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## Female Participation in Administration and Accounting Research in Brazil

### ABSTRACT

**Objective:** To map female participation in management and accounting research in Brazil.

**Method:** Articles (n=3,552) published in 2016 and 2017 were retrieved from the Spell database. The data were submitted to descriptive statistics (general characteristics and most recurrent subject areas), chi-squared testing and one-way ANOVA (comparisons between Qualis grades) and two-way ANOVA (identification of explanatory factors of female participation).

**Originality/Relevance:** Earlier studies on this topic have been limited in scope. In this study we sampled all publications in the fields of management and accounting and employed innovative techniques of analysis.

**Results:** Qualis grade and female participation were significantly associated. Male authorship was predominant in all Qualis grades, except in B4.

**Theoretical/Methodological contributions:** Mapping of female participation in research considering journal classification (Qualis grade) and the most recurrent subject areas of publications authored by women.

**Social/Management contributions:** We discuss the challenges of gender equality in the scientific community and provide subsidies for organizations and researchers to contribute to the development of practices and public policies promoting gender equality.

**Keywords:** Research. Female. Gender. Management and accounting. Brazil.

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## 1 INTRODUCTION

The role of women in science, organizations, economy and society has changed substantially over the past century but, despite the near numerical equivalence of men and women in the world population, women's participation in leadership roles remains limited, still incipient (Lazzarini, Sampaio, Gonçalves, Nascimento, Pereira, & França, 2018).

Many studies have shown the predominance of men in the labor market in general (Estivalet, Andrade, & Costa, 2018) rising in audit firms (Cruz, Lima, Durso, & Cunha, 2018), boards of directors (Silva & Martins, 2017) and strategic corporate governance positions in family firms traded on BM&FBovespa (currently, B3 S. A. Brasil, Bolsa Balcão) (Vaccari & Beuren, 2017). In science, a similar disproportion is observed, such as the number of female vs. male Nobel Prize winners; thus, in the Swedish Academy's first 115 years of existence (1901-2016), only 49 (8.5%) of the 579 laureates were women (Nobelprize.org, 2014).

The present investigation was instigated by, on one hand, the rapid and profound changes observed in the contribution of women to scientific research over the past decades (Morais, Cabral, Santos, Pessoa, & Oliveira, 2016), and, on the other, the persistence of gender inequality in the scientific community despite these advances (Santos, 2010).

Brazilian government agencies have made efforts to promote gender equality and parity, as noted by Rodrigues and Guimarães (2016) with regard to access to institutions of higher education, university teaching positions, research groups registered with the National Council for Scientific and Technological Development (CNPq, 2013) and CNPq research productivity scholarships. However, female participation in CNPq scholarships in the fields of management and economics declined between 2001 (36.7% and 18.8%, respectively) and 2012 (31.7% and 12.4%, respectively) (Guedes, Azevedo, & Ferreira, 2015). Statistical data for the year 2015 (CNPq, 2017) show that, despite securing the majority of research mentorships (58.9%), master's positions (52.5%), PhD positions (50.7%) and post-PhD positions (56.1%), women are still the minority in overseas scholarships (46%), in all categories of research productivity scholarships (35.5%), competitive innovation grants (49.3%) and other modalities (45.1%).

While Brazilian public policies implemented since the 1970s have managed to propel the female gender towards higher education and graduate studies, which in the past provided greater opportunities for male academics, the policies governing research productivity scholarships have not had the same effect. In fact, current female participation in this type of scholarship is inconsistent with the overall rise of women in academia (Guedes *et al.*, 2015).

Scientific knowledge production over the past 300 years has been a primarily male pursuit (Luca, Gomes, Correa & Domingos, 2011). According to many authors, gender inequality compromises the careers of female professionals in research and academia (Guedes *et al.*, 2015; Lazzarini *et al.*, 2018; Rodrigues, 2014; Rodrigues & Guimarães, 2016). Brazilian studies have used the overall body of scientific literature to quantify female participation in research (Lazzarini *et al.*, 2018; Ribeiro, 2015), but little has been published regarding specific fields (Guedes *et al.*, 2015; Luca *et al.*, 2011; Rodrigues, 2014; Rodrigues & Guimarães, 2016; Soares, Lessa, Cabral, Pessoa, & Santos, 2015). In fact, investigations into gender equality in science and academic institutions in Brazil is still at the embryonic stage, especially in the fields of management and accounting (Morais *et al.*, 2016).

In this quantitative and exploratory study, we set out to map female participation in research in management and accounting in Brazil. To do so, three specific objectives were established: i) identify the most recurring subject areas in research produced or co-produced by women, ii) analyze female participation in light of the Qualis classification system, and iii)

evaluate the effect of subject area and Qualis stratum on the level of female participation in research.

First, information on articles in the fields of management and accounting published in 2016 and 2017 was retrieved from the Spell database. The collected information was then submitted to descriptive statistics, chi-squared testing and variance analysis.

The scientific production hosted by the Spell database was chosen as unit of analysis because Spell is the most prominent Brazilian database in the fields of management and accounting and, to be accepted, publications must be indexed by CAPES (a service under the Ministry of Education for the supervision of continuing education). The period covered by the present study (2016-2017) complements a study by Elsevier (2017) analyzing scientific production until 2015. The study also expands the research by Morais *et al.* (2016) who mapped female contributions to management and accounting studies published in specialized journals from 2013 to 2015.

