct./Dec. 2017

407
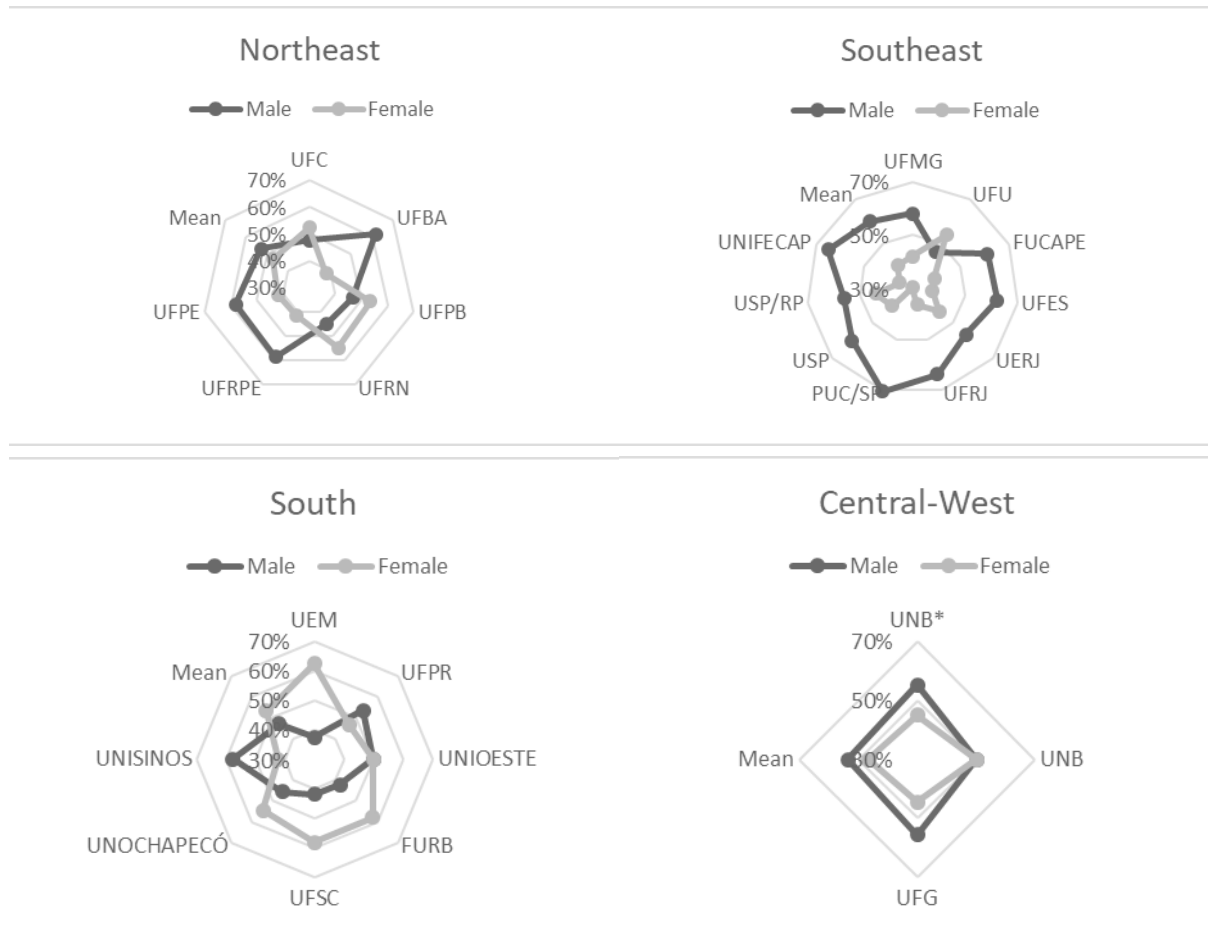
Legend: *partnership among UnB, UFRN and UFPB

Figure 2. Percentage enrollments in academic Master's programs per macroregions (2010-2016)

Source: research data (2016).

As observed in Figure 3, on average, the male inflow in the Northeast was 53%. Although UFRN (55%), UFPB (53%) and UFC (52%) had higher admission rates for women, UFBA (62%), UFRPE (59%) and UFPE (58%) presented higher inflows of men in the period analyzed.

In the Central-West, even with a smaller representation, the percentage was close to that of the Northeast (54% male), with UnB (2011-2014) presenting 55% of male new students and UFG (56%).

The Southeast presented an average 60% of male inflows. The highlights were for PUC / SP (70%), UFRJ (64%), UNIFECAP (63%), UFES (62%) and FUCAPE (61%), which had higher levels of male enrollment. Only UFU had higher average female inflows (54%), while the other institutions, USP, USP / RP, UFMG and UERJ, also had higher numbers of male participants.

The South is the only region that showed a larger average of female (53%) than male students (47%) in the academic Master's courses in Accounting over the study period. UEM (63%), FURB (58%), UFSC (58%) and UNOCHAPECÓ (55%) stood out with a greater inflow of women. UNIOESTE (50%) maintained the same indices for both genders. Only UNISINOS (58%) and UFPR (53%) presented higher proportions of male enrollment in academic Master's courses.

According to Brandão and Teixeira (2003), women have already managed to overcome issues involving gender or differences in levels of education between men and women at the undergraduate level. As pointed out by Pinto (2007), however, the same factor still does not happen at the graduate level, which supports the results of this research in graduate Accounting programs.

In Table 4, the list of Doctorate students is shown who entered the graduate programs in Accounting in Brazil.

Table 4

Number of new students in Doctorate programs by gender (2010 till 2016)

	2010		2011		2012		2013		2014		2015		2016		General Total		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
UFPB											2	3	2	7	**4**	**10**	29%	71%
UFPE													1	5	**1**	**5**	17%	83%
UnB*	3	3	4	6	6	8	1	7	14	18					**28**	**42**	40%	60%
UnB											4	8	4	6	**8**	**14**	36%	64%
UFU													5	3	**5**	**3**	63%	38%
FUCAPE	1	1	2	2	1	0	1	1	2	2	**	**	1	0	**8**	**6**	57%	43%
UFRJ									2	6	4	1	4	3	**10**	**10**	50%	50%
USP	2	12	6	11	13	15	7	13	10	9	7	6	4	4	**49**	**70**	41%	59%
USP/RP							4	0	3	9	2	5	2	5	**11**	**19**	37%	63%
UFPR									4	2	4	2	1	5	**9**	**9**	50%	50%
FURB	3	2	4	3	1	7	2	5	1	6	6	4	3	5	**20**	**32**	38%	62%
UFSC							1	2	3	3	5	1	4	5	**13**	**11**	54%	46%
UNISINOS							0	6	4	3	4	5	3	3	**11**	**17**	39%	61%
General Total	9	18	16	22	21	30	16	34	43	58	38	35	34	51	177	248	42%	58%
Total %	33%	67%	42%	58%	41%	59%	32%	68%	43%	57%	52%	48%	40%	60%	42%	58%		

Legend: * partnership among UnB, UFRN and UFPB; **Not identified.

Source: research data (2016).

In Table 4, it is shown that, of the 451 places occupied by Doctorate students in Accounting, between 2010 and 2016, about 42% are female and 58% male. These figures are close to the total number of admissions in the academic Master's (Table 3) but, for the Doctorate programs, the admission was different over time, especially in 2010. Analyzing the total of each institution, it was noted that UFU (63%), FUCAPE (57%) and UFSC (54%) presented a higher number of women entering Doctorate courses than men in the period 2010 to 2016. On the other hand, all the other institutions had higher numbers of men, particularly UFPE (83%), UFPB (71%), UnB (64%), USP / RP and FURB (62%). If analyzed annually, it is observed that, in 2015, the number of female enrollments surpasses the male enrollments, as can be observed in Figure 4.
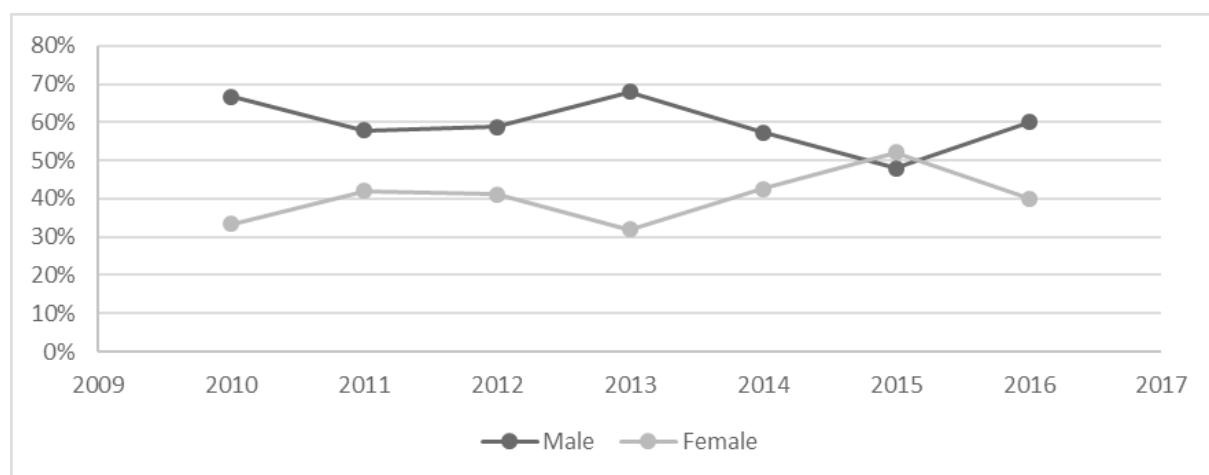
Figure 3. Percentage evolution in number of Doctorate students (2010-2016)

Source: research data.

According to Figure 3, over the years, the percentage of female admissions in doctorate courses differed. In 2010, about 67% of the new students were male, dropping in 2011 and 2012 to approximately 58%. There was an increase in male enrollment in 2013 though, reaching 68%, compared to 32% for the female gender. The difference may be due to the higher male admission, about 30% at USP, 75% at UnB and 100% at UNISINOS, in this same period. In 2014, a male ratio of 57% was obtained; in 2015, on the other hand, the number of female new students was 52%. The increase in female enrollment in 2015 was mainly influenced by the higher enrollment in the South, around 61%, but the Southeast also exerted influence with 52% of enrolled women. In 2016, however, a proportion of 60% of male participants is observed. Few institutions had a higher female admission that year, as was the case for UFU, FUCAPE and UFRJ, or a balanced inflow like USP.

Figure 4 shows the different distributions by macroregion and the proportions according to the Doctorate courses in Accounting.
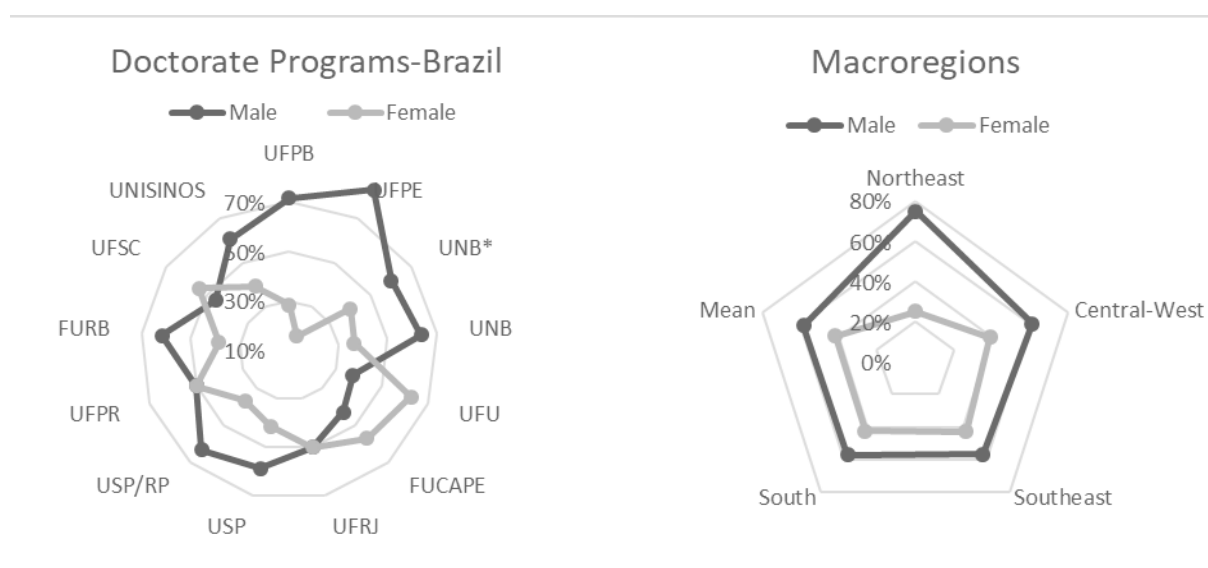
Figure 4. Percentages of enrollments in Doctorate programs per Brazilian macroregions (2010-2016)

Source: research data.

Overall, it can be observed in Figure 5 that the Southeast and South also present 57% for men and 43% for women entering Doctorate courses in the period analyzed. Because the number of programs in these regions is larger, however, the data should be interpreted with caution when compared with more recent or less numerous programs. In addition, UnB, in the Central-West, has an average total of 61% of men between 2010 and 2016 but, until 2014, it had a partnership with programs in the Northeast (UFPB and UFRN). In the Central-West, in total, the women enrolled in the academic Master's course corresponded to 46%, against 39% in the Doctorate program. Therefore, there are 7% less women in Doctorate courses.

In the Northeast, the doctorate courses at UFPB and UFPE, although only evaluating the years 2015 and 2016, being more recent courses, present a more expressive male inflow - on average 75% -, adding up to more than 83% at UFPE. In this region, it is observed that, in the doctorate programs, there is a percentage drop in the total number of female participants in comparison to the Master's degree. The difference amounts to 22%, as the female admission to the academic Master's course in the period analyzed corresponded to 47%. This indicates that the access of women to the Doctorate is smaller in the Northeast compared to the Master's, as happens in the Central-West.

The Southeast had some institutions with higher female than male admissions, such as UFU (63%) and FUCAPE (57%), and a balanced inflow like at UFRJ (50%). USP / RP (63%) and USP (59%) did not show the same pattern though, with a more substantial male inflow, the average for the Southeast corresponding to 57% of men in Doctorate courses in Accounting. Although with different percentages, the region presented figures close to the admissions in the academic Master's courses. FUCAPE (61%) presented a higher male participation in the academic Master's than in the Doctorate course (43%) though. The same was true for UFRJ, with higher male admission rates in the academic Master's(64%), which was not repeated in the doctorate (50%). The same factor did not occur at USP / RP, which had more male admissions in the Doctorate (63%) than in the Master's (56%).

In the South, the average was also higher in male (57%) compared to female new students (43%), in terms of total enrollment in Doctorate courses. The UFSC showed more expressive admissions of women (54%), and UFPR (50%) showed equality between both genders. FURB and UNISINOS, then, surpassed 60% of enrollments for the male gender in the Doctorate course. The FURB presented a higher female (58%) percentage in the Master's degree but did not maintain the same standard in the Doctorate course. On average, in the academic Master's courses, a greater number of female students was found than in the Doctorate courses in that region.

In addition, the faculty structure of the graduate programs in Accounting in Brazil was investigated in the Sucupira Platform (2016). In this survey, it was observed that, on average, the programs have a male majority - about 74% - against 26% of women. At some institutions, the difference is greater than 75%, with a high male concentration in the faculty, in the Southeast (FUCAPE 100%, PUC / SP 92%, USP 88%, USP / RP 78%, UFES 77%), South (UNOCHAPECÓ 100%, UNISINOS 93%, UFPR 85%) and Northeast (UFRN 85%, UFPE 83%, UFPB 79%). These data are in line with the findings by Casa Nova (2014), which pointed out in 2012 that 75% of the faculty in the *stricto sensu* Accounting programs in Brazil were men. This figure has not changed in recent years.

The South and Southeast had the same average percentage of male teachers in the programs (78%), followed by the Central-West (73%) and Northeast (66%). Besides this aspect, among the teachers who carry out other activities and work part-time at the institution of the program, men are predominant with about 83%. It is noteworthy that, even though women are underrepresented in most programs in the country, they predominantly work on an exclusive dedication regimen to teaching and research activities.

4.2 Discussion of research results

In general, the results of this research show that, for both the academic and professional Master's courses and the Doctorate courses in Accounting, the number of male students is higher than the female. In some regions and institutions, the difference in new students exceeds 20%, as in the case of the Southeast. Based on the sample period investigated, it is inferred that the access of male students in graduate programs in Accountancy in Brazil is superior to the female, and that regional and institutional characteristics may entail implications for the evidence.

These figures are in line with some research results, although with a distinct scope, but which may sparingly reveal clues in this direction. Pinto (2007) analyzed the racial and gender profile of the Master's courses at Universidade Federal Fluminense (UFF) from 2004 to 2006. The results revealed inequalities between men and women's participation in Master's courses, as well as racial inequality. For example, in the Master's degree in economics, the male participation was 58.7%.

Tabak (2002) points out several barriers to greater integration of women in the academic environment, such as: prejudice, marriage, children, low wages, lack of opportunities to achieve high positions and social pressures. These aspects may contribute to the predominance of male students in graduate courses. Velloso and Velho (2001) point out that Brazil is considered a central or peripheral country, which tends to present low female participation in college staff, as well as in high posts in the hierarchies of the higher education system. These factors can sometimes be a deterrent to higher female admission into the academy.

According to Casa Nova (2014), in 2012, of the 244 teachers of Accounting programs in Brazil, only 61 were women (25%). In a previous study, Casa Nova (2012, p. 40) found that, according to data from 2010, about 16% of the faculty were women at the School of Economics, Administration and Accounting (FEA / USP). The research by Santana, Nganga and Leal (2014) on the profile and production of the Master's and Doctorate courses in Accounting found a predominance of the male gender (83.63%). Based on the Sucupira Platform, in this research, it was observed that, in 2016, the faculty in the *stricto sensu* graduate program at FEA / USP was composed of only 12% of women.

In the research carried out, in the academic Master's courses, female (44%) inflows occurred in smaller proportions than male entrants (56%). Also in the doctorate courses, the number of female new students (42%) was lower than that of men (58%). The results, especially those related to admission ratios in the Master's degree, are close to the number of professionals with active records in the Regional Accounting Councils, averaging at 57% in 2016 (CFC, 2016).

The AICPA (2015) revealed that, in the United States, in 2013 and 2014, there were more male Bachelor (54%) and Doctorate students (52%) than females. In the Master's courses, a slightly larger number of female students (53%) than male students (47%) was observed. The mean percentages were also different according to the regions for both genders and for public and private institutions. The gender distribution among graduates and the enrollment trends, then, indicated more male (54%) than female graduates; a higher number of females at the Master's level (51%); and a higher proportion of men at the Doctorate level (64%).

In Brazil, when observed by regions, enrollments in academic Master's courses show, in the Northeast, an average percentage of 47% of female students; in the Central-West, 46%; and in the Southeast, on average, a total of 40% of women. This denotes a larger number of male entrants in these three regions. In the South, on the other hand, there were more female (53%) than male (47%) enrollments in academic Master's courses. The results from each macroregion do not reveal any proximity to the CFC data (2016), suggesting that there are other regional, cultural and institutional factors that may be influencing these percentages.

In relation to the average admission in Doctorate courses, women represented in the Northeast about 25% of the total number of participants; in the Central-West, 39%; and in the Southeast and South, 43%. Therefore, there is a disparity between the regions with regard to women's access to Doctorate courses, with greater differences in the Northeast. It should be noted, however, that these programs are more recent when compared to the programs in the Southeast and South. In turn, these also presented different values regarding the female access to Doctorate courses, corresponding to 40% for the Master's and 43% for the Doctorate in the Southeast, against 53% and 43%, respectively, in the South.

The figures show that the female enrollments in the South already surpass the male ones in the Master's courses. This is not a reality for all Brazilian regions, requiring further research to find explanatory factors for the differences, not in the least for the fact that these differences are not maintained in the Doctorate courses in this region.

The study does not only evidence a predominance of males in the academic and professional Master's and Doctorate courses, the research also showed that this is also the case at the institutions, in view of the predominantly male teaching staff (more than 74%), confirming what the literature had been showing (Rothwell, 1985; Ott, 1989; Caplan & Caplan, 1994; Husu, 2001; Buck et al., 2008; Haynes, 2008; Bagilhole & White, 2011; Haynes, 2017).

This scenario instigates questions of the following nature: To what extent can the differences highlighted represent the first barriers women face when entering the teaching profession? What are the main factors influencing the reduced levels of women in Accounting teaching? Is there an expectation of change in the coming years for this to be reversed, with the renewal of the teaching staff due to retirements?

Haynes (2017) argues that, although the past 25 years have shown an improvement in numerical terms in the position of women in Accounting, challenges remain at various levels. Rothwell (1985) points out that they still face a predominantly male market. Pinto (2007) warns that, even if the space of women in education gradually increases, the phenomenon that is occurring in undergraduate studies, where the female gender predominates, is not yet noticed in graduate studies.

In this context, the need for further research and further discussion on gender equality in all work environments is highlighted. On the recommendation of Morley and Crossouard (2015), gender should even be incorporated into higher education policy. Thus, it is important for universities to track statistics by gender, with a view to promoting gender equality and integration, accompanied by strategic action plans, resources and monitoring mechanisms over time.

5. Conclusions

This study aimed to verify the presence of the female gender among the students in the Brazilian graduate programs in Accountancy between 2010 and 2016. The data showed that, on average, in the period studied, there was a predominance of men at the Master's and Doctorate levels. Therefore, the data indicate that the female presence in the Brazilian graduate programs in Accountancy has been inferior to the male presence. Although there is an increase in the enrollment of women in undergraduate Accountancy courses, in *stricto sensu* graduate education, there is still a predominance of males, especially in Doctorate courses.

The results, on average, are in line with the findings of Velloso and Velho (2001) about the equality between the female and male genders regarding the presence in the Master's degree and in similar proportions in the Doctorate degree. In the study itself, this difference is small - about two percent less women entering Doctorate courses (42 percent) compared to academic Master's degrees. Although changes have been perceived over the years, this has not yet caused significant repercussions in the increase of female participation in the *stricto sensu* graduate courses in the accounting area.

Nevertheless, different proportions of male and female students were observed by year and region, with a greater percentage difference in female enrollment in Doctorate courses (Northeast 22%, Central-West 7%, Southeast -3% and South 11%) when compared to Master's courses. The analysis by macroregions showed that, on average, only the programs in the South had a higher number of female than male students. This is not repeated at the doctorate level though. The region with the highest percentage of male participation in the inflow is the Southeast, both in the academic Master's and in the doctorate courses.

Based on the research results, it is concluded that the presence of the female gender among the graduate students in Accountancy in Brazil has increased, but a long road remains ahead to achieve gender equality at the national level. This is especially relevant if one considers that this may lead to later work opportunities, the female teaching career and less gender inequality in universities.

The findings should be interpreted with caution due to the temporal access and different start dates of the programs at some institutions, some of which, as in the case of the Northeast, are more recent. Likewise, the data were collected in the Sucupira Platform and are restricted to the characteristics and procedures the programs adopted in the student selection process. Further detailing the aspects of the selection process could contribute to the understanding of the reasons that led to these differences in the number of students entering by gender in the period investigated.

It is recommended that future studies investigate other elements that may explain the differences found. The gender disparities that occur among the HEIs in the accounting area in Brazil need further exploration, whether in the composition of the faculty and course structure or in the attractiveness for future students and professionals. We suggest further studies of the cultural processes and intrinsic, informal and subtle structures that produce and reproduce inequalities. There may be interferences from internal policies, such as the relation between students and advisors and preferences.

References

Alvez, B. M., & Pitanguy, J. (1985). *O que é feminismo* (5. ed.). São Paulo: Brasiliense.