The lack of quantification of female contributions to management and accounting research in Brazil represents a relevant gap in the scientific literature (Morais *et al.*, 2016). In addition to subsidizing future studies on female participation in scientific production (Beuren, Machado, & Vesco, 2015) in the fields of management and accounting, our study highlights recently researched subject areas and emerging themes now under development by female Brazilian researchers and supports the creation and/or improvement of research groups committed to these areas (Ribeiro, Costa, Ferreira, & Serra, 2014).

Therefore, the main contributions of this study are: i) to provide comprehensive information on female participation in research in Brazil and increase awareness of gender inequality in specific contexts (Morais *et al.*, 2016), ii) to describe the current status of Brazilian research in management and accounting, iii) to foster discussion on female participation in research, iv) to raise questions for future research, v) to subsidize academic debate on the topic and discuss its implications for society, and vi) to support efforts of Brazilian organizations and researchers to create and implement policies capable of mitigating gender inequality in the fields covered by the study. In other words, our study is intended to expand and enrich the current discussion on gender relations in science, encouraging a broader dialogue regarding the challenges inherent to the Brazilian academia.

## 2 FEMALE PARTICIPATION IN SCIENTIFIC RESEARCH

The aptitudes required for professorship in the capitalist society are based on technological skills, control and rationalization of activities—attributes culturally and socially associated with the masculine gender. However, the lesser representation of women in science and technology (S&T) is not the result of inaptitude, but of inappropriate institutional structures (Soares, 2001).

Nevertheless, female participation in S&T has grown considerably in Brazil, especially within research and teaching institutions (Velho & Prochazka, 2003). According to Elsevier (2017), among all countries, Brazil and Portugal have the highest proportion of female authors or coauthors of academic publications (49%). In other words, nearly half the scientific papers published in these countries are produced or co-produced by female researchers, indicating a near gender parity in an activity historically less welcoming to women (Sims, 2017).

Research on the situation of women in organizations often highlight aspects of exclusion and inequality (Cruz *et al.*, 2018; Estivaleta *et al.*, 2018; Silva & Martins, 2017; Souza, Corvino, & Lopes, 2013; Vaccari & Beuren, 2017) and a number of international

studies have evaluated female representation in academia (Thompson, 2015). Despite a moderately sized body of work on women's contribution to S&T, several gaps remain in the mapping of scientific production by female researchers (Santos, 2010). Thus, it is crucial to increase the availability of gender-specific information on authorship—a potential determining factor in S&T policy making (Morais *et al.*, 2016). In the following, we review several studies in order to summarize the *status quaestionis* of female participation in scientific research in Brazil.

Cruz, Marques, Silva and Cogan (2010) conducted a bibliometric study analyzing scientific papers on the theory of restrictions published in the annual proceedings of the Brazilian Congress on Costs over the period 1994-2008. The male sex was highly predominant among the authors (74.3%).

Luca *et al.* (2011) looked at female participation in accounting studies published in the proceedings of three major Brazilian specialized events and found that 58.3% of the articles were produced or co-produced by women, but also noted a reduction in female participation in the annual proceedings of the Meeting of the National Association of Graduate Study and Research in Management (EnAnpad) between 2007 and 2009.

Focusing on the finance segment, Resende *et al.*, (2012) investigated trends in female participation in the proceedings of EnAnpad over a decade (2000-2010). In general, male authorship was predominant, and a female preference for the sub-area 'corporate finances' was observed.

Soares *et al.* (2015) evaluated studies on 'strategy' and found that 42 of the 227 articles sampled were produced exclusively by women. In general, female representation in this area was not high, but a growth trend throughout the study period was observed.

In a study very similar to our own, Morais *et al.* (2016) quantified female authorship in articles in Brazilian journals of management and accounting covering the period 2013-2015. A clear gender imparity was observed: women represented only 38% (2013), 35.9% (2014) and 38.1% (2015) of the total number of authors or coauthors. Moreover, publications involving female authors revealed a preference for qualitative approaches. The present study complements that of Morais *et al.* (2016) by mapping female participation in 2016 and 2017, and expands the unit of analysis and study object by including all publications from the period, regardless of the journal, and evaluating potential associations with subject area and Qualis stratum.

Finally, a recent study by Silva, Oliveira, Morais and Lima (2018) revealed that only 13 of 173 sampled articles on cost accounting published in *Revista ABCustos* were produced exclusively by women, most articles had 3 coauthors, authorship was predominantly male, and 'cost management' was the most recurrent subject area in the sample.

Filling a gap left by earlier research, in this study we mapped female participation in Brazilian publications on management and accounting according to the subject area addressed, covering the period 2016-2017.

Over the past years, women have gained more visibility in the scientific community. The Elsevier report (2017) shows that citations of female authors has a growing impact on research in Brazil, although male authorship remains predominant. Likewise, the impact on research of downloads of papers authored by women has increased significantly in Brazil (in this case female participation has surpassed male participation).

The unit of analysis of this study (scientific publications in the Spell database) was classified with the Qualis system, a tool developed by CAPES. The system lists and classifies academic journals used in postgraduate programs (master's and PhD) with regard to the range of circulation (local, national, international) and academic quality (A, B, C) per subject area. Eight grades are considered, in decreasing order: A1, A2, B1, B2, B3, B4, B5 and C.



Rodrigues (2014) mapped female participation in research published by the Oswaldo Cruz Foundation (Fiocruz) by evaluating the Qualis classification of articles cited on the Lattes curriculum platform (CNPq), but grading was only possible for 24% of the sample. The highest level of female participation was observed in journals graded B2 (n=449), followed by B1 (n=122), A1 (n=88), B3 (n=22), B4 (n=8) and A2 (n=2). Women predominated over men in journals graded A1 (88 vs. 78), B1 (122 vs. 115) and B3 (22 vs. 15), while male authors were predominant in journals graded A2 (8 vs. 2), B2 (494 vs. 449) and B4 (21 vs. 8). It should be noted that Rodrigues (2014) did not restrict the sample to publications on management and accounting, as in the present study.

In order to fill the gap in the literature regarding research quality, we surveyed the Qualis grading of publications in management and accounting produced or co-produced by female researchers in 2016 and 2017.

As shown by the Elsevier report (2017), Brazil and Portugal boast the highest levels of female participation in research. However, Sims (2017) pointed out that, in the period between 2011 and 2015, research conducted by women represented 5.6 times more publications in Brazil (n=153,967) than in Portugal (n=27,561). According to Sims (2017), the Brazilian figures indicate a significant growth in female participation. By comparison, only 38% of scientific papers published in Brazil in the period 1996-2000 were authored by women. Since then, a near gender parity has been achieved.

The figures of the Elsevier report (2017) for the subject areas of business, management and accounting (which are particularly relevant to our study), indicate a near parity between female and male participation in Brazilian scientific articles. What remains to be seen is how subject area and Qualis grade affect female representation in management and accounting research published in Brazil.

### 3 METHOD

In order to map female participation in Brazilian research in the areas of management and accounting covering the period 2016-2017, we retrieved information on 3,552 articles from the Spell database published in Portuguese between January 2016 and November 2017 (last retrieval: 14 Nov 2017). We then analyzed the contents and organized the items according to year of publication, key words, author name, number of authors, female representation, journal name and Qualis grade.

Based on the titles of the sampled articles, content analysis was performed by defining 12 general categories (following the example of the EnAnpad classification system) and then subjectively classifying each article into the most appropriate category. The adopted categories were: information management, public administration, accounting and finances, entrepreneurship, teaching and research in management and accounting, organizational strategies, organizational studies, management of S&T and innovation, management of operations and logistics, management of personnel and labor relationships, marketing, and sustainability. These areas were defined by the researchers based on adaptation of the EnAnpad thematic areas.

The collected data were then submitted to descriptive statistics and inferential analysis. The former was used to explore the general characteristics of the study object. We also employed similitude analysis and tag clouds to identify the most recurrent words in the article titles, aided by the software Iramuteq. Based on Graph Theory, the similitude analysis allowed to identify words and their interconnections, while the tag clouds made it possible to group words graphically according to frequency. Along with the content analysis, the

descriptive statistics met both the first specific study objective (identify the most recurrent topics in management and accounting research produced or co-produced by women) and the second specific study objective (evaluate the grading of the journals with the greatest representation of female authors).

Associations between Qualis grade and female authorship were evaluated with the chi-squared test, while one-way ANOVA and the Tukey test were used to compare mean percentages of female representation in the Qualis grades. Two-way ANOVA was employed to meet the third specific study objective (identify explanatory factors of female participation in research). Thus, the effect of the variables ‘subject area’ and ‘Qualis grade’ on female participation in management and accounting research in Brazil was evaluated for the period 2016-2017.

**4 RESULTS**

In this study, female participation in research was proxied by authorship or co-authorship of scientific publications. Table 1 summarizes our findings for the quantitative and proportional distribution of male and female authorship.

Table 1  
**Quantitative and proportional distribution of publications on management and accounting according to author gender. Brazil, 2016-2017.**

Authors	Quantity (n)	Proportion (%)	Female (co)authors	Quantity (n)	Proportion (%)
1	301	8.5	0	1,029	29.0
2	1,165	32.8	1	1,288	36.3
3	1,087	30.6	2	832	23.4
4	766	21.6	3	311	8.8
5	200	5.6	4	74	2.1
6	28	0.8	5	15	0.4
7	3	0.1	6	3	0.1
8	2	0.1	-	-	-
Total	3,552	100.0	Total	3,552	100.0

A small number of the sampled articles were written by a single author (8.5%; n=301). Most were cowritten by 2, 3 or 4 authors (59.6%). Many articles (29%) were written exclusively by men, while 501 (14.1%) of the 2,523 articles featuring female authors/coauthors were written exclusively by women (alone or in collaboration).

Tag clouds (Figure 1) were composed to visualize the most prominent words in the titles, with font size proportional to the frequency of occurrence.

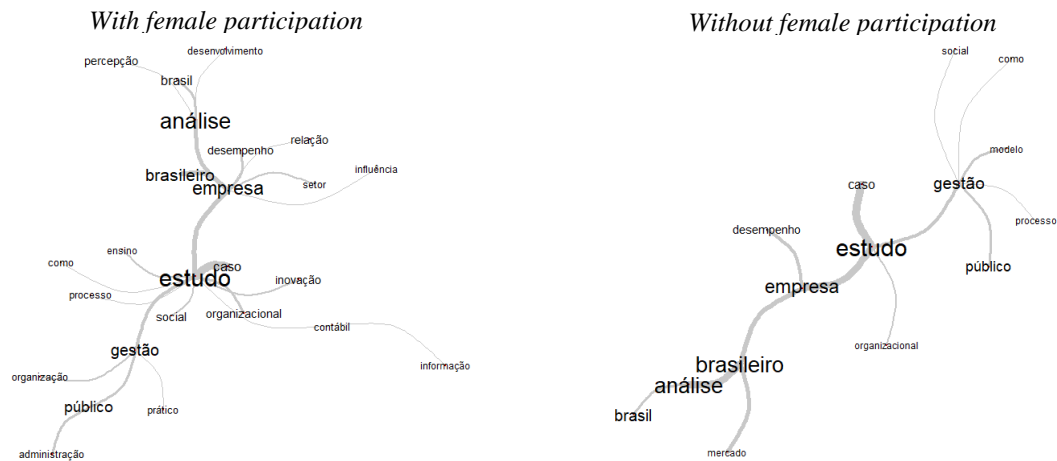
The sample was divided into articles with and without female participation and submitted to a preliminary descriptive analysis using the software Iramuteq.