American Institute of Certified Public Accountants (AICPA). 2015. *Trends: In the supply of accounting graduates and the demand for public accounting recruits*. American Institute of CPAs. Reportado em 01 ago. 2017, de: https://www.aicpa.org/InterestAreas/AccountingEducation/NewsAndPublications/DownloadableDocuments/2015-TrendsReport.pdf

Andrade, L. F. S., Macedo, A. S., & Oliveira, M. L. S. (2014). A produção científica em gênero no Brasil: um panorama dos grupos de pesquisa de administração. *Revista de Administração Mackenzie, 15*(6, ed. espec.)*,* pp. 48-75. DOI: http://dx.doi.org/10.1590/1678-69712014/administracao.v15n6p48-75

Andrade, L. F. S., Macedo, A. S., & Oliveira, M. L. S. (2014). A produção científica em gênero no Brasil: um panorama dos grupos de pesquisa de administração [Edição Especial]. Revista de Administração Mackenzie, 15(6), pp. 48-75. http://dx.doi.org/10.1590/1678-69712014/administracao.v15n6p48-75

Araújo, M. F. D. (2005). Diferença e igualdade nas relações de gênero: revisitando o debate. *Psicologia Clínica, 17*(2)*,* pp. 41-52. DOI: http://dx.doi.org/10.1590/S0103-56652005000200004

Backlund, F. (2017). A project perspective on doctoral studies – a student point of view. *International Journal of Educational Management*, *31*(7), pp. 908-921. DOI: http://dx.doi.org/10.1108/IJEM-04-2016-0075

Bagilhole, B., & White, K. (2011). Introduction: Building a Feminist Research Network. In: Bagilhole, B., & White, K. (Orgs.). *Gender, power and management: A cross cultural analysis of higher education*. Basingstoke: Palgrave Macmillan. pp. 1-19. DOI: http://dx.doi.org/10.1057/9780230305953

Borges, S. H. (2008). A importância do ensino de pós-graduação na formação de recursos humanos para o estudo da biodiversidade no Brasil: um estudo de caso na ornitologia. *Biota Neotropica, 8*(1), pp. 21-27. DOI: http://dx.doi.org/10.1590/S1676-06032008000100002

Brandão, A. A., & Teixeira, M. P. (2003). *Censo étnico-racial da Universidade Federal Fluminense e da Universidade Federal do Mato Grosso.* Niteroi: EdUFF.

Buck, G. A, Clark, V. L. P, Leslie-Pelecky, D., Lu, Y., & Cerda-Lizarraga, P. (2008). Examining the cognitive processes used by adolescent girls and women scientists in identifying science role models: a feminist approach. *Science Education, 92*(4), pp. 688-707. DOI: http://dx.doi.org/10.1002/sce.20257

Caplan, P. J., & Caplan, J. N. (1994). *Thinking critically about research on sex and gender*. New York: Harper Collins.

Casa Nova, S. P. C. (2012). Impactos de mestrados especiais em Contabilidade na trajetória de seus egressos: um olhar especial para gênero. *Revista de Contabilidade e Controladoria, 4*(3), pp. 37-62. DOI: http://dx.doi.org/10.5380/rcc.v4i3.29952

Casa Nova, S. P. C. (2014). *Contabilidade das mulheres na universidade brasileira: lucros, e perdas, ingresso e permanência*. Tese de livre-docência, Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo, SP, Brasil.

Conselho Federal de Contabilidade (CFC). (2016). *Profissionais e escritórios registrados e ativos existem no território nacional*. Recuperado em 02 fevereiro, 2016, de http://www3.cfc.org.br/spw/crcs/ConsultaPorRegiao.aspx?Tipo=0

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). (2004). *Plano Nacional de Pós-Graduação* 2005-2010. Brasília: MEC/CAPES. Recuperado em: 12 julho, 2017, de https://www.capes.gov.br/images/stories/download/editais/PNPG_2005_2010.pdf

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 3, p. 396-417, Oct./Dec. 2017

414

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). (2013). Resultados da avaliação da Capes revelam que pós-graduação teve crescimento de 23% no triênio. Recuperado em 10 fevereiro, 2016, de http://www.capes.gov.br/36-noticias/6689-resultados-da-avaliacao-da-capes-revelam-que-pos-graduacao-teve-crescimento-de-23-no-trienio

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). (2014). *Plataforma Sucupira*. Recuperado em: 12 julho, 2017, de: http://www.capes.gov.br/avaliacao/plataforma-sucupira

Cunha, J. V. A., Cornachione Jr., E. B., & Martins, G. A. (2008). Pós-graduação: o curso de doutorado em ciências contábeis da FEA/USP. *Revista Contabilidade & Finanças, 19*(48), pp. 6-26. DOI: http://dx.doi.org/10.1590/S1519-70772008000300002

Drucker, P. F. (1999). *Management challenges for the 21st century*. New York, Harper.

Durso, S. O., Cunha, J. V. A., Neves, P. A, & Teixeira, J. D. V. (2016). Fatores motivacionais para o mestrado acadêmico: Uma comparação entre alunos de Ciências Contábeis e Ciências Econômicas à luz da Teoria da Autodeterminação. *Revista Contabilidade & Finanças, 27*(71), pp. 243-258. DOI: http://dx.doi.org/10.1590/1808-057x201602080

Flynn, C. B, Feild, H. S., & Bedeian, A. G. (2011). "Life could be a dream" What US-based management PhD students desire in an initial academic appointment? *Career Development International,16*(4), pp. 316-341. DOI: https://doi.org/10.1108/13620431111158760

Fogarty, J. T., & Goldwater, M. P. (2010). Beyond just desserts: The gendered nature of the connection between effort and achievement for accounting students. *Journal of Accounting Education, 28*(1), pp. 1-12. DOI: http://dx.doi.org/10.1016/j.jaccedu.2010.09.001

Franke, A., & Arvidsson, B. (2011). 'Research supervisors' different ways of experiencing supervision of doctoral students. *Studies in Higher Education, 36*(1), pp. 7-19. DOI: http://dx.doi.org/10.1080/03075070903402151

Godinho, T., Ristoff, D., Fontes, A., Xavier, I. M., Sampaio, C. E. M. (2005). *Trajetória da mulher na educação Brasileira*. Brasília: INEP.

Gomes, A. F. (2005). O outro no trabalho: mulher e gestão. *Revista de Gestão USP, 12*(3), pp.1-9. DOI: http://dx.doi.org/10.5700/issn.2177-8736.rege.2005.36522

Gomes, C. A. S, Corrêa, D. M. M. C, & Domingos, S. R. M. (2010). Participação feminina na produção científica em contabilidade publicada nos Anais dos Eventos EnANPAD, Congresso USP de Controladoria e Contabilidade e Congresso ANPCONT. *Anais Encontro da Associação Nacional de Pós-Graduação em Administração*, Rio de Janeiro, RJ, Brasil, 34.

Granovetter, M. (1978). Threshold models of collective behavior. *American Journal of Sociology, 83*(6), pp. 1420-1443.

Haynes, K. (2008). Moving the gender agenda or stirring chicken's entrails? Where next for feminist methodologies in accounting? *Accounting, Auditing & Accountability Journal, 21*(4), pp. 539-555. DOI: http://dx.doi.org/10.1108/09513570810872914

Haynes, K. (2017). Accounting as gendering and gendered: A review of 25 years of critical accounting research on gender. Critical Perspective on Accounting, *43*, pp. 110-124. DOI: 10.1016/j.cpa.2016.06.004

Husu, L. (2001). On metaphors on the position of women in academia and science. *NORA*, *Nordic Journal of Feminist and Gender Research, 9*(3), pp. 172-181.

Jurkus, A. F., Park, J. C., & Woodard, L. S. (2011). Women in top management and agency. *Journal of Business Research, 64*(2), pp. 180-186. DOI: http://dx.doi.org/10.1016/j.jbusres.2009.12.010

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 3, p. 396-417, Oct./Dec. 2017

415

Louro, G. L. (1996). Nas redes do conceito de gênero. In: Lopes, M. J. M., Meyer, D. E., & Waldow, V. R. (Orgs). *Gênero e saúde*. Porto Alegre: Artes Médicas.

Madalozzo, R. (2011). CEOs e composição do Conselho de Administração: a falta de identificação pode ser motivo para existência de teto de vidro para mulheres no Brasil? *RAC. Revista de Administração Contemporânea, 15*(1), pp. 126-137. DOI: http://dx.doi.org/10.1590/S1415-65552011000100008

Melo, H. P., Lastres, H. M. M., & Marques, T. C. N. (2004). Gênero no sistema da Ciência, Tecnologia e Inovação no Brasil. *Revista Gênero, 4*(2), pp. 73-94. DOI: http://dx.doi.org/10.22409/rg.v4i2.247

Meyers-Levy, J., & Loken, B. (2014). Revisiting gender differences: What we know and What lies ahead. *Journal of Consumer Psychology, 25*(1), pp.129-149. DOI: http://dx.doi.org/10.1016/j.jcps.2014.06.003

Morley, L., & Crossouard, B. (2015) Gender in the neoliberalised global academy: the affective economy of women and leadership in South Asia. *British Journal of Sociology of Education*, 37*(1)*, pp. 149-168. DOI: http://dx.doi.org/10.1080/01425692.2015.1100529

Mota, E. R. C. F., & Souza, M. A. (2013). A evolução da mulher na Contabilidade: os desafios da profissão. Anais do Congresso Convibra, São Paulo, SP, Brasil.

Nascimento, S., & Beuren, I. M. (2011). Redes sociais na produção científica dos Programas de Pós-Graduação de Ciências Contábeis do Brasil. *RAC Eletrônica, 15*(1), pp. 47-66. DOI: http://dx.doi.org/10.1590/S1415-65552011000100004

Nascimento, V. M. S., & Alves, F. J. (2014). Gênero e carreira: Um estudo de caso das percepções de Contadores Públicos. *Anais Congresso USP de Controladoria de Contabilidade*, São Paulo, São Paulo, SP, Brasil, 14.

Pinto, G. (2007). *Gênero, raça e pós-graduação: um estudo sobre a presença de mulheres negras nos cursos de mestrado da Universidade Federal Fluminense*. Dissertação de Mestrado, Universidade Federal Fluminense, Niterói, RJ, Brasil.

Plataforma Sucupira. (2016). *Coleta CAPES*. Recuperado em: 12 julho, 2017, de https://sucupira.capes.gov.br/sucupira/

Ott, E.M. (1989). Effects of the male-female ratio at work: Police women and male nurses. *Psychology of Women Quarterly, 13*(1), pp.41-57. DOI: http://dx.doi.org/10.1111/j.1471-6402.1989.tb00984.x

Reina, D., Reina, D. R. M, Silva, H. A. S., & Ensslin, S. R. (2012). Pós-Graduação em Contabilidade: Um estudo comparativo em cinco países. *Gestão & Regionalidade, 28*(82), pp. 49-63. DOI: http://dx.doi.org/10.13037/gr.vol28n82.1399

Rothwell, S. (1985). Is management a masculine role? *Management Education and Development, 16*(2), pp. 79-98.

Saffioti, Saffiotti H. I. B. (1997). Violência de gênero: lugar da práxis na construção da subjetividade, *Lutas Sociais, 2*(1), pp. 59-79.

Santana, A. R., Nganga, C. S. N., & Leal, E. A. (2014). Perfil e produção científica dos docentes nos Cursos de Pós-Graduação *Stricto Sensu* em Ciências Contábeis. *Anais do Congresso UFSC de Controladoria e Finanças e Iniciação Científica em Contabilidade*, São Paulo, SP, Brasil, 14.

Scott, J. W. (1995). Gender: A usefull category of historical analysis. *Educação & Realidade. 20*(2), pp. 71-99. DOI: http://dx.doi.org/10.2307/1864376

Silva, C. N., Anzilago, M., & Lucas, A. C. (2015). A mulher contabilista nas publicações acadêmicas brasileiras. *Anais Congresso USP de Contabilidade e Controladoria*, São Paulo, SP, Brasil, 15.

Silva, S. M. C. (2016). *Tetos de vitrais:* gênero e raça na contabilidade no Brasil. Tese de Doutorado, Universidade de São Paulo, São Paulo, SP, Brasil.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 3, p. 396-417, Oct./Dec. 2017

416

Souza, M. A., Machado, D. G., & Bianchi, M. (2011). Um perfil dos programas brasileiros de pós-graduação stricto sensu em Contabilidade. *Revista de Educação e Pesquisa em Contabilidade, 5*(2)*,* pp. 67-95. DOI: http://dx.doi.org/10.17524/repec.v5i2.344

Tabak, F. (2002). *O laboratório de Pandora: estudos sobre a ciência no feminino*. Rio de Janeiro: Gramond.

Tavares, H. M. F. (2000). Pesquisa brasileira precisa de um novo perfil. *Revista Pesquisa Fapesp*, n. 56. Recuperado em 02 fevereiro, 2016, de http://revistapesquisa.fapesp.br/

Tedeschi, L. A. (2007). Gênero: uma palavra para desconstruir e construir usos políticos. *Revista Artemis, 6*(1), pp. 106-113.

Tilly, L. A. (1994). Gênero, história das mulheres e História social. *Cadernos Pagu, 2*(3), pp. 29-62.

Unmüßig, B. (2007). *Política de gênero faz a diferença: o futuro da política feminista e da democracia de gênero na Fundação Heinrich Böll*. Berlim: Heinrich Böll Stiftung – A Fundação da Politica Verde. Recuperado em 13 Janeiro, 2016, de http://br.boell.org/downloads/Politica_de_genero_faz_a_diferenca_-_hbs_position_paper(2).pdf

Velloso, J., & Velho, L. (2001). *Mestrandos e doutorandos do país: trajetórias de formação*. Brasilia: Capes. Recuperado em 10 julho, 2016, de http://www.dominiopublico.gov.br/pesquisa/DetalheObraForm.do?select_action=&co_obra=24681

Weyer, B. (2007). Twenty years later: explaining the persistence of the glass ceiling for women leaders. *Women in Management Review, 22*(6), pp. 482-496. DOI: http://dx.doi.org/10.1108/09649420710778718

Characteristics and International Perspectives of Different Stakeholder Groups in IFRS for SMEs

Abstract

Objective: To identify the characteristics and perspectives of different stakeholder groups in the IFRS of Small and Medium-sized Enterprises (SMEs), in addition to two specific objectives: to identify and characterize who sent the comment letters to IASB and to characterize the comments of these letters in the pre-implementation of the standard.

Method: Secondary data collection in 57 pre-implementation comment letters forwarded to IASB, aiming for adjustments in the SMEs standard. The following data were processed to achieve the primary objective: name, category, country and region of each comment letter. To achieve the secondary objectives, the answers to the eight inquiries on the Exposure Draft of the standard were classified.

Results: The results indicate that all continents participated in the comments, but with a concentration in Europe. Accounting Associations were the main stakeholders in the IFRS of SMEs. Countries with little representativeness participated in the process, while others of global importance stayed out of any comment.

Contributions: The study aims to provide evidence of the lobbying activities and perceptions of the financial statement users and analyze issues in the context of the IASB about the SMEs. It is based on information collected through voluntary participation, and can therefore serve as an incentive for the stakeholders to remit their suggestions and improve on this or other IASB standards.

Keywords: Accounting regulation. IFRS. SMEs. Lobbying.

Juçara Haveroth
B.Sc. in Accountancy from Centro Universitário para o Desenvolvimento do Alto Vale do Itajaí (UNIDAVI) and Master's student in Accountancy at Universidade Regional de Blumenau (FURB). **Contact:** Rua Antonio da Veiga, Sala C-202, Itoupava Seca, Blumenau/SC, CEP.: 89030-003.
E-mail: jucara_haveroth@hotmail.com

Evandro De Nez
M.Sc. in Accountancy from Universidade Regional de Blumenau (FURB) and Professor at Centro de Ensino Superior de Realeza (CESREAL). **Contact:** Travessa Sete, 428, Caixa Postal 247, Centro, Realeza/PR, CEP.: 85.770-000.
E-mail: evandronez@hotmail.com

Ângela Bilk
B.Sc. in Accountancy from Centro Universitário para o Desenvolvimento do Alto Vale do Itajaí (UNIDAVI) and Master's student in Accountancy from Universidade Regional de Blumenau (Furb). **Contact:** Rua Antonio da Veiga, Itoupava Seca, Blumenau/SC, CEP.: 89030-003.
E-mail: angelabilk07@gmail.com

Roberto Carlos Klann
Ph.D. in Accountancy and Business Administration from Universidade Regional de Blumenau (FURB) and Professor, Graduate Program in Accountancy at Universidade Regional de Blumenau (FURB). **Contact:** Rua Antonio da Veiga, Sala D-202, Itoupava Seca, Blumenau/SC, CEP.: 89030-003.
E-mail: rklann@furb.br

1. Introduction

In 2000, the International Organization of Securities Commissions (IOSCO) recognized the International Accounting Standards (IAS), issued by the International Accounting Standards Committee (IASC) as accounting standards for listed companies. This was one of the first indications of the great changes that were to come and make a difference in the international accounting standards. Over time, the IASC transferred the responsibility to the IASB, known for its responsibility to issue the International Financial Reporting Standards (IFRS), being a true global benchmark of accounting standards (Jorissen, Lybaert, Orens & Van Der Tas, 2012).

The declared objective of the IASB in recent years has been to develop a single set of standards, which are the IFRS, so that all companies are covered, whether they are publicly accountable, for profit, irrespective of their size, legal status or domicile (Schiebel, 2008). Thus, since 2001, the IASB has striven to maintain a constant review of its Conceptual Framework (CF). Therefore, it developed a public space known as Discussion Papers, aiming to gather opinions of stakeholders in accounting on the various aspects of the conceptual structure (Araújo, Gomes, Lucena & Paulo, 2015).

The standards developed by the IASB are intended for the general use of entities in the financial statements and financial reports of many countries. These entities include those of small and medium size. Therefore, in 2009, the IASB issued IFRS for Small and Medium-sized Enterprises (SMEs) (IASB, 2009). IFRS for SMEs is seen as a response to the international demand of developed and emerging economies, seeking a simpler version of international standards and how to report their financial data (Albu et al., 2013).

In the same context of international accounting standards, it is important to highlight that these are constantly changing, a context in which stakeholder participation may occur through lobbying, which is the attempt to influence accounting standards in search of improvements in the standard. Lobbying ranges from the issuing of comment letters to public consultations to direct pressures on regulators (Georgiou, 2010). Despite its possibilities, however, approaches associated with the use of comment letters are more common, thus turning into the most used method to investigate this subject (Georgiou, 2010; Carmo; Ribeiro & Carvalho, 2015).

The comment letters have intermediation purposes, in which the interested parties can express themselves on the subjects discussed and expose their opinions, agree or diverge from the standard and, thus, exert pressure in order to influence the issuing of future or changes in existing standards (Hansen, 2011; Carmo et al., 2015). The comment letters generally follow a road map that includes suggestions for changes in the pre-implantation period, such as the subject of this study (Exposure Draft ED / 2013/9), and accounting standards for listed companies. This fact was one, as well as the post-implementation comment letter, which serves to analyze the impacts and possible contingencies arising from the application of the standard.

In view of the lack of papers on the IASB and the increased relevance of the entity as a standardizer in recent years, and the participation through lobbying and comment letters, the question that guides this research is: **what are the characteristics and perspectives of the various stakeholder groups in relation to the IFRS SMEs, presented in the comment letters for the pre-implementation period of the standard?** The specific objectives are, respectively, to identify and characterize who sent the comment letters to the IASB, that is, the category of who did so (whether private companies, auditors, associations, regulatory entities), as well as the continent and country the suggestions to the IASB originated in; and characterize the comments received in the comment letters for the pre-implementation period of the IFRS.

As a justification to study this standard, Sava, Mârza and Esanu (2013) emphasize the role of small and medium-sized enterprises in the generation of employment and wellbeing in society and, consequently, the economic importance they represent in any country in the world. This turns the international standards for small and medium-sized companies into one of the most discussed issues recently, and in need of further research, as Pedroza (2013) has also identified.

Regarding the importance of studying lobbying in accounting regulation, Tavares, Paulo, Anjos & Carter (2013) argue that it entails economic consequences. In that sense, Santos and Santos (2014) used the Economic Theory of regulation and analyzed the influence regulatory entities receive through lobbying, justifying the need for further research. In addition, as described in Carmo et al. (2015), although lobbying is common practice, little is known on how these pressures are exercised on accounting regulators.

Hence, this study contributes to the literature in different manners. First, it aims to provide evidence of the lobbying activities and perceptions of the financial statement users, who have been neglected thus far. Secondly, these aspects are analyzed in the context of the IFRS on SMEs, whose theme has been little discussed in Brazil and internationally. Finally, it is based on information collected on a voluntary base. This information is not always known and can therefore serve as an incentive for stakeholders to forward their suggestions and improve on this or other IASB standards.

2. Literature Review

In this literature review, the main aspects are discussed that help to support this study, such as information on the IFRS SMEs and the Regulation Theory, which discusses the mediation of user interests and participation in the public consultation process, being the main focus of analysis in this study.

2.1 IFRS SMEs

Millions of companies around the world are small and medium-sized entities. Thus, these entities correspond to 99% of companies worldwide (Vasek, 2011). According to Albu et al. (2013), small and medium-sized enterprises (SMEs) are the most dynamic sector in many economies.

In February 2007, the IASB published its International Financial Reporting Standard project for Small and Medium-sized Enterprises (SMEs), a specific standard for Small and Medium-sized Enterprises (SMEs). The objective of the IASB was to provide a simplified, self-sufficient set of rules based on the current set of IFRSs, however, adapted to entities without public responsibility, which IASB calls Small and Medium-sized Enterprises (SMEs). In July 2009, the IFRS development project for SMEs was completed and the final standard was issued (Schiebel, 2008). The purpose of the IFRS for SMEs is to transparently disclose information on the financial position, performance and cash flows of these entities (IAS, 2015).

According to Vasek (2011), the IFRS for SMEs is ready for immediate use on a voluntary base. Each entity that meets the definition of small or medium is able to prepare its financial statements under IFRS SMEs and present them as its other financial report, in addition to the reports prepared according to local requirements. What has been observed since the establishment of the IFRS for SMEs, however, is that it is governed by individual countries.

Brazil, in turn, the adoption process of the IFRS for SMEs occurred through the publication of CFC Resolution 1.255, of December 10, 2009, which approved NBC T 19.41 (Brazilian Technical Accounting Standard) - Accounting for Small and Medium-sized Enterprises, effective as of the fiscal years beginning on or after January 1, 2010. This Resolution presented the concept of small and medium-sized enterprises as those that have no public obligation to render accounts and prepare general financial statements for their external users (CFC 1.255/2009). Subsequently, Technical Pronouncement CPC SME - Accounting for small and medium-sized companies was created, with a glossary of terms (CPC, 2009).

According to the IFRS SMEs, the objective of a small or medium-sized entities' financial statements is to provide information on the entity's financial position, performance and cash flows, useful for the economic decision-making of a range of users of the statements who are in no position to require tailored reports as a means of meeting their specific information needs. Therefore, financial statements prepared in accordance with the IFRS for SMEs probably do not fully comply with all the measures required by the supervisor of a jurisdiction of laws and regulations (IAS, 2015).

It is known, however, that some adjustments to the standard may eventually arise for the sake of a better understanding and better response to the expectations of all users. The IASB is aware of this and offers a tool, which is the Discussion Papers and comment letters, contributing to the participation of stakeholders in a given standard, which is also a way to maintain a constant regulation of the current standard, as will be discussed in the next topics.

2.2 Theory of Regulation and participation in the public consultation process: pre-implementation of the international standard

The previous topic, referring to the analysis of current standards and the preparation of new accounting standards by the IASB, is inserted in the context of studies on regulation, related to the theory of Economic Regulation. In this context, within the list of existing theories, the most appropriate to explain the pressure process undertaken by stakeholder groups in accounting regulation is called the theory of Interest Groups, also known as the theory of Economic Regulation (Stigler, 1971; Posner, 1974; Peltzman, 1976; Carmo et al., 2015).