As shown in Figure 1, the ten most frequently used title words in articles with female participation were, in order of decreasing frequency: study, analysis, firm, public, Brazilian, management, case, Brazil, organizational and innovation. The corresponding list of words for articles without female participation was relatively similar: analysis, study, Brazilian, firm, management, Brazil, performance, case, process, and market.



**Figure 1.** Tag clouds based on the titles of the sampled publications.

Subsequently, a similitude analysis was carried out to evaluate the interconnections between the words used in the titles (Figure 2).



**Figura 2.** Similitude analysis of the sampled articles.

The word relationships shown in Figure 2 are similar for articles with and without female participation, but studies with female participation were more diversified with regard to the construct developed, while research without female participation displayed greater homogeneity.

Subsequently, an analysis of the descriptive statistics was performed to explore the general characteristics and describe the distribution of the study variables (female participation in publications, total number of male/female authors and coauthors, total number of female authors and coauthors) (Table 2).

Table 2  
**Descriptive statistics of sample characteristics.**

Variable	Female participation	Authors or coauthors of both genders (n)	female authors or coauthors (n)
Mean	41.2%	2.86	1.20
Standard deviation	33.84	1.090	1.053
Minimum	0	1	0
Maximum	100%	8	6
Coefficient of variation	82.08	38.09	87.53

In the sample, female participation amounted to 41.2%, indicating a growing contribution of women to research in management and accounting. This is compatible with the literature, which shows an attenuation of gender imparity in science (Elsevier, 2017; Velho & Prochazka, 2003). However, the mean number of female coauthors per article was relatively low (1.2) compared to that of men (2.86).

**4.1 Subject areas of publications authored or coauthored by women**

The descriptive analysis revealed that 71% of publications had at least one female author or coauthor, while 14.1% were produced exclusively by women. In comparison, 29% had exclusively male authorship, and 85.9% featured at least one male author or coauthor.

The most recurrent topics in articles authored or coauthored by women were identified. Thus, Table 3 shows the quantitative and proportional distribution of subject areas according to group (coauthored with men vs. authored or coauthored exclusively by women).

Table 3  
**Most recurrent subject areas in articles authored or coauthored by women.**

Subject areas	Coauthored with men		Authored/coauthored exclusively by women	
	Quantity (n)	Proportion (%)	Quantity (n)	Proportion (%)
Information management	38	1.5	12	2.4
Public administration	226	9.0	43	8.6
Accounting and finances	503	19.9	53	10.5
Entrepreneurship	77	3.1	20	4.0
Teaching and research in management and accounting	187	7.4	37	7.4
Strategy in organizations	247	9.8	50	10.0
Organizational studies	210	8.3	50	10.0
Management of S&T and innovation	188	7.5	31	6.2
Management of operations and logistics	73	2.9	9	1.8
Management of personnel and labor relationships	256	10.1	73	14.5
Marketing	179	7.1	34	6.8
Sustainability	218	8.6	49	9.8
Other	121	4.8	40	8.0
Total	2.523	100.0	501	100.0

The most recurrent subject areas in publications authored or coauthored by women were ‘accounting and finances’ (19.9%), ‘management of personnel and labor relationships’ (10.1%), ‘strategy in organizations’ (9.8%), ‘public administration’ (9.0%), ‘sustainability’ (8.6%) and ‘organizational studies’ (8.3%). Grouped together, these subject areas covered 65.8% of the sampled publications with female participation. In contrast, female involvement



in the subject areas ‘management of operations and logistics’ (2.9%) and ‘information management’ (1.5%) was negligible.

**4.2 Grading of publications authored or coauthored by women**

Table 4 shows the quantitative distribution of the sampled articles according to Qualis grade, number of analyzed publications, number of publications with female participation, female authorship and mean female representation.

Table 4

**Distribution of the sampled publications according to Qualis grade, journal and female participation**

Qualis grade	Journal	Articles (n)	Articles authored or coauthored by women (n)	Authors or coauthors (n)	Proportion of women (%)
<b>A2</b>	Brazilian Business Review	68	44	68	38.5
	Cadernos Ebape.br	88	54	81	37.7
	Contabilidade Vista & Revista	22	10	17	24.2
	Organizações & Sociedade	48	25	38	31.9
	Revista Brasileira de Gestão de Negócios	60	41	65	40.6
	Revista Contabilidade & Finanças	47	30	44	35.1
	Revista Contemporânea de Contabilidade	37	25	39	39.4
	Revista de Administração Contemporânea	67	39	60	33.3
	Revista de Administração de Empresas	20	12	17	34.2
	Revista de Administração Pública	77	38	54	28.5
	Revista de Contabilidade e Organizações	28	16	26	31.9
	Revista Universo Contábil	51	35	52	35.9
<b>Subtotal</b>		<b>613</b>	<b>369</b>	<b>561</b>	<b>34.9</b>
<b>B1</b>	Administração Pública e Gestão Social	48	29	42	37.1
	Administração: Ensino e Pesquisa	27	18	34	41.0
	Base – Revista de Administração e Contabilidade da UNISINOS	19	14	22	39.5
	Contabilidade, Gestão e Governança	37	29	45	40.3
	Contextus – Revista Contemporânea de Economia e Gestão	27	16	30	33.6
	Enfoque Reflexão Contábil	50	35	55	31.6
	REAd – Revista Eletrônica de Administração	48	37	60	42.2
	Revista Brasileira de Finanças	20	7	8	14.1
	Revista Brasileira de Marketing	66	49	86	42.3
	Revista de Administração da UFSM	80	67	123	45.1
	Revista de Administração Mackenzie	13	10	14	52.6
	Revista de Ciências da Administração	38	28	42	38.8
	Revista de Educação e Pesquisa em Contabilidade	38	26	40	33.9
	Revista de Empreendedorismo e Gestão de Pequenas Empresas	32	25	43	45.9
	Revista de Gestão	55	39	69	42.8
Revista de Gestão Social e Ambiental	24	22	40	56.6	

	Revista de Negócios	1	-	-	0.0
	Revista Eletrônica de Ciência Administrativa	19	14	25	43.7
	<b>Subtotal</b>	<b>642</b>	<b>465</b>	<b>778</b>	<b>40.2</b>
<b>B2</b>	Advances in Scientific and Applied Accounting	25	17	23	35.3
	Cadernos Gestão Pública e Cidadania	29	22	32	45.6
	Desenvolvimento em Questão	117	94	182	51.9
	Future Studies Research Journal: Trends and Strategies	38	27	44	37.8
	Gestão & Regionalidade	58	45	79	41.1
	Gestão e Sociedade	32	20	41	39.1
	Gestão.Org – Revista Eletrônica de Gestão Organizacional	34	21	34	33.2
	Internext – Revista Eletrônica de Negócios Internacionais	17	11	22	44.7
	Organizações Rurais & Agroindustriais	25	18	27	39.3
	Pensar Contábil	26	20	38	43.6
	Reunir: Revista de Administração, Contabilidade e Sustentabilidade	33	27	44	43.2
	Revista ADM.MADE	18	16	26	54.6
	Revista Alcance	45	29	54	41.9
	Revista Catarinense da Ciência Contábil	31	27	45	51.0
	Revista Ciências Administrativas	47	32	61	43.4
	Revista da Micro e Pequena Empresa	33	27	45	47.2
	Revista de Administração da Unimep	45	34	56	38.1
	Revista de Administração Faces Journal	43	30	52	37.1
	Revista de Contabilidade do Mestrado em Ciências Contábeis da UERJ	14	10	15	38.1
	Revista de Gestão Ambiental e Sustentabilidade	50	41	70	45.5
	Revista de Gestão e Projetos	31	19	25	31.7
	Revista de Gestão e Secretariado	35	33	69	72.1
	Revista de Gestão, Finanças e Contabilidade	66	43	76	34.8
	Revista do Serviço Público	51	37	63	44.7
	Revista Eletrônica de Estratégia & Negócios	41	32	54	45.3
	Revista Gestão & Planejamento	48	31	54	37.0
	Revista Gestão & Tecnologia	48	27	41	28.3
	Revista Gestão Organizacional	7	5	10	38.6
	Revista Ibero-americana de Estratégia	49	30	49	31.4
	Revista Organizações em Contexto	52	41	72	42.1
	Revista Pensamento Contemporâneo em Administração	71	56	93	43.1
	Revista Pretexto	41	32	57	44.9
	Sociedade, Contabilidade e Gestão	38	30	44	40.8
	Tecnologias de Administração e Contabilidade	5	3	5	36.7
	Teoria e Prática em Administração	22	20	42	61.2
	<b>Subtotal</b>	<b>1,365</b>	<b>1,007</b>	<b>1,744</b>	<b>42.5</b>
<b>B3</b>	Caderno Profissional de Administração da Unimep	23	16	21	37.9
	Desafio <i>Online</i>	37	29	45	44.9

	Interface – Revista do Centro de Ciências Sociais Aplicadas	19	15	25	58.9
	International Journal of Innovation	12	10	17	44.3
	Navus – Revista de Gestão e Tecnologia	73	58	111	45.3
	Pensamento & Realidade	40	32	56	49.5
	Perspectivas em Gestão & Conhecimento	63	53	108	56.2
	Podium Sport, Leisure and Tourism Review	31	18	27	33.9
	Race – Revista de Administração, Contabilidade e Economia	66	51	95	45.3
	Reuna	26	24	44	52.5
	Revista Administração em Diálogo	33	22	43	44.3
	Revista Brasileira de Estratégia	1	1	2	66.7
	Revista Brasileira de Inovação	15	7	12	28.3
	Revista Capital Científico – Eletrônica	63	50	85	44.3
	Revista de Administração Hospitalar e Inovação em Saúde	40	31	59	42.8
	Revista de Administração Imed	33	27	50	57.7
	Revista de Administração, Contabilidade e Economia da Fundace	46	33	58	45.4
	Revista de Administração, Sociedade e Inovação	17	10	16	34.3
	Revista de Finanças Aplicadas	19	7	12	19.7
	Revista de Gestão em Sistemas de Saúde	36	26	43	37.7
	Revista de Tecnologia Aplicada	19	7	11	16.7
	Revista Eletrônica de Sistemas de Informação	10	4	7	23.3
	Revista Eletrônica Gestão e Serviços	23	18	30	46.7
	Revista Evidenciação Contábil & Finanças	40	28	45	36.5
	Revista Mineira de Contabilidade	28	16	26	30.5
	<b>Subtotal</b>	<b>813</b>	<b>593</b>	<b>1,048</b>	<b>43.2</b>
<b>B4</b>	Amazônia, Organizações e Sustentabilidade	17	12	21	44.6
	Gestão & Conexões	7	5	9	54.8
	RAUnP – Revista Eletrônica do Mestrado Profissional em Administração da Universidade Potiguar	5	2	3	20.0
	Revista de Carreiras e Pessoas	37	32	57	62.5
	Revista Interdisciplinar de Gestão Social	34	26	35	54.5
	<b>Subtotal</b>	<b>100</b>	<b>77</b>	<b>125</b>	<b>54.1</b>
<b>B5</b>	Marketing & Tourism Review	19	12	18	38.2
	<b>Subtotal</b>	<b>19</b>	<b>12</b>	<b>18</b>	<b>38.2</b>
	<b>Total</b>	<b>3,552</b>	<b>2,523</b>	<b>4,274</b>	<b>41,2</b>