The first theoretical framework to deal with the relationship between stakeholder groups and bureaucracy was the theory of Economic Regulation, formulated by Stigler, (1971), entitled: The Theory of Economic Regulation. This theory points to the possibility that regulation may serve industry interests to the detriment of consumer interests. The author's basic thesis is that, as a rule, regulation is acquired by the industry, being elaborated and implemented to benefit it (Stigler, 1973; 1975).

The theory of Economic Regulation, or of Interest Groups, presupposes that regulation can be understood as the fruit of the supply and demand forces (Posner, 1974). This theory is the counterpoint to the theory of Public Interest, in which the state has to ensure that public interests stand out over private interests. It is thus perceived that the theory of Interest Groups is the intermediation among other regulation theories, evidencing that the regulator is not only concerned with public interest and will not be controlled by the entities it regulates.Therefore, those entities attempt to exercise their influence, that is, to put pressure on the regulator to achieve their objectives (Stigler, 1971; Peltzman, 1976; Posner, 1974).

Stigler's (1971) work on the theory of regulation, according to Peltzman (1976), is a rare contribution to all, as Stigler forced a fundamental change in the way important problems are analyzed. The central question for the theory then became to explain this regularity of small group predominance in the regulatory process.

Based on Stigler's (1971) studies, other complementary approaches have emerged that have somewhat advanced on the issue of lobbying (Posner, 1974; Peltzman, 1976). These include the work by Becker (1983). Becker (1983) argued that the regulatory process was the result of competition between different interest groups, in which the most influential managed to prevail and gain the added value resulting from the regulatory process (Carmo et al., 2015).

The central point of this theory, then, is to explain this regular predominance of the group in the regulatory process and in the political process in general (Peltzman, 1976). The understanding of lobbying in this situation is intended to influence certain decisions according to their interests, in which the the categories policy and economic consequences exist (Vieira & Borba, 2015).

The IFRS are standards issued by the IASB, following a six-stage roadmap, which are: 1st definition of the discussion agenda; 2nd project planning; 3rd development and publication of the Discussion Paper; 4th elaboration and presentation of a draft presentation of a new standard or modification of an existing standard; 5th development and publication of the standard; and 6th analysis of the impacts and possible contingencies arising from the application of the standard. Such a road map involves a broad process of public consultation, with the participation of individual and organizational stakeholders from around the world (IFRS, 2011), in which groups can try to make their interests prevail.

The IASB's first goal with the standards concerns the development of the public interest, the building of a single, high-quality, understandable and feasible set of globally accepted financial reports. The IASB has already expressed its views on the importance of the members of the academy's acquiring greater knowledge about who is interested in accounting standards and how they are actually involved in the IASB in the standard-setting process, given the importance of public participation (IAS, 2015).

The participation of lobbyists in the definition of accounting standards has been analyzed in earlier studies, but generally addressing a single country, focusing on the context of the Anglo-Saxon countries, such as the studies of Gavens, Carnegie and Gibson (1989), MacArthur and Groves (1993), Dechow, Sloan and Sweeney (1996), Ang, Cole and Lin (2000), Georgiou (2010) and Carmo et al. (2015).

Tandy and Wilburn (1992), when researching the regulatory environment of the United States, found that of a total of 13,369 letters of comments received by Fasb in relation to the adoption of its first accounting standards, only 239 were submitted by users of reports, of which 185 were individuals and 54 representative organizations. Robinson and Walker (1993) emphasized at the time the inequality of the various stakeholders in their influence on the standardization process.

In recent years, Hochberg, Sapienza and Vissing-Jorgensen (2009) conducted a study that investigated lobbying in relation to the approval of the Sarbanes-Oxley Act (SOX). They reported that, of 1,948 letters analyzed, 125 (6.4%) came from investor groups. The results pointed out that this participation was due to investors' positive expectations about the effects of SOX, that it would improve disclosure, transparency and corporate governance so as to reduce investors' control of management. For shareholders, these benefits could outweigh compliance costs.

Katselas, Birt and Kang (2011) claim that there is an intrinsically complicated nature of the political process surrounding the development of accounting standards, particularly when moving to the international arena. Lobbyist participation is considered important to standard setting bodies as it helps to measure the potential reaction of interest groups to their standards. Therefore, the participation of all lobbyists is often seen as a key component for an organization to gain legitimacy and success.

3. Methodological Aspects

Initially, the letters of the IFRS SMEs (Exposure Draft - ED / 2013/9) were obtained from the website www.ifrs.org; under the link: Standards Development; Work Plan for IFRS and Segment Reporting, where the explanatory documents of the IFRS SMES project were obtained, and the 57 pre-implantation comments letters, which contain the answers to the eight inquiries IASB formulated on the IFRS SMEs. All comment letters were analyzed. After obtaining these comment letters and to achieve the first specific objective, which was to identify the respondents' profile, the data were collected and processed. First, the data of the stakeholder groups were processed, such as: name, category, country and region of each respondent to the comment letter, according to research by Katselas et al. (2011) and Huian (2013). To achieve the second specific objective, content analysis was applied to the answers to the eight inquiries in ED / 2013/9. These inquiries refer to different themes, displayed in Picture 1.

Question 1	Definition of "fiduciary capacity".
Question 2	Accounting treatment of income tax.
Question 3	Other proposed amendments to IFRS for SMEs.
Question 4	Additional questions.
Question 5	Transitory determinations.
Question 6	Date of entry into force.
Question 7	Future analyses of IFRS for SMEs.
Question 8	Other comments.

Picture 1. Themes of Inquiries

Source: comment letter (IFRS, 2013).

For each answer, the number of arguments, number of phases per argument, presence of additional comments and level of agreement or disagreement from the inquiry. Picture 2 indicates the classification and operationalization concerning the answers analyzed.

Classification	Operationalization	Authors
Number of Arguments	Sum of all arguments per answer, corresponding to 1 for each argument.	Gerhardy and Wyatt (2001); Katselas *et al.* (2011)
Number of Sentences per Argument	Number of sentences for each argument.	Tilt (2001); Gerhardy and Wyatt (2001); Katselas *et al.* (2011)
Additional Comments	Number of additional comments.	Katselas *et al.* (2011)
Level of Agreement or Disagreement	Agreement: All arguments agreed. Partial Agreement: At least 1 argument with agreement. Partial Disagreement: At least 1 argument with disagreement. Disagreement: All arguments disagreed.	Huian (2013)

Picture 2. Classification of answers

Source: elaborated by the authors.

According to Gerhardy and Wyatt (2001) and Katselas et al. (2011), the number of supporting arguments for the answer to each question is a manifestation of lobbying. They consider that the greater the number of arguments in the answers to the inquiries, the greater the respondents' attempt to lobby. In this study, the number of arguments is presented for each response with a possibility of lobbying.

The studies by Tilt (2001), Gerhardy and Wyatt (2001) and Katselas et al. (2011) analyzed the content by counting sentences. The higher the number of sentences per argument, the more consistent the argument would be. Thus, this study also considered the number of sentences as a form of lobbying. Respondents may also give more robustness to the intended lobby if additional comments are provided (Katselas et al., 2011), which was considered another possibility of lobbying.

In addition to these three criteria, the answers to the eight questions asked by the IASB through ED / 2013/9 were evaluated according to the level of agreement or disagreement (agreement, partial agreement, partial disagreement, disagreement), proposed in the study by Huian (2013). There were a significant number of unanswered questions, which were included in the "no comment" category.

4. Results and Analysis

4.1 Respondent Profile

The IASB received 57 letters from respondents from various countries and continents, as well as from various stakeholder groups, which presented their answers to the eight questions proposed by the IASB in the Exposure Draft - ED / 2013/9 - IFRS SMEs.

Table 1 identifies the continents of the respondents, and the quantity of each of them. The so-called "global" continent is made up of respondents who have global coverage and therefore have not been allocated to specific continents.

Table 1

Continents of respondents

Region	Quantity	%
Europe	32	56.14%
Asia	13	22.80%
America	6	10.53%
Africa	3	5.27%
Oceania	3	5.27%
Total	57	100%

Source: research data.

It can be seen from Table 1 that the continent that most contributed respondents was Europe, with 32 responses, representing 56% of the total. This result supports the study by Huian (2013), which analyzed the comments letters from ED / 2009/12 to IFRS 9 - Financial Instruments, noting that the continent that participated most in the pre-implementation phase was Europe, with little more than 45% of 192 comment letters. A similar result was found in the study by Vieira and Borba (2015), in which the European respondents accounted for about 64% of the pre-implementation comment letters of IFRS 8 - Operating Segments.

The Asian continent showed the second largest number of respondents, with slightly more than 20% of the total, also corroborating the study by Huian (2013), as the second continent with the largest number of respondents. The continents with the lowest number of respondents were Africa and Oceania, with three respondents each, representing just over 5% of the total. In the findings of Vieira and Borba (2015), Oceania was also the continent with the lowest number of respondents, accounting for only 8 of 176.

Analyzing these results, we can see that all the continents participated as respondents, some in greater quantity than others. This result is consistent with the study by Chatham, Larson and Vietze (2010), which indicated the participation of all the continents in the interviewees in the comment letters reflecting on IFRS 39. Despite the participation of all continents in the process, it is important to note that most of the letters came from Europe, which leads to reflections on the true globalization of the IFRS SMEs standard, or its effective implementation by small and medium-sized companies around the world.

When comparing the total number of respondents (57) with that observed for other standards, however, such as 141 respondents to IFRS 6, 192 comments letters to IFRS 9 and 231 to IFRS 39, the participation for the IFRS SMEs seemed timid. Although small and medium-sized enterprises are an important component of the world economy, as already described, the participation of the stakeholders in the standard may not yet be represented in an equivalent way.

Table 2 details these continents, indicating the countries› participation in the context of the respondents to the ED / 2013/9 - IFRS SMEs proposed by the IASB as a way to capture the stakeholder groups› opinion.

Table 2

Countries of respondents

Country	Quantity	%
United Kingdom	17	29.83%
Germany	6	10.54%
France, United States, Australia	3	5.28%
Japan, Spain, Sri Lanka, Malaysia	2	3.51%
Argentina, Hong Kong, Kenya, Belgium, Indonesia, Zambia, Thailand, The Netherlands, Singapore, Israel, Guatemala, Ireland, South Africa, Korea, Italy, Norway, Mexico	1	1.75%
Total	57	100%

Source: research data.

Table 2 shows that the country with the largest number of respondents is the United Kingdom, representing almost 30% of the total. When associating this condition with what is indicated in Table 1 concerning the region with the highest participation, one can identify that the result is almost entirely due to the English respondents. A similar result was verified by Huian (2013) for IFRS 9, with the United Kingdom as the country with the highest participation in the comment letters, with 23 respondents. Vieira and Borba (2015), when analyzing IFRS 8, also identified the United Kingdom with 17 respondents.

Another country with a significant participation in the responses was Germany. In the findings by Huian (2013), Germany had a prominent participation in the respondents, with 12 letters, being the third country in number of answers. In the study by Borba and Vieira (2015), the country ranked fourth in number of respondents. In the results of this study, Germany was the second most representative country, with little more than 10% of the respondents.

The participation, although reduced (one or two respondents), of countries such as Guatemala, Kenya, Zambia, Sri Lanka, among others, is highlighted, which are of little importance in the global economic-financial scenario. The same had already been observed in the study by Vieira and Borba (2015), who find respondents to IFRS 8 comments from countries such as Malaysia, Israel and New Zealand.

It should be noted that no Brazilian respondent participated, and it is important to remember that, in Brazil, according to Sebrae (2014), small and medium-sized companies accounted for 27% of the Gross Domestic Product (GDP) of trade, with 53.4%. In the study by Huian (2013), Brazil participated with only one respondent, while the study by Vieira and Borba (2015) identified only two comment letters from Brazilian respondents, thus demonstrating the low participation of Brazilian interest groups in issuing their opinions on IFRS.

These results entail some practical implications. For example, in the Brazilian case, non-participation in the process may be an indication that companies are not actually implementing this standard, as not even regulatory entities (Federal Accounting Council and Accounting Pronouncements Committee) actually demonstrated their interest in opining on the process, which may indicate greater concern with the regulation of other companies. In a way, this goes against all the efforts of the Federal Accounting Council to disseminate the standard for small and medium enterprises in the Brazilian scope.

The stakeholder groups that participated in the pre-implementation of the IFRS SMEs through the answers to the questions elaborated by the IASB are highlighted in Table 3.

Table 3
Stakeholder groups

Stakeholder groups	Quantity	%
Accounting associations	23	40.35%
Regulators	18	31.58%
Accounting companies	7	12.28%
Audit firms	4	7.02%
Academy	2	3.51%
Representative institutions	2	3.51%
Private institutions	1	1.75%
Total	57	100%

Source: research data.

The members of the stakeholder group that participated most in the pre-implementation phase of the IFRS SMEs were the accounting associations and can be compared to the Brazilian Federal Accounting Council (CFC), representing a little over 40% of the total number of respondents. This result is consistent with the reality of Accounting, in which the biggest stakeholders in new norms are the accountants and their representatives, given the impact of international regulation on accounting professionals.

A second stakeholder group that participated significantly was the group of standardizers. The audit firms called the big four also participated in the process, as the IFRS SMEs will also impact the performance of their activities. We can see the small participation of the academy, with only two respondents, which generates an alert about the participation of people who study accounting deeply and their participation in the elaboration of standards that influence the companies' day to day. Also interesting is the participation of a natural person in the answers to the question.

This first analysis provides a profile of the main participants in the pre-implementation phase of the IFRS SMEs, consisting of accounting associations, mostly European. It also reflects the small participation of stakeholders from the Oceanic and African continents, as well as important countries in the world scenario, in the case of Brazil, without participation in the pre-implantation phase of the IFRS SMEs.

Firstly, one can reflect on the participation of accounting entities in the process, something that can be seen as natural, as audit firms, for example, whose participation has been effective in other standards, would not take much interest in this specific rule for not being within its scope. In this case, national regulators are observed that are trying to influence or contribute to the international standard, often seeking to introduce specific needs of their countries into the standard.

This arouses a second reflection, in line with the analysis in Table 2, about the non-participation of Brazilian regulators in this process, which makes it impossible for accounting features for SMEs in Brazil to be covered in the international standard. This, in turn, can contribute to its non-adoption at the national level.

4.2 Characterization of comments received by the IASB

This analysis covered the number of arguments, sentences by argument, additional comments and level of agreement or disagreement, as established in the section on methodological aspects of the research.

According to Gerhardy and Wyatt (2001) and Katselas et al. (2011), the number of arguments supporting a response, whether negative or positive, is a manifestation of lobbying. More arguments leave the answer more consistent though, strengthening the lobby. On the contrary, a small number of arguments lead to less consistency, reducing the strength of the lobbying the respondent intends. Table 4 indicates the number of arguments for questions answered to the IASB in the comment letters concerning the IFRS SMEs.

Table 4

Number of Arguments per question

Respondents	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
CM1	1	3	1	3	4	0	1	0
CM2	1	1	1	1	1	2	2	0
CM3	2	2	4	2	4	2	1	1
CM4	2	2	4	2	4	2	2	1
CM5	1	2	3	1	0	0	0	0
CM6	3	2	1	0	0	0	0	0
CM7	1	1	1	0	1	1	1	0
CM8	0	2	1	0	1	1	1	0
CM9	1	3	1	3	1	1	2	2
CM10	1	2	2	2	1	0	2	0
CM11	1	2	4	0	0	0	0	0
CM12	2	0	2	2	0	0	1	2
CM13	2	11	5	1	0	2	2	3
CM14	2	0	0	4	1	1	1	0
CM15	1	3	3	6	0	0	1	1
CM16	3	2	0	0	0	0	0	0
CM17	2	6	3	4	2	0	3	1
CM18	3	6	6	1	1	1	3	1
CM19	1	1	0	0	1	0	0	0
CM20	1	1	1	1	1	1	1	1
CM21	0	1	0	1	0	0	1	0
CM22	1	1	2	3	1	1	2	0
CM23	1	1	1	2	0	0	1	0
CM24	2	0	2	1	0	0	1	0
CM25	3	2	4	4	1	1	1	2
CM26	1	2	4	5	1	1	3	0
CM27	3	1	0	3	2	1	2	0
CM28	0	1	10	2	1	1	3	2
CM29	0	1	0	0	0	0	0	0
CM30	1	1	2	1	1	1	1	2
CM31	0	1	1	0	1	0	1	0
CM32	1	2	0	0	1	0	1	0
CM33	2	4	2	3	1	1	0	1
CM34	0	0	0	3	0	0	1	0
CM35	2	2	4	4	1	0	1	0
CM36	0	3	3	1	0	0	1	0
CM37	2	3	4	3	1	0	2	0
CM38	1	1	0	0	0	0	0	0
CM39	4	2	0	0	0	0	0	0
CM40	2	2	1	3	1	0	2	0
CM41	0	1	1	4	0	0	0	1
CM42	1	1	6	5	1	2	1	0
CM43	1	1	0	2	0	1	1	0

Respondents	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
CM44	1	1	3	2	1	0	0	5
CM45	1	1	4	1	1	0	1	0
CM46	0	1	5	4	0	0	1	0
CM47	1	2	2	0	2	2	0	0
CM48	0	1	1	0	1	0	0	0
CM49	0	1	7	2	0	0	1	0
CM50	0	0	0	2	0	0	1	0
CM51	2	3	7	3	1	1	2	5
CM52	1	2	1	2	1	1	1	7
CM53	2	3	4	3	1	0	2	0
CM54	1	1	0	0	0	0	0	0
CM55	1	1	1	1	1	1	1	1
CM56	0	1	0	1	0	0	1	0
CM57	1	2	2	0	2	2	0	0
Total	70	106	127	104	48	31	61	39
Average	1.23	1.86	2.23	1.82	0.84	0.54	1.07	0.68
Minimum	0	0	0	0	0	0	0	0
Maximum	4	11	10	6	4	2	3	7
Mode	1	1	0	0	1	0	1	0
Median	1	1	2	2	1	0	1	0

Legend: the abbreviation CM in the table corresponds to Comment Letter and the subsequent number to each of the 57 Comment Letters analyzed.

Source: research data.

Table 4 demonstrates that the question with the largest number of arguments was number 3, in which the IASB questioned a number of proposed changes to the IFRS SMEs, on which respondents had to agree or disagree. Some respondents argued in favor of or against the changes, individually specifying each item they would comment on. Other respondents provided general comments. Fifty-six amendments were proposed to the IFRS SMEs. This condition of a large number of proposals justifies that this is the question with the largest number of arguments. Questions 6 and 8 showed the smallest numbers of arguments, with 31 and 39, respectively. This is due to the fact that these are relatively simple questions, question 6 being related to the effective date of the IFRS SMEs and 8 to additional comments from the respondent. In question 6, several responses were only agreeing or disagreeing, without argument, while several respondents did not even answer question 8 because they had no further comments to make.

The maximum number of arguments for question 2 was 11 and for question 3 ten, being the questions with the largest number of arguments in a comment letter. This demonstrates that some respondents probably presented good arguments for their answers, which is in line with the idea of lobbying for IFRS SMEs. The median result for these two questions was 1 or 2 though, that is, most respondents used only one or two arguments to strengthen their views. This can be verified in the mode, where 0 or 1 prevailed for all questions.

This scenario identifies that, despite the interest groups' opportunity to participate in the formulation of a global standard, the participation, when done, mostly provides only simple answers with few arguments. This demonstrates, according to Gerhardy and Wyatt (2001) and Katselas et al. (2011), a low possibility of lobbying by these groups. This result can be related to this particular standard, given that it is particular to small and medium enterprises, which are hardly representative in many countries and class organizations.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 4, p. 418-437, Oct./Dec. 2017

428

The practical implication of this result is that the limitation in the number of arguments weakens the respondents' lobbying power, so that their demands may not be met or analyzed further by the IASB. In addition, it may also demonstrate some lack of interest from the participants in most of the issues, which may result, as already mentioned, from the effective adoption of this specific standard by companies around the world.

Table 5, elaborated based on the indications in the study by Tilt (2001), Gerhardy and Wyatt (2001) and Katselas et al. (2011), identifies the content of the arguments per question, using the number of sentences used by the respondent, recalling that, the higher the number of sentences, the more consistent the argument can be.

Table 5

Number of Sentences per question

Respondents	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
CM1	3	3	2	3	5	1	3	1
CM2	1	1	1	1	2	2	3	1
CM3	4	3	6	4	6	6	1	1
CM4	4	3	6	4	6	6	3	1
CM5	1	4	6	2	0	0	0	0
CM6	6	3	1	0	0	0	0	0
CM7	1	1	1	1	1	1	1	1
CM8	1	2	2	1	1	2	1	1
CM9	2	9	1	10	1	1	3	11
CM10	1	2	5	4	1	1	4	0
CM11	4	7	11	0	0	0	0	0
CM12	4	1	8	4	1	1	1	4
CM13	3	18	10	2	1	4	5	5
CM14	8	1	1	18	2	1	1	0
CM15	2	9	12	18	1	1	5	4
CM16	6	6	0	0	0	0	0	0
CM17	3	16	8	12	2	1	8	1
CM18	8	18	22	2	2	2	8	2
CM19	2	2	1	1	2	1	1	1
CM20	3	2	5	5	3	1	2	4
CM21	1	1	1	1	1	1	1	1
CM22	1	3	5	8	2	1	6	1
CM23	3	2	3	6	1	1	3	1
CM24	6	1	8	4	1	1	1	1
CM25	13	7	12	12	2	1	4	8
CM26	3	15	12	15	2	2	10	1
CM27	8	2	1	13	5	4	8	1
CM28	2	2	36	4	2	2	10	7
CM29	1	1	1	1	1	1	1	1
CM30	3	5	10	6	2	2	2	6
CM31	2	1	2	1	1	1	3	1
CM32	3	9	1	1	4	1	4	1
CM33	8	14	8	12	3	3	1	3

Respondents	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
CM34	2	1	1	13	1	1	2	1
CM35	4	4	7	24	1	1	2	1
CM36	2	13	12	2	1	1	3	1
CM37	5	15	13	10	3	1	9	1
CM38	3	4	0	0	0	0	0	0
CM39	19	8	0	0	0	0	0	0
CM40	18	7	4	13	3	1	13	1
CM41	1	1	1	11	1	1	1	6
CM42	4	2	39	28	4	5	4	0
CM43	2	2	1	8	1	2	2	1
CM44	2	3	9	3	3	1	1	10
CM45	2	1	13	1	2	1	2	1
CM46	2	4	13	8	1	1	6	1
CM47	3	12	9	1	5	8	1	0
CM48	1	3	3	1	2	1	1	1
CM49	1	3	26	13	1	1	5	1
CM50	1	1	1	8	1	1	1	1
CM51	6	9	33	12	4	4	9	12
CM52	3	8	4	4	3	3	4	12
CM53	2	2	1	1	2	1	1	1
CM54	3	2	5	5	3	1	2	4
CM55	1	1	1	1	1	1	1	1
CM56	1	2	2	1	1	2	1	1
CM57	3	2	3	6	1	1	3	1
Total	212	284	410	350	109	93	178	130
Average	3.72	4.98	7.19	6.14	1.91	1.63	3.12	2.28
Minimum	1	1	0	0	0	0	0	0
Maximum	19	18	39	28	6	8	13	12
Mode	1	2	1	1	1	1	1	1
Median	3	3	5	4	1	1	2	1

Legend: the abbreviation CM in the table corresponds to Comment Letter and the subsequent number to each of the 57 Comment Letters analyzed.

Source: research data.

Again, question 3 presented the highest average (7.19), with 410 sentences per response. This result corroborates the previous analysis, as a greater number of arguments should generate a greater number of explanations, constituting a greater number of sentences. Questions 5, 6 and 8 received the smallest number of sentences, which is in line with the previous findings regarding questions 6 and 8 (Table 4). As they had few arguments, one could expect a smaller number of sentences.

As observed in Table 5, there are questions with 0 or 1 sentence in total, that is, with no explanation whatsoever - this has already been verified in the arguments, in which questions without arguments obligatorily indicate that they do not have a sentence. As for the maximum, question 3 stands out with 39 arguments, as well as question 4 with a maximum of 28 sentences. It should be noted, therefore, that question 4, which supplements question 3, in which the respondents are supposed to indicate other considerations concerning the 56 proposals the IASB proposes in question 3, accompanied the indication of the previous question, with a large number of sentences.