The distribution of the sampled articles according to Qualis grade (Table 4) shows that female participation was superior in journals graded B2 (n=1,007), followed by B3 (n=593), B1 (n=465) and A2 (n=369), in total corresponding to 2,434 (68.5%) of the 3,552 sampled publications.

The proportion of articles authored or coauthored by women was superior in journals graded B4 (77%), B2 (73.8%), B3 (72.9%), B1 (72.4%) and A2 (60.2%). The association

between Qualis grade and female participation was statistically significant in the chi-squared test ( $p < 0.001$ ,  $F = 44.315$ , with 5 degrees of freedom).

As observed, 2,523 (71%) of 3,552 articles involved female authorship, corresponding to 4,274 female authors or coauthors, but the overall representation of women among authors was only 41.2%. The journal with the smallest number of articles without female participation ( $n = 1$ ) was *Revista de Negócios* (B1), while *Revista Brasileira de Finanças* (B1) displayed the lowest level of female participation (14.1%). In contrast, *Revista de Gestão e Secretariado* (B2) had the highest level of female representation (72.1% female authors or coauthors), followed by *Revista Brasileira de Estratégia* (B3) (66.7%).

Our analysis of female participation according to Qualis grade revealed that female authorship was only predominant (54.1%) among journals graded B4. This was followed by journals graded B3 (43.2%), B2 (42.5%), B1 (40.2%), B5 (38.2%) and A2 (34.9%). ANOVA shows that Qualis grade differed significantly with regard to female participation ( $F [5, 3546] = 8.37$ ;  $p < 0.001$ ), while the Tukey test identified significant differences at the level of 5% between the grade pairs B2/A2, B3/A2, B4/A2, B4/B1, B4/B2 and B4/B3.

### 4.3 Determinants of female participation in scientific research

Meeting the third specific study objective (evaluating the effect of Qualis grade and subject area on the level of female participation) required the use of two-way ANOVA. To do so, we created a subsample of all articles authored or coauthored by women.

Contrary to our expectations, the results of the analysis revealed that female participation was only significantly associated with Qualis grade (Table 5).

Table 5

#### Effect of Qualis grade and subject area on female participation (two-way ANOVA).

Origin	Type III sum of squares	df	Mean squares	Z	p-value
Corrected model	71.237	69	1.032	1.430	0.012
Intercept	552.296	1	552.296	765.179	0.000
Qualis grade	10.511	5	2.102	2.912	0.013*
Subject area	12.303	12	1.025	1.420	0.149
Qualis grade x subject area	27.828	52	0.535	0.741	0.916
Error	1770.542	2453	0.722		
Total	9082.000	2523			
Corrected total	1841.780	2522			

\*level of statistical significance of 5% ( $p < 0.05$ ).

As shown in Table 5, female participation was significantly associated with Qualis grade ( $p = 0.013$ ) in the two-way ANOVA, but not with subject area ( $p = 0.149$ ).

Subsequent REGWQ post-hoc testing revealed that Qualis grades A2 and B5 differed significantly regarding female participation, the same being observed for Qualis grades B2 and B3.

In short, female representation in management and accounting research depended on the Qualis grade of the journal, but not on the specific subject area.

## 5 DISCUSSION

Three specific objectives were established in order to map female participation in management and accounting research in Brazil. The first involved the identification of recurrent subject areas in publications authored or coauthored by women. The most

predominant subject area was found to be ‘accounting and finances’, followed by ‘management of personnel and labor relationships’, ‘strategy in organizations’, ‘public administration’, ‘sustainability’ and ‘organizational studies’, totaling 65.8% of the sampled articles. This is supported by Resende *et al.* (2012) and Silva *et al.* (2018) who, despite the specific nature of their studies, found ‘corporate finance’ and ‘cost management’ to be the subject areas most frequently addressed by female researchers. In contrast, the lowest level of female representation was observed in the journals *Revista de Negócios* (B1) and *Revista Brasileira de Finanças* (B1).

Interestingly, the least recurrent subject areas among female authors were ‘information management’ and ‘management of operations and logistics’, possibly, among other things, as a result of the smaller number of Brazilian competitive innovation scholarships held by women (CNPq, 2017). This gender gap is a potentially relevant topic for future studies.

The second specific study objective required evaluating female participation in relation to Qualis grade. The greatest number of articles authored or coauthored by women were found in journals graded B2, but percentage-wise female participation was highest in journals graded B4. The latter was the only grade in which women were predominant (54.1%), in the sense of the highest mean number of female authors or coauthors per article. In all other Qualis grades, despite coauthoring most articles, women were less well represented than men.