The mode of the number of sentences for the questions is concentrated between 1 and 2, which possibly evidences the absence of lobbying by the stakeholder groups, at least through the comment letters. This inference stems from the limited number of arguments, as well as their lack of robustness, according to the small number of sentences (Tilt, 2001; Gerhardy & Wyatt, 2001).

The median found in the analysis was highlighted in questions 3 and 4, in which a large part of the respondents used several phrases to try to properly design their argument. This condition opens a parenthesis in the previous results, considering that, despite the low effectiveness of the respondents' lobbying, those that do effectively use several arguments, as well as several phrases to make themselves understood, thus exerting some pressure on the regulator.

Table 6 identifies the comment letters that have additional comments, consistent with Katselas et al. (2011) in that, to enhance the robustness of the intended lobbying, respondents include additional comments to achieve their objectives.

Table 6

Additional Comments

Additional Comments	Quantity	%
With Additional Comments	11	19.3%
No Additional Comments	46	80.7%
Total	57	100%

Source: research data.

Eleven respondents who provided additional comments in their comment letters, representing 19.3% of all comment letters. Therefore, little more than 80% of the sample did not make additional comments, indicating little participation of the respondents in this question, which could also be used for lobbying in the IASB. Additional comments were also requested in question 8 of ED / 2013/9 - IFRS SMEs, and the respondents' limited participation had already been noted in the analysis of arguments and sentences for this question, thus supporting this result.

Katselas et al. (2011) found in their study on ED 8 Operating Segments that 56% of the 182 comment letters had additional comments, a result different from that found for ED / 2013/9 - IFRS SMEs. Hence, the pressure found in the study by Katselas et al. (2011) was not the same as the respondents exercised in ED / 2013/9 - IFRS SMEs.

This situation can be justified by the different importance of each IFRS in its country of adoption, presuming that the IFRS of micro and small companies is less important due to the size of the companies involved. The impact of the IFRS in specific situations can also be indicated, like in the capital market for example, where the participation of small and medium-sized enterprises is rare.

In the same line as observed in Tables 4 and 5, the results of Table 6 demonstrate the low attractiveness of the IFRS SMEs standard for the lobbying activities, as most of the respondents (80%) did not comment further on their answers. Considering that these comments often represent an opportunity for the respondent to address a subject that was not part of the issues raised by the IASB, it can be inferred that the participants missed a great opportunity for lobbying. Again, this result may imply low adherence to the standard among companies in several countries, considering that important aspects for several countries may not have been contemplated.

Table 7 demonstrates what was proposed in Huian's study (2013), in which the level of agreement or disagreement (agreement, partial agreement, partial disagreement, disagreement) from the IASB questions was analyzed.

Table 7

Level of Agreement or Disagreement

	Agreement	Partial Agreement	Partial Disagreement	Disagreement	No comments	Total
Q1	13	13	10	18	3	57
Q1%	22.81%	22.81%	17.54%	31.58%	5.26%	100%
Q2	17	12	10	14	4	57
Q2%	29.82%	21.05%	17.54%	24.56%	7.02%	100%
Q3	16	10	16	5	10	57
Q3%	28.07%	17.54%	28.07%	8.77%	17.54%	100%
Q4	17	14	11	5	10	57
Q4%	29.82%	24.56%	19.30%	8.77%	17.54%	100%
Q5	24	14	5	5	9	57
Q5%	42.11%	24.56%	8.77%	8.77%	15.79%	100%
Q6	26	11	7	5	8	57
Q6%	45.61%	19.30%	12.28%	8.77%	14.04%	100%
Q7	13	16	9	10	9	57
Q7%	22.81%	28.07%	15.79%	17.54%	15.79%	100%
Q8	8	3	7	15	24	57
Q8%	14.04%	5.26%	12.28%	26.32%	42.11%	100%

Legend: The abbreviation Q in the table corresponds to the eight questions asked in ED/2013/9, while the subsequent number indicates the question it refers to. Q followed by a number and % corresponds to the percentage quantities.

Source: research data.

Question 1 inquired about the uncertainty generated in the users by the use of the term "fiduciary capacity", as well as whether it had an impact in practice, and also questioned whether the IFRS should clarify or replace that term. Although a large part of the respondents (31.58%) indicate that there is no doubt about the use of the term and also considering those who disagreed only partially, the percentage found is 49.12%. Nevertheless, 45.62% totally or partially agreed that the term should be better clarified, indicating a controversy, as almost half of the respondents had difficulties with the term. It is up to the IASB to reflect on what should be done to minimize these doubts.

Another proposal by the IASB (Q2) to align the principles of income tax section 29 with IAS 12 asked whether this condition was appropriate for small and medium-sized enterprises. As observed in Table 7, slightly more than 50% agreed totally or partially with the question, against about 42% who disagreed totally or partially. Again, as noted in question number 1, the understandings differ.

Question 3 contained the largest number of arguments and considerations found in the analysis of arguments and sentences, but was also one of the most unanswered questions (17.5%). This result can be considered due to the complexity of the question, covering more than 50 changes proposed by the IASB. As in the previous questions, although 45% agree totally or partially on the proposed amendments, slightly more than 35% of the respondents disagreed partially or totally from the proposals, indicating a certain division among the respondents as to the adequacy of the standard.

In question 4, the IASB inquired on any further changes that were not addressed in the proposals linked to question 3. The number of non-respondents was the same as in question 3 (10). Almost 55% of the respondents had no other considerations though, neither totally nor partially, leaving less than 30% who disagreed and proposed new changes.

Regarding the provisions on transition, in Question 5, the IASB proposed that changes to IFRS for SMEs should be applied retrospectively. Most of the respondents (more than 65%) agreed totally or partially with this proposition. Many described that they agreed with the IASB recommendation, given that the proposed changes would not be difficult to achieve. Question 6 addressed in ED / 2013/9 - IFRS SMEs asked about the effective date of the standard, indicating one year after the final changes issued. Almost 65% of the respondents agreed with this condition, and almost 15% did not respond. This issue shows the highest percentage of total agreement with the IASB, reaching just over 45% of the total.

The IASB asked (Q7) whether the adjustments to the standard should be made every three years, unless something extraordinary happened, with ten respondents fully opposing this deadline and 13 being totally in favor. For those who opposed, most suggested a longer period for adjustments, arguing that constant changes hurt the environment of small and medium-sized enterprises.

The last question, number 8, asked if the respondents had additional considerations. Only 11 respondents indicated that they had any additional information. This result corroborates the finding in the lobbying analysis of the additional comments, with little participation of the respondents. Almost 45% of the respondents indicated that they had no additional information to be answered.

Based on the above, it is inferred that the answers to the questions, when they address the specific standard, entail a lot of divergence, thus hindering the IASB's analysis. This can be observed in the initial questions. Greater agreement is found on the less technical questions, such as deadlines and effective dates. The stakeholders provide little answers to questions related to additional considerations though, confirming what has been verified previously, that the stakeholders did not carry out significant lobbying practices in the issue of IFRS SMEs.

These results entail practical implications for the IASB's formulation of the standard, as important questions were not answered or the answers were contradictory. Thus, there is a risk that the standard will not be able to effectively address the needs of micro and small enterprises around the world, being adopted only partially or not even being adopted.

Another issue for reflection is that the greater participation of stakeholders in the process could solve the doubts on the most controversial questions, with more responses and possibly with less contradiction among them.

5. Final Considerations

The IASB issued ED / 2013/9 - IFRS SMEs for the participation of stakeholder groups in the formulation of that standard, and received 57 comment letters. This article aimed to identify the characteristics and perspectives of the different interest groups regarding this IFRS. Specifically, the respondents were identified and characterized and the respective comments of each respondent were subject to content analysis.

The results on the respondents' characteristics indicate that all continents participated in the comments, however, there is concentration in Europe, as other studies had already indicated. It was also noted that those who responded most were the accounting associations, which were very interested in the IFRS of SMEs. It was also identified that organizations from countries with low representativeness participated in the process, while others with global importance were left out of any comments on the standard.

As for the content analysis, the results indicated that most of the answers have few arguments, which does not evidence strong lobbying by the interest groups. In addition, in certain types of questions, especially in the more technical ones, there are significant divergences while, in others, focused on deadlines and validity, greater agreement is found, specifically due to the characteristic of the question.

Considering the theory of Economic Regulation, used as a theoretical support for this study, it was verified that the lobbying activity, although timid, was exercised mainly by European regulators, who are not necessarily the users of the standard, but those responsible for monitoring its adoption in many countries, like in the case of Brazil, the CFC in relation to the accounting professionals. This goes against the theory in question, which provides for the participation of the regulated trying to influence the regulator. In the case of this specific norm, the regulated would be the accountants as, in most countries, the adoption of this standard by the companies is not mandatory, but it is so for the accountants. Thus, accountants would be represented in the process by their class organs, also due to the latter's greater possibility of lobbying in relation to individual accountants.

Regarding the implications of the study, it can be pointed out that the low participation of stakeholders in the process of preparing the standard within the IASB can serve as an alert for the IASB itself and other national regulatory entities regarding the effective adoption of the standard by SMEs in the different countries.

This implication applies, even more forcefully, to the Brazilian case, in which there was simply no participation of any representative in the process. Thus, an improper environment for the wide adoption of this standard is revealed in the Brazilian scenario as, possibly, important issues related to the scenario of micro and small Brazilian companies were not presented in the elaboration process of the standard. In this case, there may be a distance between what is provided in the standard and the reality of these companies in Brazil.

It is also important to highlight that the study has several limitations. Initially, the number of comment letters available and analyzed is small for a study fully focused on the lobbying for a particular accounting standard, in this case the IFRS SMEs, which had already been verified in the study by Gerhardy and Wyatt (2001). Another limitation is the content analysis, which is linked to the subjectivity determined by the researcher in his evaluation of responses that do not clearly suggest the respondent's agreement or disagreement.

There are several possibilities for future research based on the results of this research. The answers could be analyzed per continent and country, thus representing the trend of each region, and it can be made clearer which of them practices lobbying in a more enhanced manner. Lobbying can also be analyzed by other means available for evaluation. Another opportunity is related to the production of relevant and useful information for users of ED / 2013/9, empirically testing the actual effectiveness of using this information to elaborate the final IFRS SMEs.

References

Albu, C. N., Albu, N., Pali-Pista, S. F., Gîrbină, M. M., Selimoglu, S. K., Kovács, D. M., Lukács, J., Mohl, G., Müllerová, L., Paseková, M., Arsoy, A. P., Sipahi, B. and Strouhal, J. (2013). Implementation of IFRS for SMEs in Emerging Economies: Stakeholder Perceptions in the Czech Republic, Hungary, Romania and Turkey. *Journal of International Financial Management & Accounting*, *24*(2), pp. 140–175. DOI: http://dx.doi.org/10.1111/jifm.12008

Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. *The Journal of Finance, 55*(1), pp. 81-106. DOI: http://dx.doi.org/10.1111/0022-1082.00201

Araújo, V. R. B. S., Gomes, A. K. L., Lucena, W. G. L., & Paulo, E. (2015). Análise das opiniões emitidas nas cartas comentários sobre o termo prudence. *Revista de Educação e Pesquisa em Contabilidade (REPeC), 9*(2), pp. 140–175. DOI: http://dx.doi.org/10.17524/repec.v9i2.1231

Becker, G. S. (1983). A theory of competition among pressure groups for political influence. The quarterly journal of economics, *98*(3), pp. 371-400. DOI: https://doi.org/10.2307/1886017.

Carmo, C. H. S., Ribeiro, A. M., & Carvalho, L. N. G. (2014). Influência dos grupos de interesse no processo de normatização contábil internacional: o caso do Discussion Paper sobre Leasing. *Contabilidade Vista & Revista, 25*(2), pp. 98-118.

Chatham, M. D., Larson, R. K., & Vietze, A. (2010). Issues affecting the development of an international accounting standard on financial instruments. *Advances in Accounting, 26*(1), pp. 97-107. DOI: http://dx.doi.org/10.1016/j.adiac.2010.03.002

Conselho Federal de Contabilidade. (2009). Resolução CFC Nº. 1.255/09, de 10 dezembro de 2009. Recuperado em 16 de outubro de 2016, de http://www.normaslegais.com.br/legislacao/resolucaocfc1255_2009.htm.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary accounting research, 13*(1), pp. 1-36. DOI: http://dx.doi.org/10.1111/j.1911-3846.1996.tb00489.x

Gavens, J. J., Carnegie, G. D., & Gibson, R. W. (1989). Company participation in the Australian accounting standards setting process. *Accounting & Finance, 29*(2), pp. 47-58. DOI: http://dx.doi.org/10.1111/j.1467-629X.1989.tb00101.x

Georgiou, G. (2010). The IASB standard-setting process: Participation and perceptions of financial statement users. *The British Accounting Review, 42*(2), pp. 103-118. DOI: http://dx.doi.org/10.1016/j.bar.2010.02.003

Gerhardy, P., & Wyatt, L. (2001). An Analysis of Corporate Lobbying on Australia's ED 49, Accounting for Identifiable Intangible Assets. Pacific *Accounting Review, 13*(2), pp. 71-102. DOI: http://dx.doi.org/10.1108/eb037961

Hansen, T. B. (2011). Lobbying of the IASB: an empirical investigation. *Journal of International Accounting Research, 10*(2), pp. 57-75. DOI: http://dx.doi.org/10.2308/jiar-10078

Hochberg, Y. V., Sapienza, P., & Vissing-Jørgensen, A. (2009). A Lobbying Approach to Evaluating the Sarbanes-Oxley Act of 2002. *Journal of Accounting Research, 47*(2), pp. 519-583. DOI: http://dx.doi.org/10.1111/j.1475-679X.2009.00321.x

Huian, M. (2013). Stakeholder's participation in the development of the new accounting rules regarding the impairment of financial assets. *Business Management Dynamics, 2*(9), pp. 23-35.

IFRS para PMEs (2009). Recuperado em 16 de outubro de 2017, de http://www.ifrs.org/issued-standards/ifrs-for-smes/.

IFRS para PMEs (2015). Recuperado em 16 de outubro de 2017, de http://www.ifrs.org/issued-standards/ifrs-for-smes/.

IFRS para PMEs. Recuperado em 21 de setembro de 2016, de http://ifrsbrasil.com/category/demonstracoes-contabeis/ifrs-pequenas-e-medias-empresas.

IFRS. Recuperado em 16 de outubro de 2016, de http://www.ifrs.org/Pages/default.aspx.

Jorissen, A., Lybaert, N., Orens, R., & Van Der Tas, L. (2012). Formal participation in the IASB's due process of standard setting: a multi-issue/multi-period analysis. *European Accounting Review, 21*(4), pp. 693-729. DOI: http://dx.doi.org/10.1080/09638180.2010.522775

Katselas, D., Birt, J., & Kang, X. (2011). International firm lobbying and ED 8 Operating Segments. *Australian Accounting Review*, *21*(2), pp. 154-166. DOI: http://dx.doi.org/10.1111/j.1835-2561.2011.00132.x

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 4, p. 418-437, Oct./Dec. 2017

435

Katselas, D., Birt, J., & Kang, X. H. (2011). International firm lobbying and ED 8 operating segments. *Australian Accounting Review, 21*(2), pp. 154-166. DOI: http://dx.doi.org/10.1111/j.1835-2561.2011.00132.x

Macarthur, J. B., & Groves, R. E. V. (1993). An empirical investigation into the impact of profit sharing schemes of executivies on the content of corporate submissions on proposed accounting standards. *Journal of Business Finance & Accounting, 20*(5), pp. 623-638. DOI: http://dx.doi.org/10.1111/j.1468-5957.1993.tb00280.x

Pedroza, J. K. B. R. (2013*) IFRS para PMES: uma investigação quanto ao nível de compreensão de contadores amparada na Teoria de Resposta ao Item*. Dissertação de Mestrado em Ciências Contábeis Universidade de Brasília, Universidade Federal da Paraíba e Universidade Federal do Rio Grande do Norte. João Pessoa, PB.

Peltzman, S. (1976). Toward a more general theory of regulation. *The Journal of Law and Economics, 19*(2), pp. 211-240. DOI: http://dx.doi.org/10.1086/466865

Posner, R. A. (1974). Theories of economic regulation. *The Bell Journal of Economics and Management Science, 5*(2), pp. 335-358. DOI: http://dx.doi.org/10.2307/3003113

Robinson & Walker, R. G, P. (1993) A critical assessment of the literature on political activity and accounting regulation. Research in Accounting Regulation, 7(1), pp.3-40.

Santos, O. M. D., & Santos, A. D. (2014). Lobbying on Accounting Regulation: Evidence from the Oil Industry. *Revista Contabilidade & Finanças, 25*(65), pp. 124-144. DOI: http://dx.doi.org/10.1590/S1519-70772014000200004

Sava, R., Mârza, B., & Eşanu, N. (2013). Financial reporting for SMEs–past and perspectives. *Procedia Economics and Finance, 6,* pp. 713-718. DOI: http://dx.doi.org/10.1016/S2212-5671(13)00193-7

Schiebel, A. (2008). Is there a solid empirical foundation for the IASB's draft IFRS for SMEs? *Althanstrasse,* 39-45. DOI: http://dx.doi.org/10.2139/ssrn.994684

Schiebel, A. (2008). Is there a solid empirical foundation for the IASB's draft IFRS for SMEs? pp. 1-29. DOI: http://dx.doi.org/10.2139/ssrn.994684

Sebrae (2014). Recuperado em 17 de outubro de 2017. https://www.sebrae.com.br/sites/PortalSebrae/ufs/mt/noticias/micro-e-pequenas-empresas-geram-27-do-pib-do-brasil,ad0fc70646467410VgnVC-M2000003c74010aRCRD

Stigler, G. J. (1971). The theory of economic regulation. *The Bell journal of economics and management science,* 3-21.

Stigler, G. J. (1971). The theory of economic regulation. *The Bell journal of economics and management science, 2*(1), pp. 3-21. doi: http://dx.doi.org/10.2307/3003160

Stigler, G. J. (1973). General economic conditions and national elections. *The American Economic Review, 63*(2), pp. 160-167.

Stigler, G. J. (1975). The citizen and the state: Essays on regulation, 720. Chicago: *University of Chicago Press.*

Tandy, P. R., & Wilburn, N. L. (1992). Constituent participation in standard-setting: The FASB's first 100 statements. *Accounting Horizons,* Sarasota, *6*(2), p. 47.

Tavares, M. F. N., Paulo, E., Anjos, L. C. M., & Carter, D. (2013). Contribuições ao exposure draft revenue from contracts with costumers: análise das opiniões das firmas sobre a obrigação de desempenho onerosa. *Revista de Contabilidade do Mestrado em Ciências Contábeis da UERJ, 18*(2), pp. 81-99.

Tilt, C. A. (2001). The content and disclosure of Australian corporate environmental policies. *Accounting, Auditing & Accountability Journal, 14*(2), pp. 190-212. DOI: http://dx.doi.org/10.1108/09513570110389314

Vasek, L. (2011). IFRS for SMEs a new challenge for worldwide financial reporting. *International Journal of Management Cases, 13*(4), pp. 115-120. DOI: http://dx.doi.org/10.5848/APBJ.2011.00118

Vieira, R. T. & Borba, J. A. (2015) Análise do processo de revisão pós-implementação do IFRS 08 por meio das cartas comentários enviadas por empresas. *Revista de Contabilidade e Controladoria, 7* (1) pp. 64-80. doi: http://dx.doi.org/10.5380/rcc.v7i1

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 4, p. 418-437, Oct./Dec. 2017

437

Capital Structure and Corporate Governance in Companies Listed on BM&FBovespa

Abstract

Objective: to analyze the relation between capital structure and corporate governance.

Method: the sample consists of the companies listed on BM&FBOVESPA between 2010 and 2014. The data were collected on the BNDES website and in the Economática® database and quantitative analysis was applied by the test of difference of means, correlation analysis and multiple linear regression.

Results: the companies that did not participate in the differentiated corporate governance levels present a higher mean indebtedness. In 2012, the companies received a higher volume of resources funded by BNDES, particularly Petrobras. The results appoint that corporate governance exerted negative influence on the subsidized indebtedness, and that the profitability was negatively related with all four types of indebtedness analyzed, confirming what is provisioned in the Pecking Order Theory.

Contributions: The research contributes to enrich the bibliography on capital structure by incorporating the subsidized debt as one of the explanatory variables of the model. Due to its great importance in the corporate context and the fact that academic research results are generally heterogeneous, the discussions on capital structure contribute somehow to the advance in this research area.

Key words: Capital structure. Corporate governance. Subsidized indebtedness.

Bruno Goes Pinheiro
M.Sc. in Administration and Controllership from Universidade Federal do Ceará (UFC) and Banking analyst at Banco do Nordeste do Brasil (BNB). **Contact:** Avenida Dr. Silas Munguba, 5700. Ambiente de Crédito Comercial e Cartões. Passaré. Fortaleza(CE). CEP: 60743-902.
E-mail: brunogoesp@gmail.com

Alessandra Carvalho de Vasconcelos
Ph.D. in Production Engineering from Universidade Federal de Santa Catarina (UFSC) and Professor at Universidade Federal do Ceará (UFC). **Contact:** Av. da Universidade, 2431. Departamento de Contabilidade. Benfica. Fortaleza (CE). CEP: 60020-180.
E-mail: alevasconcelos.ufc@gmail.com

Márcia Martins Mendes De Luca
Ph.D. in Controllership and Accounting from University of São Paulo (USP) and Professor at Universidade Federal do Ceará (UFC). **Contact:** Av. da Universidade, 2431. Departamento de Contabilidade. Benfica. Fortaleza (CE). CEP: 60020-180.
E-mail: marciammdeluca@gmail.com

Vicente Lima Crisóstomo
Ph.D. in New Tendencies in Company Management from Universidad de Valladolid and Professor at Universidade Federal do Ceará (UFC). **Contact:** Av. da Universidade, 2431. Departamento de Contabilidade. Benfica. Fortaleza (CE). CEP: 60020-180.
E-mail: vicentelc@gmail.com

1. Introduction

Capital structure is one of the main items of corporate finance (Correa, Basso & Nakamura, 2013; David, Nakamura & Bastos, 2009; Terra, 2009). The theme is related to the use of equity and third-party capital to finance projects. Equity is represented by the proceeds from the retention of profits and also from the resources invested by the company shareholders, whose resources have no repayment term. Third-party capital corresponds to resources obtained by contracting debts, in which there is a set period for discharge, in addition to the payment of interest for its use (Assaf Neto & Lima, 2010).

The theme started to be further discussed by Modigliani and Miller (1958), according to whom a company's form of financing is irrelevant to determine its value. Several studies have been carried out and some theories have been elaborated in the attempt to determine the main factors that influence the use of equity or third-party capital and if the way they are used affects the company value (Bastos, Nakamura & Basso, 2009; Handoo & Sharma, 2014; Joneveer, 2013; Thippayana, 2014).

Trade-off theory and Pecking Order theory are the two most used in empirical studies and dominate the discussion on the capital structure. There is no consensus, however, on which theory best explains the capital structure and its determinants (Campos & Nakamura, 2013; Correa et al., 2013; Pohlmann & Iudícibus, 2010). The Agency theory and the Market Timing theory are also present in empirical studies on capital structure, and their assumptions have already produced results that show their importance in the context of capital structure theories (Baker & Wurgler, 2002; Chen & Huang, 2013; Sun, Ding, Guo, & Li, 2016; Yang, 2013).

Crisóstomo and López-Iturriaga (2011) suggest that countless factors of different kinds can influence how companies are able to obtain resources in the market. Among these, corporate governance stands out, as the companies adopting the best practices have more advantages to contract debt (Silveira, Perobelli, & Barros, 2008). Even though corporate governance has already been tested as a possible determinant of capital structure (Chang, Chen, Chou & Huang, 2015; Chang, Chou & Huang, 2011), the results are contradictory.

In view of the above, in this study, we aim to answer the following question: What is the relationship between capital structure and corporate governance?

The main objective of the study is to analyze the relationship between capital structure and corporate governance and the following specific objectives are: (i) to identify the profile of subsidized debts in companies that adopt the best governance practices and the debt profile of other companies ; (ii) to identify the difference between the indebtedness in the companies that adopt the best governance practices and the indebtedness in the others; and (iii) to investigate the relationship between indebtedness and the factors pointed out in the literature as capital structure determinants.

The sample includes the companies listed on BM & FBOVESPA from 2010 to 2014. The data were collected from the Brazilian Development Bank (BNDES) (2016), in relation to subsidized indebtedness; and from Economática®, regarding the economic-financial situation. Quantitative analysis was performed using methods such as the test of difference of means, correlation analysis and multiple linear regression.

As capital structure theories have been elaborated in developed economies, it is timely to validate them in markets of developing countries, such as Brazil (Brito, Corrar, & Batistella, 2007). Although there are many theoretical and practical studies on the subject, the issue has not been defined yet, and imperfections in emerging markets require adjustments in the models already applied (Assaf Neto & Lima, 2010).

In addition, the main contribution of this study is the analysis of the capital structure, especially the composition of indebtedness, under the corporate governance approach, incorporating the company's participation in one of the differentiated levels (Level 1, Level 2 and New Market) as a factor that can explain the indebtedness of the companies listed on BM & FBOVESPA. In addition, this study will not treat third-party capital homogeneously (Póvoa & Nakamura, 2015), as it considers the debts contracted at BNDES (2016) as one of the measures of indebtedness, which distinguishes it from other studies. BNDES was intentionally selected because it is the most active development bank in credit granting in Brazil (Bachiller, 2016; Póvoa, Vieira, Kudlawicz & Bach, 2015).

2. Theoretical Framework

2.1 Capital structure theories

Over the last 50 years, different theories have sought to explain how firms determine their capital structure. Considering a perfect capital market, Modigliani and Miller (1958) proposed that the capital structure is irrelevant to determine the company value. Based on their proposals, however, other studies have found results that show the non-irrelevance of the capital structure, due to the influence of several factors. This advance in research indicates that, in fact, there are market imperfections that cause the non-irrelevance of the capital structure, such as taxes, agency costs, bankruptcy costs, and informational asymmetry. The Trade-off, Pecking Order, Agency and Market Timing theories address these imperfections from different perspectives.

The Trade-off theory proposes that there is an optimal capital structure, obtained by the combination of equity and third-party capital. According to this theory, the optimal capital structure maximizes the possibility of using external indebtedness to finance investments (Myers, 1984).

According to the Pecking Order theory by Myers (1984) and Myers and Majluf (1984), there is an ideal hierarchy (or order of preference) to be used in the choice of funding sources. The first form of financing would be the use of internal resources, through the retention of profits. If these resources are not enough, the company would then prefer external financing through the contraction of debt. And, in the latter case, shares would be issued, influencing the share value, the dividend division and, consequently, the ownership structure, which is not well accepted by the main shareholders.

The Agency theory, in turn, analyzes the relationship between the agent and the principal, as well as the respective costs. The agency relationship can be characterized as a contract in which one or more people (principal) commission a third party (agent) to perform services (Jensen & Meckling, 1976). The agency problem arises when both parts of the relationship are maximizing their usefulness and, for this purpose, the agent can act for his or her own benefit (Jensen & Meckling, 1976). In order to reduce these conflicts, the principal incurs agency costs, which are the costs incurred to verify if the agent has harmed the principal (Jensen & Meckling, 1976). Jensen (1986) admits that debt has the capacity/potential to reduce agency costs as, through debt, there is a lower free cash flow, reducing expenses at the discretion of the agent, who, having few free resources, should use them in the way (s)he judges most rational.

In turn, Market Timing theory, formulated by Baker and Wurgler (2002), refers to the opportunistic practice of issuing shares when the company experiences a favorable market value and buy back stock at low prices. The practice aims to exploit temporary fluctuations in the cost of equity as compared to the cost of other forms of funding.

2.2 Capital structure and corporate governance

The adoption of good corporate governance practices aims to reduce agency problems arising from the relationship between shareholders and managers. Thus, firms with a higher governance quality suffer less agency conflicts (Chang et al., 2014; Chang et al., 2015; Jiraporn, Kim, Kim & Kitsabunnarat, 2012).

Good governance practices are seen as capable of improving company management, organizational performance, increasing market value and reducing informational asymmetry through a better disclosure process (Armstrong, Guay, & Weber, 2010; Detthamrong, Chancharat & Vithessonthi, 2017). This set of benefits tends to improve the company's relationship with the external credit market (Chen, Chung, Hsu, & Wu, 2010). In this sense, the high quality of corporate governance can contribute to improve access to external resources, regardless of the institutional environment (Silveira et al., 2008; Vieira et al., 2011).

The empirical studies in international contexts show that the better quality of the corporate governance system contributes positively to the access to indebtedness, whether in developed countries (Liao, Mukherjee & Wang, 2015) or in emerging market countries (Detthamrong et al., 2017).

In Brazil, studies also concluded that good corporate governance practices contribute to the access to financing through debt (Fonseca, Silveira & Hiratuka, 2016; Silveira et al., 2008), suggesting that this result is due to the reduction of information asymmetry and also to difficulties to get financing through the issuance of shares, as commented by Silveira et al. (2008), considering that the value of company stock may not incorporate the quality of corporate governance, as investors face difficulty to evaluate this quality precisely. It is deduced that the adoption of good corporate governance practices can facilitate Brazilian companies' access to indebtedness.

2.3 Background empirical studies

Jiraporn et al. (2012) analyzed the relationship between the quality of governance and the leverage of companies listed in the Institutional Shareholder Services (ISS) from 2001 to 2004. The authors used two corporate governance indices, one of them based on categories adopted in earlier studies; while the other was built based on the ISS recommendations. As a main result, a negative and significant relationship was found between the two indices and the leverage, emphasizing that each index was tested in a specific regression model. Therefore, the results confirm the hypothesis of influence among the variables, but in a negative sense, that is, there is an inverse relationship between the quality of governance and leverage.

In the analysis of 154 non-financial companies with shares traded on BM & FBOVESPA, Silveira et al. (2008) identified some factors that influence leverage, namely: quality of corporate governance (positive relation), profitability, growth and volatility (negative relation). The authors separated the governance index in two dimensions (transparency, ownership structure and board of directors). They found that the transparency index does not influence the degree of leverage, while the ownership structure index and the board of directors influence it positively. The authors noted the importance of corporate governance as one of the determinants of the capital structure.

In another study that correlates the themes, Vieira et al. (2011) aimed to identify the influence of governance on the capital structure and performance of companies participating in BM & FBOVESPA's differentiated levels of governance. The authors analyzed the 84 companies listed at Level 1, Level 2 and the New Market from 2001 to 2006, and the governance index used in the study corresponds to the sum of 23 dummy variables. As observed, the independence of the board of directors presented negative significance, while the variation in stock concentration in the hands of the five largest shareholders and the variation in stock market liquidity are positively significant. According to the authors, the companies that joined Level 1, those who joined Level 2 and those who opted for the New Market have been adopting the best governance practices suggested by BM&FBOVESPA, but the governance index under study did not influence their indebtedness.

Fonseca et al. (2016) evaluated the influence of corporate governance on the amount and profile of indebtedness in 252 Brazilian publicly-traded companies from 2000 to 2013. The corporate governance variable was measured by a dummy that was equal to 1, as from the year when the company adhered to one of the three listing segments, and null in the other years. As verified, the indebtedness in t-1 is positively correlated with the current indebtedness, and there is a negative relation between profitability and growth opportunities on the one hand and indebtedness on the other. It was also observed that asset structure and cash flow volatility negatively influence short-term indebtedness, and that there is a positive relationship between size and total indebtedness. Regarding corporate governance, the authors observed a positive, costly and long-term relationship with total indebtedness, concluding that governance facilitates access to financing with third-party capital, but the corporate governance variable presented a negative relation with the short-term debt.

In view of the above, the relevance of this research is reinforced to deepen the analysis of the capital structure under the governance approach, by incorporating the participation in the differentiated levels of BM&FBOVESPA as a factor capable of explaining the capital structure in companies listed in that institution. It should be noted that this study differs from the others because it does not consider third-party capital in a homogeneous way, as it includes the analysis of company debt subsidized by BNDES (2016) as one of the measures of indebtedness.

3. Methodological Procedures

Regarding the purposes, the research is classified as descriptive, as it identifies the situation of the event and establishes how the variables are mutually related (Gray, 2012). With regard to procedures, this is a documentary research. The source of the documents is secondary (Cooper & Schindler, 2011), as the financing the companies obtained was consulted on the BNDES website (2016); data on the listing segment of each company were collected from the BM&FBOVESPA website; and the economic-financial data of the fiscal years between 2010 and 2014 were consulted in the Economática® base. Regarding the approach, the research is classified as quantitative, as data are organized, arranged in tables and submitted to statistical tests (Martins & Theóphilo, 2009).

The population includes the publicly-traded companies listed on BM&BOVESPA between 2010 and 2014. Due to the fact that the financial statements of financial companies (banks, insurance and investment brokers) present a differentiated structure in comparison with the non-financial companies, which can distort the results if they are included in the study, these were excluded from the sample. Figure 1 evidences some operational details and the theoretical backgrounds of the variables used in the study.

Variable	Description	Source	Theoretical background	Expected relation
Short-Term Indebtedness (INDST)	(Short-Term Debt + Short/Term Debentures) / Assets	Economática®	Crisóstomo and Pinheiro (2015)	
Long-Term Indebtedness (INDLT)	(Long-Term Debt + Long-Term Debentures) / Assets	Economática®	Crisóstomo and Pinheiro (2015)	
Total Indebtedness (INDTOT)	(Short-Term Debt + Long-Term Debt + Short-Term Debentures + Long-Term Debentures) / Assets	Economática®	Crisóstomo and Pinheiro (2015) Silveira *et al.* (2008)	
Subsidized Indebtedness (INDSUB)	Debt financed by BNDES / Assets	BNDES (2016) Economática®	Póvoa and Nakamura (2015)	
Corporate Governance (CG)	CG = 1, if listed on one of the differentiated corporate governance levels; CG = 0 if not	BM&FBovespa	Fonseca *et al.* (2016)	Positive
Profitability (ROA)	Net Income / Assets	Economática®	De Luca, Maia, Cardoso, Vasconcelos and Cunha (2014)	Negative
Size (SIZ)	Natural Logarithm of Assets	Economática®	Machado, Prado, Vieira, Antonialli and Santos (2015) Chang *et al.* (2014)	Positive
Tangibility (TANG)	Fixed Assets / Assets	Economática®	Chang *et al.* (2014)	Positive

Figure 1. Research variables

Source: elaborated by the authors.

Corporate governance is characterized in this article as a dummy variable, in which companies listed on the differentiated levels of corporate governance of BM&FBOVESPA (Level 1, Level 2 and New Market) receive score 1, while the other companies receive 0. A similar procedure is adopted in studies that measure corporate governance (Arruda, Girão & Lucena, 2015; Barros, Silva & Voese, 2015; Dalmácio, Lopes, Rezende & Sarlo Neto, 2013; Fonseca et al., 2016). Thus, participation in the differentiated segments represents the adoption of best corporate governance practices.

The variable corporate governance took into account the date on which the company adhered to that level. For example, if a company was listed in the Traditional Market until 2012 and then moved to the New Market in 2013, 0 was awarded to that company in the years 2010 to 2012, and 1 between 2013 and 2014 for being part of one of the differentiated levels of corporate governance.

In 2000, the São Paulo Stock Exchange (Bovespa) created the differentiated levels of corporate governance, which classify companies committed to best practices in the market. In increasing order of adoption of best practices, the following levels are available: Level 1 (N1), Level 2 (N2) and New Market (NM). Companies listed on BM&FBOVESPA on a voluntary basis, if they comply with the established rules, can be listed in the segments. Briefly, in order to participate in levels 1 and 2, companies need to decrease their concentration. The new market represents the differentiated level, with the most rigid corporate governance rules, as, for example, companies need to have their share capital exclusively in common shares, that is, shares with voting rights.

In the statistical model of the research, as there are four types of indebtedness - short-term (INDST), long-term (INDLT), total (INDTOT) and subsidized (dependent variables) -, four regressions are developed. The mathematical models used are defined in equations 1, 2, 3 and 4.

$$INDST_{i,tt} = \alpha + \beta 1 CG_{i,t} + \beta 2 ROA_{i,t} + \beta 3 SIZ_{i,tt} + \beta 4 TANG_{i,t} + \varepsilon \tag{1}$$

$$INDLT_{i,t} = \alpha + \beta 1 CG_{i,t} + \beta 2 ROA_{i,t} + \beta 3 SIZ_{i,t} + \beta 4 TANG_{i,t} + \varepsilon \tag{2}$$

$$INDTOT_{i,t} = \alpha + \beta 1 CG_{i,t} + \beta 2 ROA_{i,t} + \beta 3 SIZ_{i,t} + \beta 4 TANG_{i,t} + \varepsilon \tag{3}$$

$$INDSUB_{i,t} = \alpha + \beta 1 CG_{i,t} + \beta 2 ROA_{i,t} + \beta 3 SIZ_{i,t} + \beta 4 TANG_{i,t} + \varepsilon \tag{4}$$

Where $IND_{i,t}$ is the indebtedness of company i in year t, according to its nature (short term, long term, total or subsidized); α is the line intercept; β are the angular coefficients; $CG_{i,t}$ (corporate governance), $ROA_{i,t}$ (profitability), $TAM_{i,t}$ (size) and $TANG_{i,t}$ (tangibility) are the independent variables of firm i in year t; and ε is the error term.

In addition to these variables, the dummy variables of sectors and years considered in the study sample were also used.

In order to reach the proposed objectives, the test of difference of means, correlation analysis and multiple linear regression were performed. The first one was used to check for differences among the four types of indebtedness in companies that adopt the best governance practices (Level 1, Level 2 and New Market) and in the others. Thus, the study compares two groups of companies: Group 1, consisting of companies that adopt the best governance practices; and Group 2, composed of the other companies. The application of multiple linear regression aimed to investigate the relationship between indebtedness and factors pointed out by the literature as determinants of capital structure (corporate governance, profitability, size and tangibility). Therefore, the statistical tests used in the study (test of difference of means, correlation and regression test), significances were set at 10%, 5% and 1%.

4. Results

Table 1 shows the descriptive statistics of the characteristics of the sample companies, according to the variables adopted for the study: short-term indebtedness, long-term indebtedness, total indebtedness, subsidized indebtedness, profitability, size and tangibility.

Table 1
Descriptive statistics of the data

Variable	N	Minimum	Maximum	Mean	Standard deviation	Variation Coefficient
INDST	986	0.0000	0.7072	0.0848	0.0928	2.2598
INDLT	986	0.0000	0.7015	0.1639	0.1389	0.8473
INDTOT	986	0.0000	0.8939	0.2487	0.1660	0.6676
INDSUB	120	0.0000	1.5877	0.0666	0.1709	2.5662
ROA	986	-0.3387	0.8414	0.0423	0.0980	2.3141
SIZ	986	8.6618	19.4506	13.6565	1.6826	0.1232
TANG	986	0.0000	0.9715	0.1845	0.2223	1.2033

Source: elaborated by the authors.

As shown in Table 1, the variables short-term indebtedness (INDST), long-term indebtedness (INDLT), total indebtedness (INDTOT) and subsidized indebtedness (INDSUB) averaged 8.5%, 16%, 25% and 6.6%, respectively. Subsidized debt (INDSUB) shows a high dispersion, as observed by the variation coefficient. Total indebtedness (INDTOT) showed the highest mean and the highest homogeneity, that is, it presents a low standard deviation and a low variation coefficient. As is also shown in Table 1, the profitability of the sample companies averages at 4.2% and the variable shows a high dispersion.

In order to understand the behavior of the indebtedness types in relation to the BM&FBOVESPA listing segments, descriptive statistical analysis was applied to the data, as shown in Table 2.

Table 2
Descriptive statistics of indebtedness types

Variable	Segment	N	Mean	Standard deviation	Mean error deviation
INDST	Traditional market	414	0.1013	0.1103	0.0054
	Differentiated corporate governance levels	572	0.0728	0.0757	0.0032
INDLT	Traditional market	414	0.1487	0.1411	0.0069
	Differentiated corporate governance levels	572	0.1749	0.1363	0.0057
INDTOT	Traditional market	414	0.2500	0.1806	0.0089
	Differentiated corporate governance levels	572	0.2478	0.1548	0.0065
INDSUB	Traditional market	46	0.1109	0.2617	0.0386
	Differentiated corporate governance levels	74	0.0390	0.0581	0.0067

Source: elaborated by the authors.

Based on the data in Table 2, it is observed that the companies not listed in any differentiated segment have higher average indebtedness than the others. It can be observed that the indebtedness in the companies participating in the differentiated levels is less dispersed than in the other companies. It should also be noted that the number of observations in the two groups is similar.

In order to verify if there are differences among the types of indebtedness used in the study (short-term, long-term, total and subsidized) and the BM&FBOVESPA listing segments, the test of difference of means was used, the results of which are shown in Table 3. Non-parametric tests were performed because the assumptions of the parametric test were not met, that is, the data did not follow an approximately normal distribution and homogeneity.

Table 3
Results of tests of difference of means

Variable	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
INDST	104,062.00	267,940.00	-3.250	0.001
INDLT	101,989.50	187,894.50	-3.720	0.000
INDTOT	116,260.00	202,165.00	0.486	0.627
INDSUB	1,147.00	3,922.00	-2.996	0.003

Source: elaborated by the authors.

Table 3 shows that there are statistically significant differences between the average indebtedness of companies at different levels of corporate governance and that of other companies. In the short-term (INDST), long-term (INDLT) and subsidized indebtedness (INDSUB), the significance is 1% while, in total indebtedness (INDTOT) there was no significance.

In order to investigate the correlation among the variables considered in the study, a correlation analysis was performed, the results of which are shown in Table 4.

Table 4
Results of correlation analysis

Variable	1	2	3	4	5	6	7	8
INDST (1)	1							
INDLT (2)	-0.013	1						
INDTOT (3)	0.548(***)	0.829(***)	1					
INDSUB (4)	-0.155(*)	-0.193(**)	-0.220(**)	1				
CG (5)	-0.151(***)	0.093(***)	-0.007	-0.205(**)	1			
ROA (6)	-0.338(***)	-0.073(**)	-0.250(***)	-0.142	0.044	1		
SIZ (7)	-0.254(***)	0.148(***)	-0.018	-0.436(***)	0.356(***)	0.128(***)	1	
TANG (8)	0.046	0.151(***)	0.152(***)	-0.158(*)	-0.235(***)	-0.009	-0.107(***)	1

Obs.: (*), (**) and (***) indicate the statistical significance of the coefficients at 10%, 5% and 1%, respectively.

Source: elaborated by the authors.

Based on the information shown in Table 4, it is observed that, in general, the independent variables are not highly correlated. Therefore, we do not verify the presence of multicollinearity among the regressors of the statistical model, complying with the models proposed for one of the assumptions of the regression. It can be observed that subsidized debt is negatively correlated with all the independent variables.

Table 5 shows the application of the regression models used in the study. The models were estimated using the Ordinary Least Squares method.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 5, p. 438-452, Oct./Dec. 2017

445

Table 5

Estimation of the models

Variable	INDST		INDLT		INDTOT		INDSUB	
CG	-0.012	(**)	0.023	(**)	0.011		-0.101	(**)
	(0.006)		(0.009)		(0.011)		(0.048)	
ROA	-0.281	(***)	-0.161	(***)	-0.442	(***)	-0.644	(*)
	(0.047)		(0.043)		(0.058)		(0.346)	
SIZ	-0.010	(***)	0.010	(***)	-0.001	'	-0.032	(**)
	(0.002)		(0.003)		(0.004)		(0.014)	
TANG	-0.002		0.140	(***)	0.138	(***)	-0.207	(*)
	(0.014)		(0.028)		(0.034)		(0.124)	
No. of observations	986		986		986		120	
F	8.18		7.99		7.66		1.24	
p-value	0.000		0.000		0.000		0.077	
R^2	19.95		12.20		12.75		33.87	

Obs.: Models estimated by ordinary least squares method. Estimated coefficients and deviations of errors (between parentheses) related to the estimation of the equation model.

(*), (**) and (***) indicate the statistical significance of the coefficients at 10%, 5% and 1%, respectively.

Source: elaborated by the authors.

Regarding the statistical aspects of the regression models, it is worth mentioning that all aspects were complied with. The variance analysis provided an F test that permitted the acceptance of the alternative hypothesis, in which the variation of the dependent variable is explained in global terms by the independent variables.

As shown by the application of the regression analysis, subsidized indebtedness presents specific characteristics and, in studies on capital structure, a more descriptive analysis is not common. This is followed by a more in-depth analysis of this type of indebtedness.

In order to identify the subsidized debt profile in the sample companies, an analysis of this type of indebtedness was carried out. Table 6 shows the values extracted from the BNDES website (2016).

Table 6

Annual distribution of amounts funded by BNDES for sample companies – 2010-2014

Year	No. of Companies	Amount (R$)	Proportion (%)
2010	18	4.843.359.567,00	8,6
2011	21	11.484.160.035,00	20,5
2012	29	17.970.134.595,00	32,1
2013	26	10.521.267.423,00	18,8
2014	26	11.238.941.202,00	20,0
Total	120	56.057.862.822,00	100,0

Source: elaborated by the authors.

As shown in Table 6, the year 2012 registered the largest number of companies (29) and the highest proportion of subsidized resources (32.1%). The total amount the BNDES provided to the sample companies in the period under review (2010-2014) was over R$ 56 billion.

Table 7 shows the distribution of loan amounts surpassing R $ 1,000,000,000.00 the BNDES (2016) granted to the sample companies from 2010 to 2014. The category "Other" contains 52 companies.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 5, p. 438-452, Oct./Dec. 2017

446

Table 7

Ranking of companies that received loans from BNDES – 2010-2014

Company	Amount (R$)	Proportion (%)
Petrobras	14.418.240.366,00	25,7
Klabin	3.370.232.000,00	6,0
Ambev	3.365.839.113,00	6,0
Braskem	3.253.928.979,00	5,8
Sabesp	3.170.568.634,00	5,7
Telefonica	3.031.110.000,00	5,4
B2W Companhia	1.998.826.634,00	3,6
Embraer	1.943.092.605,00	3,5
Oi	1.804.975.760,00	3,2
Fibria Celulose	1.651.488.485,00	2,9
Lojas Americanas	1.586.616.378,00	2,8
CPFL	1.508.759.793,00	2,7
Sanepar	1.406.392.099,00	2,5
Usiminas	1.086.363.000,00	1,9
Outras	12.461.428.976,00	22,2
Total	56.057.862.822,00	100,0

Source: elaborated by the authors.

According to the information shown in Table 7, Petrobras was the company that most received BNDES funds (2016) in the period under analysis and, adding up the amounts received by Klabin and Ambev, all three together hold approximately 38% of the total granted to the companies in the sample. It is also worth noting that 50.5% (R$ 28,307,186,091.00) of the total volume of subsidized resources of the sample are present in companies belonging to the Traditional Market. On the other hand, 49.5% (R$ 27,750,676,731.00) of the funds were allocated to companies belonging to the differentiated levels of corporate governance.

5. Discussion

As shown in Table 3, in terms of indebtedness, the companies listed in the differentiated segments have lower levels of indebtedness than the other companies. One possible explanation for the result is that companies with the best governance practices have lower information asymmetry and, thus, these companies have access to different sources of financing (Tani & Albanez, 2016), and may be using debt less.