Debates on gender issues have often raised the question of male dominance (Cruz *et al.*, 2018; Estivaleta *et al.*, 2018; Silva & Martins, 2017; Vaccari & Beuren, 2017). In this study, female researchers were indeed found to be in quantitative disadvantage, with only 41.2% participation, matching the findings of Morais *et al.* (2016), but not those of other authors focusing on specific areas in accounting (Luca *et al.*, 2011). Our results will hopefully subsidize the current discussion on scientific production and gender in Brazilian academia, considering that, despite the considerable expansion of female access to postgraduate education, women are still underrepresented with regard to authorship (Morais *et al.*, 2016).

The third specific study objective involved the use of two-way ANOVA to evaluate the effect of subject area and Qualis grade on female participation in management and accounting research in Brazil. Only Qualis grade was found to be significantly associated, but the difference between male and female representation was only significant in pairwise comparisons of grades B5 and A2 and grades B2 and B3. According to Soares and Nova (2016), although the Qualis system is built as a gradient between A2 and C, journals graded A2, B1 and B2 differ statistically from journals of all other grades with regard to the mean number of citations.

Female participation in research, though still quantitatively inferior, displays a promising trend towards a greater contribution of women to the development of science. In this regard, countries like Brazil and Portugal have been setting the example, as shown by the Elsevier report (2017).

However, several pertinent issues may be raised. For example, what power relationships exist between men and women affiliated with research and teaching institutions? To what extent are these relationships determined by publish-or-perish pressure, by family and work-related time restrictions and by the quality of publications authored by women? What organizational practices or public policies are needed to promote gender parity in high-quality research? To answer these questions, a whole new set of studies may be proposed.

Labor laws now exist which mandate gender equality in the workplace in terms of rights and work conditions, including parental leave (Vaccari & Beuren, 2017), but reconciling work and family is still a challenge for many women. According to Lazzarini *et al.* (2018), in traditional societies women are conditioned to serve and care from childhood,



while men are expected to focus on planning, decision making, problem solving and exploration of the outside world.

Some firms have made adjustments, offering more attractive working conditions for female employees, including the creation of day nurseries, kindergartens and flexible hours for pregnant and lactating women—arrangements which have proven beneficial to productivity (Vaccari & Beuren, 2017). In society, a gradual change in gender equity is perceptible, spurred by social movements, legislators, firms and teaching and research institutions committed to this objective through advertising campaigns, events, booklets and other initiatives towards female empowerment and the abolition of Brazilian patriarchal culture.

Based on our findings and those of recent studies, including the Elsevier report (2017) which shows that only 40% of research papers published in the US and the UK are produced by women (as opposed to 49% in Brazil), it may be inferred that female representation in science is increasing (Luca *et al.*, 2011; Velho and Prochazka, 2003) hand in hand with growing attention to gender-related issues in research and the development of more innovative approaches, without restricting analysis to the question of patriarchy (Souza *et al.*, 2013) but focusing on the progress achieved and on female empowerment in the Brazilian scientific community.

## 6 CONCLUSION

The present study was designed to quantify and map female participation in management and accounting research in Brazil.

Adopting an explorative approach, with techniques capable of addressing the problematic, we submitted our sample to content analysis, descriptive analysis, similitude analysis, tag clouds, chi-squared tests, one-way ANOVA and two-way ANOVA. Our results show that female participation in management and accounting research in Brazil is growing, when compared to earlier data, but still inferior to male participation.

With regard to the first specific study objective, we found that the most frequent subject areas in Brazilian management and accounting research conducted by women in 2016 and 2017 were ‘accounting and finances’ and ‘management of personnel and work relationships’.

Meeting the second specific study objective, we ascertained that the greatest number of articles authored or coauthored by women were graded B2, while percentage-wise female participation was highest in B4. Male authorship was predominant in all Qualis grades, except in B4.

As for the third specific study objective, gender representation in authorship was found to be significantly associated with Qualis grade in pairwise comparisons between grades B5 and A2 and grades B2 and B3.

The main contribution of this mapping of female participation in research in the period 2016-2017 lies in the evaluation of potential associations with Qualis grade and subject area. Female participation was considered with regard to the most recurrent subject areas, journal classification (Qualis) and representativeness in research (proportion of female authors), with a comprehensive and innovative approach. The study is intended to subsidize discussions on the role of women in the development of science, with emphasis on applied social sciences, management and accounting.

Our study was subject to some limitations as well. For example, the study period (2 years) was relatively short. Also, our results should be interpreted with caution considering

the subjective nature of content analysis (distribution of publications into EnAnpad categories, based on the title). Finally, the label 'female' was assigned to the social names of women listed as authors without taking into account the current discussion on gender diversity.

Future studies might address the above limitations, associated with study design, for example by considering longer periods and other scientific disciplines, thereby widening the scope of the study and increasing comparability. Studies might also go beyond the conventional binary gender definition or include racial, social class and age categories in the analysis.