According to Table 5, the corporate governance (CG) variable showed negative significance for short-term indebtedness and subsidized indebtedness. Therefore, the companies participating in the differentiated levels of corporate governance tend to have less subsidized indebtedness, that is, this fact does not influence the BNDES decision to grant financing. Meanwhile, participation in differentiated levels of corporate governance influences long-term debt raising positively, which can be explained by the fact that companies in this group tend to prefer loans with longer maturities to short-term loans.

Regarding total indebtedness, the governance does not influence a better funding of external resources, confirming the study by Vieira et al. (2011), which did not identify a relationship either between capital structure and corporate governance.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 5, p. 438-452, Oct./Dec. 2017

447

Considering the above, it is worth mentioning that the results found in this study partially confirm other Brazilian studies, which have already found both a positive relation and a negative relation between capital structure and corporate governance (Cicogna, Toneto Junior & Valle, 2007; Fonseca et al., 2016; Silveira et al., 2008).

Also in Table 5, it can be noticed that profitability (ROA) has a negative effect on indebtedness, that is, the Brazilian company follows the basic behavior of the Pecking Order theory. Therefore, companies prioritize the use of internally generated resources to finance their projects. This effect occurs in relation to all four types of indebtedness cited in the study. The profitability variable presented convergent results between the present study and several national and foreign surveys in different periods (Bastos et al., 2009; Bevan & Danbolt, 2002; Booth, Aivazian, Demirguc-Kunt & Maksimovic, 2001; et al., 2013, Haron, 2014, Rajan & Zingales, 1995, Titman & Wessels, 1988).

Table 5 also highlights that size generates different effects on short-term debt (INDST) and subsidized indebtedness (INDSUB), and that this effect is negative. Therefore, the larger the size, the less the company presents these types of indebtedness. Meanwhile, long-term indebtedness (INDLT) presented a positive relationship, which can be explained by the company's image and reputation in the market (Crisóstomo & Pinheiro, 2015) or the guarantees that it can obtain from credit institutions. With this result, the influence of size on debt is reversed, which has a negative effect on short-term indebtedness, as opposed to the positive effect of long-term indebtedness. The result may indicate the lesser need of large firms for short-term financing.

As observed, tangibility (TANG) presented a positive relationship with long-term indebtedness and total indebtedness, confirming the financial theories; that is, the more tangible assets the company has, the more guarantees it can make available to credit institutions. Tangibility (TANG) is a widely used variable in empirical studies, and the positive relation is almost always confirmed (Albanez & Valle, 2009; Chen, 2004).

Due to the magnitude of the values presented in Table 6, we can see the relevance of development banks in the country, ratified by Póvoa et al. (2015), according to which development banks are of great importance in the granting of credit in Brazil, BNDES being the most active of them.

It should be noted that, among the 66 companies considered for the total value of Table 7, 11 belong to the electricity sector, evidencing the importance of this type of financing for the segment, which requires high investments.

6. Final Considerations

The main objective of this research was to analyze the relationship between capital structure and corporate governance. For this purpose, the non-financial companies listed on BM&FBOVESPA were analyzed, taking into account the years from 2010 to 2014.

The results indicate that, in general terms, corporate debt is low, which requires a better use of the resources received, mainly in projects that guarantee an adequate return. The inappropriate use of resources can lead to serious problems, such as bankruptcy. In this context, the subsidized resources stand out, which present some advantages, such as interest rates well below the market average, long grace period for the repayment of loans and long-term installments of financing.

In the comparison between the capital structure in the companies that adopt the best governance practices and that of the other companies, a significant statistical difference was verified. The companies that do not participate in the differentiated levels of corporate governance have higher indebtedness when compared to the others. Among the possible explanations for this result, the following stand out: (i) financial institutions may be more concerned with the company's investment projects and/or characteristics, such as cash flow, profitability, assets that can be offered in guarantee, reputation in society, and less with the fact that the company adopts or stops adopting the best practices of corporate governance, represented here by the participation in a listing segment of BM&FBovespa; and (ii) firms at differentiated levels may behave according to the Pecking Order theory and, therefore, use internally generated resources, requiring less external financial resources for their investments.

The results of the regression analysis show that corporate governance influences subsidized indebtedness negatively, that is, the company's participation in one of the differentiated levels of corporate governance of BM&FBOVESPA impacts the attainment of this type of indebtedness negatively. It was also observed that the profitability presented a negative relation in the four types of indebtedness (short-term, long-term, total and subsidized), confirming that companies practice what the Pecking Order Theory proposes.

This research contributes to enrich the bibliography on capital structure by incorporating the subsidized debt as one of the explanatory variables of the model. In addition, the corporate governance variable was analyzed in the four types of indebtedness. Because of their great importance to the business environment and the fact that the results of academic studies are largely heterogeneous, discussions on capital structure contribute somehow to the advance of this field of research.

The study presents some limitations, such as the adoption of the differentiated levels as a proxy for corporate governance. In addition, it is highlighted that, for the subsidized debt, only the variable BNDES financing was used. As a suggestion for future studies, the construction of a corporate governance index that contemplates specific characteristics is indicated for the sake of a better measurement of corporate governance. In addition, the use of a longer period of analysis and a larger sample is recommended, considering companies from other emerging economies similar to Brazil. Thus, we suggest the use of other variables that may explain the indebtedness in the companies and an analysis of other subsidized debts contracted in other development banks.

References

Albanez, T. & Valle, M. R. (2009). Impactos da assimetria de informação na estrutura de capital de empresas brasileiras abertas. *Revista Contabilidade & Finanças*, *20*(51), pp. 6-27. DOI: https://doi.org/10.1590/S1519-70772009000300002

Armstrong, C. S., Guay, W. R. & Weber, J. P. (2010). The role of information and financial reporting in corporate governance and debt contracting. *Journal of Accounting and Economics*, *50*(2-3), pp. 179-234. DOI: https://doi.org/10.1016/j.jacceco.2010.10.001

Arruda, M. P., Girão, L. F. A. P. & Lucena, W. G. L. (2015). Assimetria informacional e o preço das ações: análise da utilização das redes sociais nos mercados de capitais brasileiro e norte-americano. *Revista Contabilidade & Finanças*, *26*(69), pp. 317-330. DOI: https://doi.org/10.1590/1808-057x201501540

Assaf Neto, A. & Lima, F. G. (2010). *Fundamentos de administração financeira*. São Paulo: Atlas.

Bachiller, J. V. (2016). Das privatizações à nova estratégia de desenvolvimento - a trajetória do BNDES entre 1990 e 2010. *Desenvolvimento em Questão*, *14*(36), pp. 5-30. DOI: https://doi.org/10.21527/2237-6453.2016.36.5-30

Baker, M. & Wurgler, J. (2002). Market timing and capital structure. *The Journal of Finance*, *57*(1), pp. 1–32. DOI: https://doi.org/10.1111/1540-6261.00414

Barros, C. M. E., Silva, P. Y. C. & Voese, S. B. (2015). Relação entre o custo da dívida de financiamentos e governança corporativa no Brasil. *Contabilidade, Gestão e Governança*, *18*(2), pp. 7-26.

Bastos, D. D., Nakamura, W. T. & Basso, L. F. C. (2009). Determinantes da estrutura de capital das companhias abertas na América Latina: um estudo empírico considerando fatores macroeconômicos e institucionais. *Revista de Administração Mackenzie*, 10(6), 47-77. DOI: https://doi.org/10.1590/S1678-69712009000600005

Bevan, A. A. & Danbolt, J. (2002). Capital structure and its determinants in the UK - a decompositional analysis. *Applied Financial Economics*, *12*(3), pp. 159-170. DOI: https://doi.org/10.1080/09603100110090073

Banco Nacional de Desenvolvimento Econômico e Social. (2016). *Central de downloads*. Recuperado em 10 novembro, 2016, de http://www.bndes.gov.br/wps/portal/site/home/transparencia/centralde-downloads

Booth, L., Aivazian, V., Demirguc-Kunt, A. & Maksimovic, V. (2001). Capital structures in developing countries. *The Journal of Finance*, *56*(1), pp. 87-130. DOI: https://doi.org/10.1111/0022-1082.00320

Brito, G. A. S., Corrar, L. J. & Batistella, F. D. (2007). Fatores determinantes da estrutura de capital das maiores empresas que atuam no Brasil. *Revista Contabilidade & Finanças 18*(43), pp. 9-19. DOI: https://doi.org/10.1590/S1519-70772007000100002

Campos, A. L. S. & Nakamura, W. T. (2013). Folga financeira avaliada como endividamento relativo e estrutura de capital. *Revista de Finanças Aplicadas*, *1*(1), pp. 1-19.

Chang, Y.-K., Chen, Y.-L., Chou, R. K. & Huang, T.-H. (2015). Corporate governance, product market competition and dynamic capital structure. *International Review of Economics and Finance*, *38*(1), pp. 44–55. DOI: https://doi.org/10.1016/j.iref.2014.12.013

Chang, Y.-K., Chou, R. K. & Huang, T.-H. (2014). Corporate governance and the dynamics of capital structure: New evidence. *Journal of Banking & Finance*, *48*(1), pp. 374–385. DOI: https://doi.org/10.1016/j.jbankfin.2014.04.026

Chen, D.-H., Chen, C.-D., Chen, J. & Huang, Y.-F. (2013). Panel data analyses of the pecking order theory and the market timing theory of capital structure in Taiwan. *International Review of Economics and Finance*, *27*(1), pp. 1-13. DOI: https://doi.org/10.1016/j.iref.2012.09.011

Chen, J. J. (2004). Determinants of capital structure of Chinese-listed companies. *Journal of Business Research*, *57*(1), pp. 1341-1351. DOI: https://doi.org/10.1016/S0148-2963(03)00070-5

Chen, W.-P., Chung, H., Hsu, T.-L. & Wu, S. (2010). External financing needs, corporate governance, and firm value. *Corporate Governance: An International Review*, *18*(3), pp. 234-249. DOI: https://doi.org/10.1111/j.1467-8683.2010.00801.x

Cicogna, M. P. V., Toneto Junior, R. & Valle, M. R. (2007). O impacto da adesão a padrões mais elevados de governança sobre o financiamento empresarial. *Revista de Administração da USP*, *42*(1), pp. 52-63.

Cooper, D. R. & Schindler, P. S. (2011). *Métodos de pesquisa em administração* (10ª ed.). Porto Alegre: Bookman.

Correa, C. A., Basso, L. F. C. & Nakamura, W. T. (2013). A estrutura de capital das maiores empresas brasileiras: análise empírica das teorias de pecking order e trade-off usando panel data. *Revista de Administração Mackenzie*, *14*(4), pp. 106-133. DOI: https://doi.org/10.1590/S1678-69712013000400005

Crisóstomo, V. L. & López-Iturriaga, F. (2011). Financiamiento de la inversión y las imperfecciones del mercado. *Información Financiera, Gerencia y Control*, *1*(3), pp.11-48.

Crisóstomo, V. L. & Pinheiro, B. G. (2015). Estrutura de capital e concentração de propriedade da empresa brasileira. *Revista de Finanças Aplicadas*, *4*(1), pp. 1-30.

Dalmácio, F. Z., Lopes, A. B., Rezende, A. J. & Sarlo Neto, A. (2013). Uma análise da relação entre governança corporativa e acurácia das previsões dos analistas do mercado brasileiro. *Revista de Administração Mackenzie*, *14*(5), pp. 104-139. DOI: https://doi.org/10.1590/S1678-69712013000500005

David, M., Nakamura, W. T. & Bastos, D. D. (2009). Estudo dos modelos trade-off e pecking order para as variáveis endividamento e payout em empresas brasileiras (2000 – 2006). *Revista de Administração Mackenzie*, *10*(6), pp. 132-153. DOI: https://doi.org/10.1590/S1678-69712009000600008

De Luca, M. M. M., Maia, A. B. G. R., Cardoso, V. I. C., Vasconcelos, A. C. & Cunha, J. V. A. (2014). Intangible assets and superior and sustained performance of innovative Brazilian firms. *BAR Brazilian Administration Review*, *11*(4), pp. 407-440. DOI: https://doi.org/10.1590/1807-7692bar2014130012

Detthamrong, U., Chancharat, N. & Vithessonthi, C. (2017). Corporate governance, capital structure and firm performance: evidence from Thailand. *Research in International Business and Finance*, *42*(1), pp. 689-709. DOI: https://doi.org/10.1016/j.ribaf.2017.07.011

Fonseca, C. V. C., Silveira, R. L. F. & Hiratuka, C. (2016). A relação entre a governança corporativa e a estrutura de capital das empresas brasileiras no período 2000-2013. *Enfoque: Reflexão Contábil*, *35*(2), pp. 35-52. DOI: https://doi.org/10.4025/enfoque.v35i2.29673

Gray, D. E. (2012). *Pesquisa no mundo real* (2ª ed.). Porto Alegre: Penso.

Handoo, A. & Sharma, K. (2014). A study on determinants of capital structure in India. *IIMB Management Review*, *26*(1), pp. 170-182. DOI: https://doi.org/10.1016/j.iimb.2014.07.009

Haron, R. (2014). Capital structure inconclusiveness: evidence from Malaysia, Thailand and Singapore. *International Journal of Managerial Finance*, *10*(1), pp. 23-38. DOI: https://doi.org/10.1108/IJMF-03-2012-0025

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, *76*(2), pp. 323-329.

Jensen, M. C. & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency cost and ownership structure. *Journal of Financial Economics*, *3*(4), pp. 305-360. DOI: https://doi.org/10.1016/0304-405X(76)90026-X

Jiraporn, P., Kim, J. C., Kim, Y. S. & Kitsabunnarat, P. (2012). Capital structure and corporate governance quality: evidence from the Institutional Shareholder Services (ISS). *International Review of Economics and Finance*, *22*(1), pp. 208-221. DOI: https://doi.org/10.1016/j.iref.2011.10.014

Jõeveer, K. (2013). Firm, country and macroeconomic determinants of capital structure: evidence from transition economies. *Journal of Comparative Economics*, 41(1), 294–308. DOI: https://doi.org/10.1016/j.jce.2012.05.001

Liao, L. K., Mukherjee, T. & Wang, W. (2015). Corporate governance and capital structure dynamics: an empirical study. *The Journal of Financial Research*, *38*(2), pp. 169-191. DOI: https://doi.org/10.1111/jfir.12057

Machado, L. K. C., Prado, J. W., Vieira, K. C., Antonialli, L. M. & Santos, A. C. (2015). A relevância da estrutura de capital no desempenho das firmas: uma análise multivariada das empresas brasileiras de capital aberto. *Revista de Educação e Pesquisa em Contabilidade*, *9*(4), pp. 397-414. DOI: https://doi.org/10.17524/repec.v9i4.1313

Martins, G. A. & Theóphilo, C. R. (2009). *Metodologia da investigação científica para ciências sociais aplicadas* (2ª ed.). São Paulo: Atlas.

Modigliani, F. & Miller, M. H. (1958). The cost of capital, corporation finance and theory of investment. *The American Economic Review*, *48*(3), pp. 261-297.

Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, *39*(3), pp. 575-592. DOI: https://doi.org/10.2307/2327916

Myers, S. C. & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), pp. 187-221. DOI: https://doi.org/10.1016/0304-405X(84)90023-0

Pohlmann, M. C. & Iudícibus, S. D. (2010). Relação entre a tributação do lucro e a estrutura de capital das grandes empresas no Brasil. *Revista Contabilidade & Finanças*, *21*(53), pp. 1-25. DOI: https://doi.org/10.1590/S1519-70772010000200002

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 5, p. 438-452, Oct./Dec. 2017

451

Bruno Goes Pinheiro, Alessandra Carvalho de Vasconcelos,
Márcia Martins Mendes De Luca, Vicente Lima Crisóstomo

Póvoa, A. C. S. & Nakamura, W. T. (2015). Relevância da estrutura de dívida para os determinantes da estrutura de capital: um estudo com dados em painel. *Revista Contemporânea de Contabilidade*, *12*(25), pp. 3-26. DOI: https://doi.org/10.5007/2175-8069.2015v12n25p03

Póvoa, A. C. S., Vieira, W. S., Kudlawicz, C. & Bach, T. M. (2015). A governança corporativa como fator determinante para a estrutura da dívida: o caso brasileiro. *Anais do Encontro da Associação Nacional dos Programas de Pós-Graduação em Administração* - EnANPAD, Belo Horizonte, BH, Brasil, 39.

Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance*, *50*(5), pp. 1421-1460. DOI: https://doi.org/10.1111/j.1540-6261.1995.tb05184.x

Silveira, A. D. M., Perobelli, F. F. C., & Barros, L. A. B. C. (2008). Governança corporativa e os determinantes da estrutura de capital: evidências empíricas no Brasil. *Revista de Administração Contemporânea*, *12*(3), pp. 763-788. DOI: https://doi.org/10.1590/S1415-65552008000300008

Sun, J., Ding, L., Guo, J. M. & Li, Y. (2016). Ownership, capital structure and financing decision: evidence from the UK. *The British Accounting Review*, *48*(4), pp. 448-463. DOI: https://doi.org/10.1016/j.bar.2015.04.001

Tani, B. B. & Albanez, T. (2016). Decisões de financiamento das companhias listadas nos diferentes segmentos de governança da BM&FBovespa segundo a teoria de pecking order. *Contabilidade, Gestão e Governança, 19*(2), pp. 317-334. DOI: https://doi.org/10.21714/19843925_2016v19n2a8

Terra, P. R. S. (2009). A are leverage and debt maturity complements or substitutes? Evidence from Latin America. *Revista de Administração Mackenzie*, *10*(6), pp. 4-24. DOI: https://doi.org/10.1590/S1678-69712009000600003

Thippayana, P. (2014). Determinants of capital structure in Thailand. *Procedia - Social and Behavioral Sciences*, *143*(1), pp. 1074–1077. DOI: https://doi.org/10.1016/j.sbspro.2014.07.558

Titman, S. & Wessels, R. (1988). The determinants of capital structure choice. *The Journal of Finance*, *43*(1), pp. 1-19. DOI: https://doi.org/10.1111/j.1540-6261.1988.tb02585.x

Vieira, K. M., Velasquez, M. D. P., Losekann, V. L., & Ceretta, P. S. (2011). A influência da governança corporativa no desempenho e na estrutura de capital das empresas listadas na Bovespa. *Revista Universo Contábil*, *7*(1), pp. 49-67. DOI: https://doi.org/10.4270/ruc.2011104

Yang, B. (2013). Dynamic capital structure with heterogeneous beliefs and market timing. *Journal of Corporate Finance*, *22*(1), pp. 254–277. DOI: https://doi.org/10.1016/j.jcorpfin.2013.05.003

Accounting for lease transactions: analysis of possible lobbying in the issuing of IFRS 16

Abstract

Objective: This study intends to analyze the potential existence of lobbying in the transition process from International Accounting Standard (IAS) 17 to International Financial Reporting Standard (IFRS) 16, issued by the International Accounting Standards Board (IASB) and related to leases.

Method: We collected 641 commented letters that were submitted to public review in the context of the revised Exposure Draft (2013). The study adopts content analysis as a method. Then, the data were submitted to univariate and bivariate content analysis.

Results: The results suggest that lobbying took place, in view of the significant divergences found between financial and non-financial entities with regard to the main aspects of the standard, related to the disclosure and the only lease accounting model.

Contributions: Verifying the existence of significant opinion differences that indicate lobbying in the context of the transition process to the standard promoted by IASB and, in function of the distinct lobbies involved, is the main contribution of this research.

Key words: Comment Letters, Leases, Lobbying, IASB, IFRS 16.

Fábio Henrique Ferreira de Albuquerque
Ph.D. in Economic and Business Sciences from Universidade de Extremadura and Professor at Instituto Superior de Contabilidade e Administração de Lisboa. **Contact:** Av. Miguel Bombarda, 20, Lisboa, Portugal, CEP: 1069-035.
E-mail: fhalbuquerque@iscal.ipl.pt

Manuela Maria Marcelino
M.Sc. from Instituto Superior de Contabilidade e Administração de Lisboa and Senior Technician at Universidade de Lisboa. **Contact:** Av. Professor Gama Pinto, Lisboa, Portugal, CEP: 1649-003.
E-mail: mmarcelino@ff.ulisboa.pt

Nuno Miguel Barroso Rodrigues
M.Sc. from Instituto Superior de Contabilidade e Administração de Lisboa and Professor at Universidade dos Açores. **Contact:** Rua Mãe de Deus, Ponta Delgada, Portugal, CEP: 9500-321.
E-mail: nuno.mb.rodrigues@uac.pt

António José Rodrigues de Almeida Cariano
M.Sc. from Instituto Superior de Contabilidade e Administração de Lisboa and Professor at Instituto Superior de Contabilidade e Administração de Lisboa. **Contact:** Av. Miguel Bombarda, 20, Lisboa, Portugal, CEP: 1069-035.
E-mail: ajcariano@iscal.ipl.pt

1. Introduction

Leases represent an important activity for different entities and are a means to get financing and access to assets and to reduce an entity's exposure to the risks of asset ownership. In that sense, it is important that users of financial statements have a complete and understandable picture of an entity's leases (International Financial Reporting Standards (IFRS) Foundation, 2013).

The accounting models in the International Accounting Standard (IAS) 17 Leases required lessees and lessors to classify their leases as financial leases or operating leases, with different accounting models. That distinction did not satisfy the investors' needs, as the dependence on the qualification of leases would result in different treatments in the financial statements, in some cases being presented in the balance sheet, but in others only reflected in the income statement for the period in which the leases are accounted for as expenses (Lloyd, 2016). As a result of this divergence, investors often adjusted the lessees' financial statements to recognize off-balance-sheet assets and liabilities, adjusting relevant indicators in the economic-financial analysis of entities (IFRS Foundation, 2016a).

Donkersley, Ravelli and Buchanan (2016) note the difficulty that sometimes exists to make such an adjustment in out-of-balance sheet information because of the absence of that information, making it impossible for investors to have a full picture of an entity's financial position and an appropriate comparison among the different entities (Donkersley et al., 2016; IFRS Foundation, 2016; Lloyd, 2016). With the introduction of IFRS 16, however, a standard that will replace the current IAS 17 with the same designation (Leases) and related interpretations, this feature is no longer necessary, as both the balance sheet and the attachment will present information on such operations, that is to say, on the lessees' lease contracts.

In this sense, the IFRS 16 approved then eliminates the traditional classification of leases as operational or financial from the lessees' point of view, introducing a single accounting model. That model reflects that leases result in a company obtaining a right to use the asset at the start of a lease against a liability resulting from the obligation (financing obtained) to pay a set of leases over time. In this sense, in practical terms, it means the adoption, by the lessees, of a single treatment similar to that already provided for in the current IAS 17 for financial leases, with some exceptions. For lessors, however, it is generally necessary to proceed with the current classification of leases provided for in the same standard: operational or financial.

IFRS 16 applies to periods beginning on or after 1 January 2019 and has not been endorsed to date by the European Union. These changes are intended to increase the transparency of financial reporting, meeting the interests of investors and other stakeholders, thereby improving the decision-making process based on this information (IFRS Foundation, 2016; Lloyd, 2016). In the words of the IFRS Foundation (2016), the basis for the joint development of the new standard between the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) was in fact a unique concern with the lack of transparency for the different stakeholders in financial reporting, including investors, as regards lease transactions. The Securities and Exchange Commission (SEC), a regulatory agency of the North American (USA) stock exchange and a counterpart of the Securities Market Commission (CMVM) in Portugal expressed this same concern in 2005.

The process leading to the issuance of IFRS 16 went through several stages, including three public consultations on the proposals submitted by IASB, namely: the issuance of a Discussion Paper (DP) in 2009; the issuance of the first Exposure Draft (ED) in 2010; and finally a revised ED in 2013. The process also went through hundreds of meetings and workshops - when, among other matters, implementation costs were discussed in detailed - round tables (15 of which were public, with the presence of stakeholders among IASB and FASB members) and other dissemination activities (IFRS Foundation, 2016). In this same process, the different parties most directly related to the impacts of the standard (lessors and lessees) were heard, as well as financial statement preparers and users, regulators and issuers of accounting standards, financial reporting, and companies related to Accounting and Auditing in several countries. A working group was also created by IASB and FASB to gain access to practical experience and expertise in this area (IFRS Foundation, 2016).

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 6, p. 453-470, Oct./Dec. 2017

454

In the public discussion process, the central issue consisted in accepting the recognition of all leases in the balance sheet of lessees, which would be done through a single accounting model, as indeed happened in IFRS 16. According to the IFRS Foundation (2016), general support was obtained for the proposed amendment. Nevertheless, the proposal to maintain the form currently provided for in IAS 17 (in other words, the non-recognition or off-balance sheet character of some of the operating leases) was received, increasing or improving only the disclosure requirements. This proposal was rejected though, in view of the arguments presented above regarding the new approach: increased transparency, comparability and reduction of the need for adjustments in the information the entities reported. On the single accounting model, then approved at the end of the process, or the application of different models proposed throughout the development of the project, the opinions were more divergent. Despite this, most of the opinions highlighted the great complexity of the IASB's proposal to apply the dual accounting model, which distinguished leases of real estate from the lease of other assets.

The IASB's due process allows all interested parties to participate in public discussions and issue opinions, namely through comment letters (Carvalho, Albuquerque, Texeira Quirós & Justino, 2015), where the practice of lobbying can take place. The concept of lobbying is very broad. Therefore, in practice, and due to methodological constraints, the use of comment letters in response to public consultations by standardizers is considered a lobbying strategy (Santos & Santos, 2014). In the literature, several studies exist that are aimed at identifying lobbying strategies used by different interest groups and/or opinion differences in the issuing or revising of a new standard, namely Carvalho et al. (2015); Ginner and Arce (2012); Jorissen, Lybaert, Orens, and Van Der Tas (2012), among others.

The objective of this study is to analyze whether the opinions in the 641 comment letters submitted to the public consultation in the scope of the revised ED (2013), from May 16 to September 13, 2013, for the accounting of lease contracts present significant differences according to the qualification of the respondents, indicating the existence of lobbying. The answers obtained were based on the twelve key issues related, among others, to the scope, recognition, measuring, disclosure and transition rules of the lease contracts addressed in the revised ED (2013). Differently from other studies in this line of research, we also intend to analyze the respondents' apparent behavior in response to the questions presented, taking into account the potential interest these issues arouse in the light of the different underlying themes.

The following point of this article presents the theoretical framework that supports the development of this study.

2. Theoretical framework

The IASB is an entity without an elected or other governmental authority. Therefore, transparent rulemaking with the participation of constituents is a key element of its legitimacy (Kenny & Larson, 1993; Jorissen et al., 2012). Larson (2007) states that participation is a method for an organization to gain greater legitimacy and success; the lack of participation, in turn, suggests a flaw in the process (Giner & Arce, 2012). In the same perspective, Kort (2011) states that, in the fulfillment of their standardizing duties, the standardizers try to be as open and transparent as possible, due to the absence of any elected or governmental authority to monitor the members. Therefore, the public's participation in this process is required.

IASB develops its standards throughout a due process, in which various opportunities are provided for different stakeholders (e.g. preparers, auditors, accountants or financial analysts) to express their opinion and influence the standards of the IASB agenda (Orens, Jorissen, Lyabert & Van Der Tas, 2011). According to Larson (2008), although great progress has been made toward the convergence of accounting standards, there is concern that political pressures, if effective, can create international accounting standards that do not always act in the best interests of investors and other stakeholders.

In the view of Asekomeh, Russell and Tarbert (2006), standard development processes, in addition to establishing a set of accounting rules, entail changes (including costs and/or benefits) for the stakeholders. Thus, because accounting affects the allocation of scarce economic resources, stakeholders (e.g. management, government or shareholders) are interested in modeling new accounting standards (Hill, Shelton & Stevens, 2002).

All stakeholders, such as preparers, auditors and users have different and often contradictory interests, and it is therefore almost impossible to develop an accounting standard that is satisfactory for all parties. Thus, all stakeholders will try to persuade standardizers to make rules that maximize their utility (Kort, 2011). One way to influence IASB is to argue in favor of or against the changes in accounting standards proposed in comment letters that are submitted to IASB, this being the most observable form of feedback obtained by IASB (Hartwig, 2012).

Lobbying activities are usually carried out whenever the new or proposed accounting standards affect the accounting information contained in the financial reports, which in turn may entail economic consequences in accounting (Hartwig, 2012). Lobbying can be defined as any attempt by individuals or private interest groups to influence the decisions of a political organization (Chatham, Larson & Vietze, 2010).

According to the study carried out by Procházka (2015), IASB tends to succumb to pressure if the lobby is expressive (evaluated by the number of comments letters sent) in relation to other projects and, according to additional evidence on the general capacity of who exerts it with a view to influencing the standardizers' decision, pushing them towards the substantial revision of a project, or even completely stopping the project in question.

Hansen (2010), on the other hand, points out that the success of the lobby is positively related to the credibility of who provides information and their ability to convey it. The author found evidence that successful lobbying is associated with its impact on the feasibility of the IASB, assessed by means of its financial contributions and the size of the capital market of the country of origin.

Chatham et al. (2010), on the contrary, state that despite the participation of different parties in the public discussion process, it is unlikely that the proposed changes will directly affect the proposals presented. The lack of (real or perceived) justice could compromise the perception of procedural legitimacy of the process and ultimately undermine IASB's cognitive legitimacy (Bamber & McMeeking, 2016).

Kothari, Ramanna and Skinner (2010) point out that regulators have their own ideologies (for example, they strongly believe in the primacy of the balance sheet or in fair value), yet they are open to lobbying by constituents with specific knowledge on a given subject. In this sense, lobbying should not be seen as an explicit form of bribery, but rather as a mechanism through which regulators are informed about the environment, including policies related to the matter. In other words, interest groups put pressure on regulators to convey their specific knowledge of the issues being regulated (Kothari et al., 2010). Thus, and according to Santos and Santos (2014), lobbying should not necessarily be considered an illegal or immoral attitude, but a mechanism through which the regulator gains knowledge of the practices and policies the companies adopt.

2.1 Theories concerning lobbying in the context of the due process

The use of lobbying in the context of the due process is supported in the accounting literature based on different theories.

Based on the positive theory of Accounting developed by Watts and Zimmerman (1978), the existence of economic incentives for the agents makes them influence the regulators to obtain standards that benefit their interests, namely through lobbying. The authors point out that stakeholders try to influence the regulatory standards to maximize their usefulness and, in this assumption, standard-based lobbying is based on the particular interests of each stakeholder. In that sense, adjustments arising from changes in an accounting standard will only be made to the extent that the marginal cost of adjustment equals the marginal benefits (Watts & Zimmerman, 1978).

According to Asekomeh et al. (2006), this approach is consistent with the Agency theory (Jensen & Meckling, 1976 and Fama, 1980) and the theory of Rational Behavior (Klein, 1946), which suggest that each stakeholder group will try to influence the standardizer's decisions in their best interests, that is, so as to maximize their own interests over those of other interested parties.

Similarly, the economic theory of regulation proposed by Stigler (1971) is committed to the strong assumptions of general economic theory, based on which people seek to achieve their own interests in a rational way, using politically effective groups for this purpose (Posner, 1974). Given this assumption, the theory is also known as interest-group theory, as regulation seeks to address the interests of groups that are politically more effective in persuading regulators to act to their benefit (Santos & Santos, 2014). The authors also point out that the accounting choices are related to the interest-group theory due to the fact that accounting policies are established based on the various economic incentives that exist and their presence in the regulation process. By aligning the accounting choices with the accounting regulation process, the managers would have economic incentives to lobby against or in favor of accounting regulation in order to influence the issuing body to opt for accounting models that allow them, for example, to reduce or defer the payment of loans; decrease political costs and the production of information (disclosure); or even increase the receipt of bonuses (Santos & Santos, 2014).

The lobbying process has also been studied from the perspective of institutional theory. According to Larson (2002), this theory investigates the relationships of organizations with individuals and other organizations, suggesting that organizational action should be understood as an attempt to achieve social legitimacy and uphold credibility with external stakeholders (Fogarty, 1992). Kenny and Larson (1993), according to Scott (1987), report that Institutional theory places organizations within a social environment and explicitly recognizes the influences and interactions of the external social environment on the internal activities of the organization. Bengtsson (2011) states that Institutional theory has been used in research on the definition of accounting standards to complement the explanatory structures of the Rational and Political Economy theories, focusing on how the pressures exerted influence the adoption of accounting standards.

The legitimacy theory, in turn, was used by Bamber and McMeeking (2016) to explain the results and question the implications of possible biases from the viewpoint of the IASB, in a study in which they explore the due process regarding the definition process of accounting standards focusing on the relative levels of stakeholders and courts' influence. The authors created a weighted coding system to analyze the content of the comment letters, evaluating differences in the acceptance rate of comments made by stakeholders and courts. Finally, they analyzed the documentation the IASB raised for public discussion that sheds light on the decision-making process. Based on the results, Bamber and McMeeking (2016) found that accounting firms seem to have significantly less influence than other stakeholders, that IASB reacts less favorably to UK proposals, but that US comments are probably more discussed.

2.2 Studies that analyze lobbying in the context of the due process

Analyzing the comment letters submitted in the context of public discussion processes for changes or regulatory reviews proposed by standardizers, we identify studies that analyzed the answers obtained from several stakeholders in different areas and objectives. Such studies are not necessarily associated with the aforementioned theories though.

Giner and Arce (2012) analyzed lobbying behavior and its influence on IASB decision making, based on a content analysis of 539 comment letters in response to the three public consultation periods prior to the issuing of IFRS 2 Share Based Payments. The comment letters were classified into six groups of respondents, namely regulators, professional associations, users, preparers, consultants and academics, focusing on three key opinions (recognition, measurement criteria and reference date) and the type of argument for justification (concetual or based on economic consequences). The preparers and consultants were the only groups that used arguments of economic consequences to disagree, but also adopted conceptual arguments. IASB, however, considered only conceptual arguments, and no interested parties were identified with dominant influence on the decisions adopted.

Allen, Ramanna and Roychowdhury (2014) analyzed the lobby practiced by auditors through comment letters during the period 1973 to 2006 by FASB. The incentives of the Big N auditors (Ernst & Young, Deloitte Touche, KPMG and PwC) were characterized based on three distinct sources, namely: the desire to manage expected litigation and regulatory costs, the desire to meet its audit clients' flexibility preference and the desire to support the FASB in its conceptual agenda on fair value accounting. The results indicated support for expected litigation costs and the threat of regulatory scrutiny as important drivers for the lobby practiced by auditors. In the presence of these forces, the Big N are more likely to emphasize their concern with decreasing the reliability of the proposed standards. The results confirm that Big N lobbying focuses more on concerns with the reliability of the proposed standards during court cases that reduce the eventual imputation of liability to the auditor.

Orens et al. (2011) explore whether the preparers' attitude towards lobbying differs according to the regulatory context of their country of origin. By comparing the participation patterns of Belgian preparers (from a regulatory environment characterized by a government-initiated internal accounting standard) to UK preparers (where preparers are invited to participate in the accounting standard-setting process), they found that the methods used, the perceived efficacy of the methods and the reasons for non-participation differ between the two groups of preparers. This finding suggests that the national regulatory context of the preparers may affect their behavior in the decision to participate in the definition of accounting standards (Orens et al., 2011).

Carvalho et al. (2015) analyzed the differences in professional interests based on the participation of different groups of stakeholders in the context of the first phase of the replacement project of IAS 39, entitled "Financial Instruments - Recognition and Measurement" by IFRS 9, in turn entitled "Financial Instruments". The respondents were identified according to the group of stakeholders, and there were significant differences between the responses obtained from the distinct groups involved in the process, especially among the group of financial preparers and regulators and/or standardizers and professional associations linked to accounting.

Larson and Brown (2001) investigated the relationship between the position of interest groups on the one hand and the accounting standards and tax rules of their countries of origin on the other. The standard of the construction contracts was used as the object of study. The study found an association between the respondent's lobbying positions and the accounting standards and tax laws of respondents' country of origin, thus providing evidence to support the idea that respondents oppose changes in the status quo (of financial reporting or tax issues), particularly changes that may provoke economic consequences in the future.

Santos and Santos (2014) analyzed the determining factors regarding the submission of comment letters in the public hearing of the IASB's DP Extractive Activities, aiming to identify a lobbying strategy in the accounting regulation of the oil sector. The authors' identified the company dimension as a determining factor, indicating a greater probability of lobbying by large oil companies who were prone to maintain the status quo.

Hartwig (2012) analyzed the positions of preparers and non-preparers in relation to accounting for the amortization of goodwill, through a study of 128 comment letters sent to ED3 Business Combinations. Due to economic consequences, the preparers demonstrated incentives to perpetuate the lobby for the non-amortization approach and the non-preparers for the amortization approach, thus providing greater support for the amortization of goodwill by non-preparers. In line with previous studies, the results demonstrated that the two groups use arguments based on frameworks rather than arguments of economic consequences, indicating that both preparers and non-preparers point out strengths and weaknesses under this approach, to the detriment of reasons related to lobbying activities, i.e. consequences that affect the final version of the standard.

Anantharaman (2015) analyzed the comment letters submitted to FASB under ED 201 Business Combinations and subsequent review, based on the evolution of the Statement of Financial Accounting Standards (SFAS) 141, with the same name, and SFAS 142 Goodwill and Other Intangible Assets. Contrary to the approaches the FASB proposed, most respondents opposed the abolition of the shared interests method, not in theoretical terms, but in practical terms, as it resulted in negative economic consequences for companies from various sectors. Concerning the treatment of goodwill, there was greater support for the "amortization with impairment" approach versus the exclusive impairment approach, the overwhelming view among most respondents, particularly audit firms, being that the latter approach would not be reliable enough to be applicable in practice.

Do Carmo, Mussoi and Carvalho (2011) analyzed the influence of interest groups in the DP about leases, based on the 302 comment letters received in the period from March to July 2009, which resulted in the ED issued in August 2010. The respondents were classified under preparers (companies and associations of companies not linked to Accounting), accounting professionals (companies and associations of companies linked to Accounting), standardizers and academics. Some information was added to these groups, namely: the country of origin of the respondent, the number of native representatives on the IASB board, the total amount of board financing by the entities from the respondent's country and the local market capitalization index. Based on logistic regression techniques, the authors verified whether the respondents' characteristics influenced the position the IASB manifested in the ED on leases after the issuance of the DP. The results obtained suggest that only the opinions of accounting professionals, national standardizers and academics influenced the IASB's decisions.

Also in the field of leases, Mellado-Bermejo and Esteban (2014) examined the comment letters submitted in the context of the DP 2009 and the 2010 and 2013 ED, in order to analyze the influence of the countries in the lease accounting proposal issued by IASB and FASB. Based on the 1,746 comment letters collected, the results obtained identified significant differences in the intensity of participation per country, being influenced by the income, language and protection of the creditors from the country of origin.

Kort (2011), in turn, analyzed the influence of companies' own interests on the positions taken in the elaboration process of the same standard (leases). The study focused only on the comment letters sent by the lessees, aiming to identify if the characteristics of the companies influence the responses sent. The research examines the comment letters relating to the DP of 2009 (105 responses) and the ED of 2010 (149 replies). The results indicate that leasing obligations and the solvency ratio of companies exert great influence on the comments submitted, indicating that they are distorted by the companies' own interests, to the detriment of the public interest.

The following point in this article discloses the hypotheses and methodological lines defined to achieve the objective initially defined, taking into account the theoretical framework presented in this point.

3. Hypothesis and method

This study aims to investigate the differences between the stakeholder groups participating in the issuance/change processes of IASB standards through the comment letters. These documents are an integral part of the standardization process and contain valuable information on the parties' views, namely issuers, accounting professionals and auditors, securities analysts and others (Anantharaman, 2015). Mellado-Bermejo and Esteban (2014) state that comment letters allow researchers to better understand the critical issues about a new standard, its characteristics and the behavior of the parties involved in the process. In addition, they permit analyzing the connection between the comment letters and the final standard. This is valuable information for the market, preparers and users in general, as it permits verifying the importance of economic and political factors in the accounting standardization process deriving from the particular interests of certain stakeholder group(s) (Mellado-Bermejo & Esteban, 2014). Asekomeh et al. (2006) refer, in the same sense, that comment letters and transcripts of public hearings provide one of the most reliable forms of evidence for studies on lobbying when compared to responses obtained from studies using the questionnaire.

The data for this study were collected through the comment letters in response to the revised ED (2013) regarding the transition project from IAS 17 to IFRS 16. Georgiou (2004) suggests that more companies are lobbying during the most effective public consultation stages (e.g. DP exposure period), compared to the initial stages of the process (e.g. agenda setting). Kort (2011) also identified in his study that comment letters sent at an early stage in the standard-setting process are less biased than those sent later. In view of the above, in order to achieve the objectives initially proposed, this study uses the opinions in the comment letters submitted for public consultation in the framework of the revised ED (2013), from May 16 to September 13, 2013.

The study thus uses content analysis as a research method. This analysis is defined by Krippendorff (1980) as a research method that permits making replicable and valid inferences from data, according to their context. Weber (1990), in turn, defines it as a research method that uses a set of procedures to elaborate inferences based on a given text. For the author, the content analysis is particularly useful as it permits transforming and coding the text for the research to be conducted.

The answers collected were then classified according to the groups of respondent stakeholders. The aforementioned classification tries to capture the existence of potential particular interests in the subject under analysis (leases), characteristic of the existence of lobbies, in line with the classification underlying the hypothesis defined. In particular, Kort (2011) states that, while standardizers expect firms to participate in the standard-setting process, taking into account the public interest, most companies criticize proposals to draw up new accounting standards based on their own interest.

The sample consisted initially of 641 comment letters. Thirty-nine responses were excluded because no specific positioning on at least one of the issues raised could be identified. Table 1 identifies the classification proposed for the different groups of stakeholders and the number of comment letters received from each group.

Table 1

Classification of responding stakeholders and distribution of the answers

Code	Classification of entities	Absolute distribution	Relative distribution (in %)
NFI	Non-financial institutions	301	50.0
FIN	Financial institutions	137	22.8
REG	Regulators and professional associations	132	21.9
OTH	Others (academics and private preparers)	32	5.3
	Total	602	100

The definition of the groups was based on the identification of potentially shared interests (characteristic of the lobbies) and on the greatest possible homogeneity among the population elements, without negatively affecting the identification of a minimally representative participation in this population. The FIN group (financial entities) includes entities related to credit institutions and financial companies, while the NFI group (non-financial entities) is composed of companies whose main activity or business lies within the scope of non-financial corporations. Thus, in the final composition, the other group is the least representative, with about 5%, particularly including individual and academic preparers. Particular mention should be made in this context of the attempt to segregate the following elements of the population, which, however, proved unfeasible in view of the objectives described above:

- **Auditors, particularly those from multinational audit firms** (included in the "non-financial entities" group): an attempt made unfeasible by the low participation of these elements in the sample;
- **Professional associations** (included in the group of "professional regulators and associations"): in addition to the low participation, the distinction between this group and the group of regulators is not always clear, besides the fact that some associations legally serve as accounting regulators in some jurisdictions; and
- **Financial versus non-financial regulators** (included jointly in the "regulators and professional associations" group): in spite of the potential interest of this classification (in view of the study objective), in several cases, the classification was not clear or homogeneous. As an example, securities market regulators may defend interests of both financial and non-financial entities. In this sense, as a guarantee of greater harmonization as a group, and because other distinctions were impracticable (low representativeness of the different groups), we decided to aggregate these observations into a single group.

IASB proposed twelve questions in the final phase of the project, which correspond, individually or in a group, to the variables of this study. Based on the content of these questions, their aggregation around their main accounting content was proposed for analysis purposes. This information is described in Table 2.

Table 2

Variables: questions under discussion in revised ED (2013)

Code	Content of the Question (Q)	Theme
Q1	Do you agree with the definition of lease and proposed requisites as to how an institution determines when a contract contains a lease?	
Q2	Do you agree that the lessee should apply a distinct accounting model according to the expectable consumption of economic benefits incorporated in the underlying asset realized by the lessee?	
Q3	Do you agree that the lesser should apply a distinct accounting model according to the expectable consumption of economic benefits incorporated in the underlying asset realized by the lessee?	**Main questions:**
Q4	Do you agree that the expectable consumption standard should be apply using requisites that differ according to the owner of the underlying asset?	Recognition, measuring and disclosure criteria (including transition rules) in the context of IFRS 16
Q5	Do you agree with the proposals on the leasing term?	
Q6	Do you agree with the proposals on the measuring of the variable lease payments?	
Q7	In the transition, do you agree with the adoption of a modified or complete retrospective approach for the recognition and measuring of leases?	
Q8	Do you agree with the disclosure requisites proposed by the lesser/lessee?	
Q9	From the perspective of cost-benefit equilibrium, do you agree with exempting non-listed entities from the reconciliation of leasing liabilities or to use a risk-free discount rate to measure them?	
Q10	Do you agree that it is not necessary to establish distinct measuring and recognition criteria for leasing between related parties?	**Additional questions:** Exemptions, additional disclosures and relations between IFRS 16 and other aspects regulated in distinct standards
Q11	Do you agree that it is not necessary to provide additional disclosure for leases between related parties?	
Q12	Do you agree that the right to use an asset should fit into the context of IAS 40 if the leased property complies with the definition of investment property?	

Thus, considering the objectives initially defined and the theoretical framework presented in the previous part on the one hand, and the model proposed for the development of this study on the other hand, the following general hypothesis was defined:

Significant differences exist between the stakeholder groups participating in the transition process from IAS 17 to IFRS 16 (leases) are significant, indicating lobbying indicators, taking into account these groups' distinct interests (lobbies).

To develop the proposed study, the questions were analyzed through their transformation into ordinal variables (from "1" to "5"), based on the classification scale proposed in Table 3, also representative of a "Likert" scale.

Table 3

Classification scale of the answers

Classification	Definition
1	When the respondent **disagrees** from the position suggested in the question
2	When the answer is presented without an apparently binding position by the respondent
3	When the answer to the question is not provided or is omitted
4	When the respondent partially agrees with the position suggested in the question
5	When the respondent **agrees** with the position suggested in the question

As indicated, the classification "3" (central point) is associated with "non-answers or omissions", representing that the respondent does not take a position and making it possible to maintain the respondent in the population. Points "1" and "5" are opposing positions ("in disagreement" and "in agreement", respectively). The classification "2" represents an intermediate position between points "1", related to disagreements, and "3", associated to non-response. It should be noted that the "non-response" may indicate the respondent's lesser interest in the potential impacts of the issue under analysis, and also be relevant information to be captured in the context of the study. This procedure had previously been used, in particular by Holder, Karim, Lin and Woods (2013). In contrast, Do Carmo et al. (2011) and Carvalho et al. (2015) opted for a dichotomous scale, according to different methods or objectives. In the first case, the authors proceeded to the analysis through a logistic regression, having the IASB decisions after the discussion process as a dependent variable ("1" if in line with the comment received, "0" otherwise). In the second, the use of the chi-square statistical test was determinant in the selection of the scale, which sought to analyze only to what extent the answers diverged according to the professional context of the respondents, without directly analyzing whether the opinions issued indicated the existence of lobbying or not.

The data were submitted to different statistical analysis techniques, according to the objectives in question. Descriptive (univariate) analysis techniques were used (frequencies) to analyze the general pattern of responses by the different groups of respondents. Bivariate non-parametric techniques such as Mann-Whitney-U and Kruskal-Wallis, suitable for variables with the characteristics described above, seek in turn to identify more robust results regarding the differences between the groups of respondents (two by two and between the various groups, respectively).

The following point of this article presents the main results obtained, in the light of the method previously described.

4. Analysis of results

In Table 4, the relative frequencies for the combination question/respondent group/obtained answers are presented.

Table 4
Relative frequency: questions, respondent group and answers obtained

Question			Answer					Question			Answer				
			1	2	3	4	5				1	2	3	4	5
Q1		FIN	20%	5%	39%	17%	19%	Q7		FIN	24%	8%	36%	14%	18%
	Cod	NFI	22%	4%	28%	24%	22%		Cod	NFI	17%	6%	38%	21%	18%
		OTH	29%	3%	27%	12%	29%			OTH	24%	9%	52%	6%	9%
		REG	22%	5%	17%	33%	23%			REG	15%	9%	30%	20%	26%
	Total		22%	5%	27%	24%	22%		Total		18%	7%	38%	18%	19%
Q2		FIN	52%	2%	19%	20%	7%	Q8		FIN	33%	3%	35%	17%	12%
	Cod	NFI	41%	5%	21%	22%	11%		Cod	NFI	35%	3%	33%	19%	10%
		OTH	47%	3%	23%	12%	15%			OTH	29%	3%	44%	15%	9%
		REG	39%	8%	9%	32%	12%			REG	39%	3%	18%	23%	17%
	Total		44%	5%	17%	23%	11%		Total		35%	3%	31%	19%	12%
Q3		FIN	62%	3%	15%	13%	7%	Q9		FIN	6%	0%	86%	1%	7%
	Cod	NFI	40%	5%	26%	18%	11%		Cod	NFI	4%	1%	88%	5%	2%
		OTH	44%	0%	26%	21%	9%			OTH	9%	6%	67%	12%	6%
		REG	45%	7%	13%	20%	15%			REG	4%	2%	82%	5%	7%
	Total		46%	5%	21%	17%	11%		Total		5%	1%	85%	4%	5%
Q4		FIN	57%	1%	15%	20%	7%	Q10		FIN	2%	1%	82%	1%	14%
	Cod	NFI	52%	3%	15%	21%	9%		Cod	NFI	3%	1%	85%	1%	10%
		OTH	53%	0%	14%	21%	12%			OTH	6%	3%	67%	6%	18%
		REG	47%	8%	7%	29%	9%			REG	5%	2%	79%	2%	12%
	Total		52%	3%	14%	22%	9%		Total		3%	1%	82%	2%	12%
Q5		FIN	29%	0%	37%	18%	16%	Q11		FIN	2%	0%	83%	0%	15%
	Cod	NFI	21%	3%	29%	25%	22%		Cod	NFI	2%	1%	86%	1%	10%
		OTH	27%	0%	52%	9%	12%			OTH	0%	3%	70%	6%	21%
		REG	25%	2%	24%	29%	20%			REG	2%	2%	82%	1%	13%
	Total		24%	2%	32%	23%	19%		Total		2%	1%	83%	1%	13%
Q6		FIN	25%	2%	40%	16%	17%	Q12		FIN	6%	3%	77%	2%	12%
	Cod	NFI	20%	3%	35%	21%	21%		Cod	NFI	4%	2%	80%	2%	12%
		OTH	18%	0%	52%	15%	15%			OTH	15%	3%	70%	3%	9%
		REG	22%	5%	24%	22%	27%			REG	4%	4%	56%	4%	32%
	Total		21%	3%	36%	19%	21%		Total		5%	3%	73%	3%	16%

It immediately stands out that questions Q2 to Q4, more directly associated with the matters related to the disclosure and the accounting treatment of leases, generally present the highest levels of disagreement or non-linkage (answers "1" and "2") . The questions on aspects related to the identification, timing and measuring of leases (Q1, Q5 and Q6, respectively), in turn, generically present the highest levels of agreement (answers "4" and "5"). A high level of non-response (response "3") can be identified for Q9 to Q12 (with a minimum of 74% and a maximum of 85%), associated with the subsidiary materials proposed in the revised ED 2013 (exemptions, disclosures and relations of IFRS 16 with other matters regulated under separate standards), which indicates a greater "indifference" to such issues. In a group analysis, it can be verified that the "FIN" group presents higher levels of disagreement in questions Q2 to Q4. Less expressively (with relative frequency varying between 27% and 33%), the higher agreement, even if partial, in questions Q1 and Q5 and the total agreement in question Q6 stand out in the group "REG" .

Table 5 presents the significance levels obtained from the results of the Kruskal-Wallis test, which identifies the existence of significant differences between the groups under analysis. Based on these results, it can be observed that one-third of the questions (Q3, Q5, Q7 and Q12) present cross-sectional divergences between the analyzed groups at a significance level of 5%, also identifying differences in terms of Q2, albeit less expressively. It should be noted that the first questions (Q1 to Q8) are generally associated with the main issues of IFRS 16 (recognition, measurement and disclosure criteria). Thus, in this context, the existence of more general differences of opinion, together with the previous conclusions, reinforces, the indications of the entities' greater involvement in the expression of their (distinct) positions around these themes.

The preliminary analysis of these results, in line with Hartwig (2012), reveals the existence of an effective attempt to influence the standardization process, materialized in the "FIN" group's particular opposition to Q2 and Q3, in order to impede the accounting model proposed for lessees, which negatively affects their economic interests. The high know-how of this group of entities in terms of leases enhances the probability of success of the lobbying effect (Larson, 2008; Kothari et al., 2010).

Table 5

Kruskal-Wallis test per groups of respondents (significance levels)

Question	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
N.Sig.	0.449	0.077	0.002	0.412	0.050	0.243	0.009	0.874	0.897	0.514	0.124	0.000

To analyze the differences among the groups under analysis in further detail, combined "two by two", the Mann-Whitney test was also applied. In Table 6, the significance levels obtained as a result of this procedure are displayed.

Table 6

Mann-Whitney test per pairs of respondent groups (significance levels)

Question	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
NFI vs. FIN	0,387	0,041	0,000	0,313	0,032	0,124	0,069	0,723	0,904	0,185	0,140	0,557
NFI vs. REG	0,304	0,364	0,968	0,332	0,815	0,441	0,207	0,407	0,463	0,749	0,506	0,000
NFI vs. OUT	0,809	0,580	0,875	0,893	0,041	0,514	0,018	0,910	0,944	0,284	0,029	0,091
FIN vs. REG	0,099	0,013	0,003	0,089	0,115	0,066	0,015	0,687	0,523	0,453	0,525	0,000
FIN vs. OUT	0,925	0,580	0,067	0,507	0,461	0,783	0,298	0,935	0,953	0,757	0,244	0,229
REG vs. OUT	0,517	0,345	0,852	0,700	0,078	0,320	0,007	0,728	0,766	0,480	0,125	0,003

In general terms, the results are consistent with the evidence resulting from the Kruskal-Wallis test, as the previously mentioned variables (Q3, Q5, Q7 and Q12) show differences in at least three combinations (although in some cases only at a significance level of 10%). Q7 and Q12 stand out in this context with differences in four combinations. The variable Q2 follows, with significant differences in two combinations. The variables Q1, Q6 and Q11 show significant differences in only one combination (in the first two cases, only at a significance level of 10%). Only the variables Q8 to Q10 do not present significant differences between the combinations analyzed.

Looking at the proposed combinations in further detail, a greater number of differences is found in two combinations, namely "Non-Financial (NFI) vs. Financial (FIN) "and" FIN vs. Regulators (REG)". The observation of the relative frequencies in Table 4, together with the level of significance of the Mann-Whitney test, is a useful resource in the analysis of these results. In this context, it should be noted that, in both cases, the differences result from a greater level of disagreement between the "FIN" group and "NFI" and "REG" for most variables in which the differences are significant, except for Q12. For the latter variable, the "REG" group differs from the others by the more expressive level of agreement and, at the same time, is the group that provided the largest number of answers, in relative terms, to that question. As a result of this fact, this group always differs from the others in relation to that question. Given that the "NFI" group only differs from the "REG" group in relation to that question (Q12), and in the light of the initial considerations, it can be concluded that these two groups are generally more consensual concerning the revision of the content of the leasing standard. In contrast, the "OTH" group has a greater number of divergences than the "NFI" and "REG" compared to the "FIN" group, which it differs from. The argument about the disagreement of financial institutions, as opposed to the greater agreement of regulators and non-financial entities, supports the positive theory of Accounting (Watts & Zimmerman, 1978), the agency theory (Jensen & Meckling, 1976 and Fama 1980) and the theory of rational behavior (Klein, 1946). In this sense, the hypothetical negative impact on the financial information of lessees, namely in terms of economic-financial ratios and recognition and/or disclosure of obligations, may justify the position of financial entities according to Kort (2011).

The next point of this article presents, finally, the main conclusions, limitations and potential contributions of this study for the sake of future investigations in this field.

5. Conclusions, limitations and future perspectives

The increase in transparency, comparability and the reduction of the need for adjustments in the financial reporting for analysis purposes, which the various stakeholders currently still carry out in the context of IAS 17, were identified by IASB and FASB as guiding objectives of the transition project to the new leasing standard: IFRS 16. The new standard seeks to obtain an even better representation of the true and fair view of entities' financial position and performance.

In view of the above, the results presented point to the existence of a higher level of significant divergences between the groups of financial and non-financial entities concerning the most central/relevant issues of IFRS 16. This particularly includes questions concerning the recognition associated with the existence of a single or dual model of lease accounting by lessees and lessors (questions 2 and 3, respectively), according to the projected consumption of economic benefits incorporated into the underlying asset and the use, in the light of this principle, of differentiated requirements according to the owner of the underlying asset (question 4).

In this context, it is also worth highlighting the greater alignment between the opinions of non-financial entities and regulators, as opposed to differences between financial institutions and non-financial entities. The finding of such differences between the groups is supported by background literature, namely Do Carmo et al. (2011) and Carvalho et al. (2015), supported by lobbying by different stakeholders.

The detailed analysis of these differences particularly reveals a significant opposition by financial entities to question 3 above, related to the lessor's application of a different accounting model in accordance with the projected consumption of economic benefits incorporated in the underlying asset held by the lessee. It should be recalled that, as a final result of the standard, the lease accounting model in IAS 17 was upheld in such operations exclusively for lessors. The above can translate the organizational influence this group of entities enjoyed in the specific regulatory context of this standard, in line with the institutional theory advocated by Bengtsson (2011).

The subsidiary issues, which include matters on exemptions, additional disclosures and relations of the lease norm with other themes regulated in different norms, obtained low levels of adherence, which is associated with the distinct groups' disinterest in topics that exert less direct influence on the investors' perception of entities' obligations resulting from leases.

This paper presents some limitations. The first, inherent in this kind of studies, concerns the subjectivity associated with the classification of responses, both in terms of the respondents' characteristics and in terms of coding in view of the proposed scale. Equally inseparable from studies of this nature, the possibility that the respondents participating in the IASB's public discussion process do not constitute a representative sample of the universe of reference stakeholders is another limitation from the perspective of the sample design that should nevertheless be referenced.

The economic or conceptual justifications presented by the respondents in matters of significant financial impact, such as leases, represent another possibility of continuity of this study. As this aspect was not analyzed here, the asymmetry in the treatment provided for in IFRS 16 between lessees and lessors could be assessed in the light of the results obtained and the possible consequences of lobbying by financial entities, which is a proposal to continue this research. In addition, the analysis of the operationalization forms used in the lobbying strategies constitutes opportunities for future research in this area.

To verify the existence of significant differences of opinion indicating lobbying in the scope of a replacement project of a standard promoted by the IASB, and in function of the different interests involved (lobbies), is therefore the main contribution of this research. In addition, the analysis of the respondents' apparent behavior in response to the presented questions can also be pointed out as an innovative element in this study, taking into account the potential interest these issues arouse in the light of the different underlying themes.

Bibliographic References

Allen, A., Ramanna, K. & Roychowdhury, S. (2014). Auditor lobbying on accounting standards. *Harvard Business School Accounting & Management Unit*. Working Paper No. 15-055.

Anantharaman, D. (2015). Regular paper: Understanding the evolution of SFAS 141 and 142: An analysis of comment letters. *Research in Accounting Regulation*, *27* (2), pp. 99-110.   DOI: https:\\doi.org/10.1016/j.racreg.2015.09.001

Asekomeh, A., Russell, A. & Tarbert, H. (2006). A critical analysis of the use of accounting standards' comment letters as lobbying tools by extractive industry firms. *Petroleum Accounting and Financial Management Journal, 25*(3), pp. 55-76. Recuperado em 23 abril, 2017, de: https://repository.abertay.ac.uk/jspui/handle/10373/70.

Bamber, M. & McMeeking, K. (2016). An examination of international accounting standard-setting due process and the implications for legitimacy. *The British Accounting Review,* 48, pp. 59-73. DOI: https:\\doi.org/10.1016/j.bar.2015.03.003

Bengtsson, E. (2011). Repoliticalization of accounting standard setting - The IASB, the EU and the global financial crisis. *Critical Perspectives on Accounting*, *22* (6), pp. 567-580. DOI: https:\\doi.org/10.1016/j.cpa.2011.04.001

Carvalho C., Albuquerque, F., Texeira Quirós, J. & Justino, M. (mai./jun./jul./ago. 2015). Uma análise das diferenças em termos dos interesses profissionais a partir do projeto de substituição da IAS 39. *Revista Contabilidade Financeira – USP*, *26(*68), pp. 181-194. DOI: https:\\doi.org/10.1590/1808-057x201500530

Chatham, M., Larson, R. & Vietze, A. (2010). Issues affecting the development of an international accounting standard on financial instruments. *Advances in Accounting*, *26* (1), pp. 97-107. DOI: https:\\doi.org/10.1016/j.adiac.2010.03.002

Do Carmo, C., Mussoi, A., & Carvalho, L. (2011). *A influência dos grupos de interesse no processo de normatização contábil internacional:* O caso do *discussion paper* sobre leasing. Anais Congresso USP de Controladoria e Contabilidade, 11. São Paulo, SP, Brasil. Recuperado em 23 abril, 2017, de: http://repositorio.bc.ufg.br/handle/ri/416.

Donkersley, K., Ravelli, R., & Buchanan, P. (2016). *IFRS 16 Leases.* [Em linha]. Recuperado em 20 abril, 2017, de: http://www.ifrs.org/Alerts/ProjectUpdate/Documents/2016/Webinar-IFRS-16-Leases.pdf.

Fama, E. (1980). Agency Problems and the Theory of the Firm. *The Journal of Political Economy*, *88*(2), pp. 288-307. Recuperado em 25 abril, 2017, de:http://www.jstor.org/stable/1837292.

Fogarty, T. (1992). Financial accounting standard setting as an institutionalized action field: Constraints, opportunities and dilemas. *Journal of Accounting and Public Policy*, *11*(4), pp. 331-355. DOI: https:\\doi.org/10.1016/0278-4254(92)90003-G

Georgiou G. (2004). Corporate lobbying on accounting standards: Methods, timing and perceived effectiveness. *ABACUS*, *40*(2), pp. 219-237. DOI: v10.1111/j.1467-6281.2004.00152.x.

Giner, B., Arce, M. (2012). Lobbying on accounting standards: Evidence from IFRS 2 on Shared-Based Payments. *European Accounting Review*, *21*(4), pp. 655-691. DOI: https:\\doi.org/10.1080/09638180.2012.701796

Hansen, B. (2010). *Lobbying of the International Accounting Standards Board: An empirical investigation*. DOI: https:\\doi.org/10.2139/ssrn.1081413

Hartwig, F. (2012). Preparers' and Non-Preparers' Lobbying on the Proposed Prohibition of Goodwill Amortisation in ED3 'Business Combinations'. *The Finnish Journal of Business Economics*, *63*(3-4), pp. 30-60. Recuperado em 23 abril, 2017, de:http://urn.kb.se/resolve?urn=urn:nbn:se:du-12549.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 6, p. 453-470, Oct./Dec. 2017

468

Hill, N., Shelton, S. & Stevens, K. (2002). Corporate lobbying behaviour on accounting for stock-based compensation: Venue and format choices. *ABACUS*, *38*(1), pp. 78-90. DOI: https:\\doi.org/10.1111/1467-6281.00098

Holder, A., Karim, K., Lin, K. & Woods, M. (2013). A content analysis of the comment letters to the FASB and IASB: Accounting for contingencies. Advances in Accounting, incorporating Advances in International Accounting, *29*(1), pp. 134-153. DOI: https:\\doi.org/10.1016/j.adiac.2013.03.005

International Financial Reporting Standards (IFRS) (2016). *Exposure Draft Leases (ED/2013/6).* [Em linha]. Recuperado em 20 abril, 2017, de: http://www.ifrs.org/Current-Projects/IASB-Projects/Leases/Exposure-Draft-May-2013/Documents/ED-Leases-Standard-May-2013.pdf

International Financial Reporting Standards (IFRS) (2016a). *IFRS 16 Leases: Effects analysis.* [Em linha]. Recuperado em 16 novembro, 2017, de: http://www.ifrs.org/-/media/project/leases/ifrs/published-documents/ifrs16-effects-analysis.pdf.

Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), pp. 305-360. DOI: org/ https:\\doi.org/10.1016/0304-405X(76)90026-X

Jorissen, A., Lybaert, N., Orens, R. & Van Der Tas, L. (2012). Formal Participation in the IASB's Due Process of Standard Setting: A Multi-issue/Multi-period Analysis. *European Accounting Review*, *21*(4), pp. 693–729. DOI: https:\\doi.org/10.1080/09638180.2010.522775

Kenny, S. & Larson, R. (1993). Lobbying behaviour and the development of international accounting standards: The case of the IASC's joint venture project. *European Accounting Review*, *2*(3), pp. 531-554. DOI: https:\\doi.org/10.1080/09638189300000050

Klein, L. (1946). Macroeconomics and the Theory of Rational Behavior. *Econometrica*, *14* (2), pp. 93-108. DOI: https:\\doi.org/10.2307/1905362

Kort, N. (2011). *Self-interest in lobbying on accounting standards: The case of a new lease standard.* Dissertação de Mestrado. Universidade de Tilburg, Holanda. Recuperado em 25 abril, 2017, de:http://arno.uvt.nl/show.cgi?fid=120551.

Krippendorff, K. 1980. *Content Analysis: An Introduction to Its Methodology*. California, Sage Pulications, Inc.

Kothari, S., Ramanna, K. & Skinner, D. (2010). Implications for GAAP from an analysis of positive research in accounting. *Journal of Accounting and Economics*, *50*(2-3), pp. 246-286. DOI: https:\\doi.org/10.1016/j.jacceco.2010.09.003

Larson, R. (2002). The IASC'S search for legitimacy: An analysis of the IASC'S standing interpretations Committee. *Advances in International Accounting*, *15*, pp. 79-120. DOI: https:\\doi.org/10.1016/S0897-3660(02)15020-3

Larson, R. (2007). Constituent participation and the IASB's International Financial Reporting Interpretations Committee. *Accounting in Europe*, *4*(2), pp. 207-254. doi: https:\\doi.org/10.1080/17449480701727981

Larson, R. (2008). An examination of comment letters to the IASC: Special purpose entities. *Research in Accounting Regulation*, *20*, pp. 27-46. DOI: https:\\doi.org/10.1016/S1052-0457(07)00202-0

Larson, R, & Brown, K. (2001). Lobbying of the International Accounting Standards Committee: The case of construction contracts. *Advances in International Accounting*, *14*, pp. 47-73. DOI: https:\\doi.org/10.1016/S0897-3660(01)14005-5

Lloyd, S. (2016). *Investor perspectives - A new lease of life.* [Em linha]. Recuperado em 20 abril, 2017, de: https://dart.deloitte.com/resource/1/e93ed2dc-3f2f-11e6-95db-b1f180414c3d.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 6, p. 453-470, Oct./Dec. 2017

469

Mellado-Bermejo, L. & Esteban, L. (2014**). An exploratory study of countries participation intensity in comment-letters: Leases accounting proposal. *Encuentro AECA: "Recuperação económica: confiança e investimento na Europa "*, 16. Leiria, Portugal. Recuperado em 26 abril, 2017, de: http://www.aeca1.org/ xviencuentroaeca/cd/59a.pdf.

Orens, R., Jorissen, A., Lybaert N. & Van Der Tas, L. (2011). Corporate lobbying in private accounting standard setting: Does the IASB have to reckon with national differences?. *Accounting in Europe*, *8*(2), pp. 211-234. DOI: https:\\doi.org/10.1080/17449480.2011.621672

Posner, R (1974). Theories of economic regulation. *The Bell Journal of Economics and Management Science*, *5*(2), pp. 335-358. DOI: https:\\doi.org/10.2307/3003113

Procházka, D. (2015). Lobbying on the IASB standards: An analysis of the lobbyists' behaviour over period 2006-2014. *Copernican Journal of Finance & Accounting*, *4*(2), pp. 129-143. DOI: https:\\doi.org/10.12775/CFJA.2015.020

Santos, O. & Santos, A. (2014). Lobbying on accounting regulation: Evidence from the oil industry. *Revista Contabilidade & Finanças*, *25*(65). DOI: https:\\doi.org/10.1590/S1519-70772014000200004

Scott, W. (1987). The Adolescence of institutional theory. *Administrative Science Quarterly*, *32*(4), pp. 493-511. DOI: https:\\doi.org/10.2307/2392880

Stigler, G. (1971). The Theory of Economic Regulation. *The Bell Journal of Economics and Management Science*, *2*(1), pp. 3-21. DOI: https:\\doi.org/10.2307/3003160

Watts, R. & Zimmerman, J. (1978). Towards a positive theory of the determination of accounting standards. *The Accounting Review*, *53*(1), pp. 112-134. Disponível em http://lib.cufe.edu.cn/upload_files/other/4_20140515041338_6%20Watts,%20R.%20L.,%20Zimmerman,%20J.%20L.%EF%BC%881978%EF%BC%89Towards%20a%20Positive%20accounting%20theory%20for%20the%20determination%20of%20accounting.pdf.

Weber, R. (1990). *Basic content analysis (Quantitative Applications in the Social Sciences), Nº. 49.* California, Sage Publications, Inc.

REPeC – Revista de Educação e Pesquisa em Contabilidade, ISSN 1981-8610, Brasília, v.11, n. 4, art. 6, p. 453-470, Oct./Dec. 2017

470

Guidelines for Authors

1. Paper Submission Guidelines

To submit articles to the *Journal of Education and Research in Accounting* – 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, with at least 5,000 and maximum 9,000 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 two languages: Portuguese and English.

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.

The submission of articles should be done electronically, through the www.repec.org.br website. At the end of the submission an electronic message will be sent by e-mail, confirming receipt of the article.

2. Content and Formatting of Papers

At the moment of submission, the articles should contain:

- The **title** in the language of origin of the article (Portuguese or English) without identifying the author(s);
- An **abstract** written in the language of origin of the article (Portuguese or English) with at least 150 and at most 200 words, single space between lines, in four paragraphs containing the following elements, highlighted: **Objective, Method, Results and Contributions**. At the end of the abstract should be placed **three to five** keywords;

Objective: this study was aimed at investigating the relevance of accounting education and research for the growth of the Brazilian economy during the first decade of the 21st century.

Method: to collect the data, a structured questionnaire was used, elaborated based on the relevant literature. The questionnaire was tested and applied to a sample of Brazilian accountants and businessmen during 2017. In the analysis of these data, content analysis was applied and statistical tests were used to establish relations between the answers obtained.

Results: the main findings of this study indicate that the expansion of accounting education and research in Brazil was essential for the growth of the economy, according to the respondents' perception, despite the impression that accountants and businessmen need to make better use of the accounting information.

Contributions: from the academic viewpoint, the evidences from this research contribute to fill of an important existing gap in the Brazilian literature. What the market is concerned, they contribute by providing evidence that, despite its perceived relevance, its users need to make better use of the accounting information.

Key words: Education: Research; Accounting.

- The article itself, written in Portuguese or English, with at least 5,000 and at most 9,000 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[1]

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:

---

1   Most of these guidelines were adapted from the Manual for Submissions of the *Revista de Administração Contemporânea* – RAC, available at www.anpad.org.br.

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:

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.
Size and proportion	Figures must fit the dimensions of the journal. Therefore, a figure should be drawn or inserted into the article so that it can be reproduced in the width of a column or page of the journal to which it will be submitted.
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.

4. Citations and References

For the full version of the standards of citations and references according to APA (American Psychological Association), access http://www.repec.org.br/index.php/repec/article/view/1607/1237.