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## REFERENCES

- Beuren, I., Machado, D., & Vesco, D. Dal. (2015). Análise sociométrica e bibliométrica de pesquisas publicadas no Management Accounting Research. *Revista Contabilidade, Gestão e Governança*, 18(1), 83-105. Recuperado em 22 março, 2019 de <https://cgg-amg.unb.br/index.php/contabil/article/view/734>
- Conselho Nacional de Desenvolvimento Científico e Tecnológico. (2013). *Mulheres bolsistas de produtividade em pesquisa conquistam direito*. Recuperado em 11 dezembro, 2017, de [http://www.cnpq.br/web/guest/noticiasviews/-/journal\\_content/56\\_INSTANCE\\_a6MO/10157/909274](http://www.cnpq.br/web/guest/noticiasviews/-/journal_content/56_INSTANCE_a6MO/10157/909274)
- Conselho Nacional de Desenvolvimento Científico e Tecnológico. (2017). *Número de bolsas-ano das principais modalidades segundo o sexo do bolsista: 2001-2015*. Recuperado em 11 dezembro, 2017, de <http://cnpq.br/series-historicas/>
- Cruz, C., Marques, A., Silva, R., & Cogan, S. (2010) Teoria das restrições: um estudo bibliométrico da produção científica apresentada no Congresso Brasileiro de Custos (1994-2008). *Revista ABCustos*, 5(1), 152-175. Recuperado em 3 junho, 2019, de <http://www.spell.org.br/documentos/ver/8467/teoria-das-restricoes--toc---uma-analise-de-estudos-de-caso-disponiveis-em-anais-de-congressos/i/pt-br>
- Cruz, N., Lima, G., Durso, S., & Cunha, J. (2018). Desigualdade de gênero em empresas de auditoria externa. *Revista Contabilidade, Gestão e Governança*, 21(1), 142-159. DOI: [https://doi.org/10.21714/1984-3925\\_2018v21n1a8](https://doi.org/10.21714/1984-3925_2018v21n1a8)
- Elsevier (2017). *Gender in the global research landscape: analysis of research performance through a gender lens across 20 years, 12 geographies, and 27 subject areas*. Retrieved December 11, 2017, from [https://www.elsevier.com/\\_\\_data/assets/pdf\\_file/0008/265661/ElsevierGenderReport\\_final\\_for-web.pdf](https://www.elsevier.com/__data/assets/pdf_file/0008/265661/ElsevierGenderReport_final_for-web.pdf)
- Estivaleta, V. F. B., Andrade, T., & Costa, V. F. (2018). Contribuições do empreendedorismo social para o aumento da participação das mulheres no mercado de trabalho. *Revista Eletrônica de Ciência Administrativa – RECAadm*, Curitiba, 17(2), 172-191. DOI: <http://dx.doi.org/10.21529/RECADM.2018007>
- Guedes, M. C., Azevedo, N., & Ferreira, L. O. (2015). A produtividade científica tem sexo? Um estudo sobre bolsistas de produtividade do CNPq. *Cadernos Pagu*, Campinas, (45),

- 367-399. Recuperado em 12 março, 2019, de <https://periodicos.sbu.unicamp.br/ojs/index.php/cadpagu/article/view/8645232>
- Lazzarini, A. B., Sampaio, C. P., Gonçalves, V. S. P., Nascimento, É. R. F., Pereira, F. M. V., & França, V. V. (2018). Mulheres na ciência: papel da educação sem desigualdade de gênero. *Revista Ciência em Extensão*, [S. l.], 14(2), 188-194. Recuperado em 12 março, 2019, de [http://ojs.unesp.br/index.php/revista\\_proex/article/view/1717](http://ojs.unesp.br/index.php/revista_proex/article/view/1717)
- Luca, M. M. M. De, Gomes, C. A. S., Correa, D. M. M. C., & Domingos, S. R. M. (2011). Participação feminina na produção científica em contabilidade publicada nos anais dos eventos EnAnpad, Congresso USP de Controladoria e Contabilidade e Congresso AnpCont. *Revista de Contabilidade e Organizações*, 5(11), 145-164. DOI: <https://doi.org/10.11606/rco.v5i11.34790>
- Morais, C. R. F., Cabral, A. C. A., Santos, S. M., Pessoa, M. N. M., & Oliveira, L. V. C. (2016). A participação feminina na produção científica nas áreas de administração e ciências contábeis. *Anais do Congresso de Administração, Sociedade e Inovação*, Juiz de Fora, MG, Brasil, 9. Recuperado em 3 junho, 2019, de <https://www.even3.com.br/anais/casi/36878-a-participacao-feminina-na-producao-cientifica-nas-areas-de-administracao-e-ciencias-contabeis/>
- Nobelprize.org. (2014). *Nobel prize awarded women*. Retrieved December 11, 2017, from [http://www.nobelprize.org/nobel\\_prizes/lists/women.html](http://www.nobelprize.org/nobel_prizes/lists/women.html)
- Resende, M. C. R., Ramos, M. A., Melo, A. A. O., Tomaz, C. M., Pacheco, M. H. S., & Silva, W. A. C. (2012). Participação feminina na produção científica em finanças nos EnAnpad's de 2000 a 2010. *Revista Ciências Sociais em Perspectiva*, 11(20), 1-22. DOI: <http://dx.doi.org/10.5935/rcsp.v11i20.6984>
- Ribeiro, H. M. (2015). Particularidades da produção acadêmica publicada na Revista de Administração e Contabilidade da Unisinos no período de 2004 a 2014. *Contabilidade Vista & Revista*, 26(3), 80-105. Recuperado em 11 dezembro, 2017, de <http://revistas.face.ufmg.br/index.php/contabilidadevistaerevista/article/download/3026/1673>
- Ribeiro, H., Costa, B., Ferreira, M., & Serra, B. (2014). Produção científica sobre os temas governança corporativa e stakeholders em periódicos internacionais. *Revista Contabilidade, Gestão e Governança*, 17(1), 95-114. Recuperado em 22 março, 2019, de <https://cgg-amg.unb.br/index.php/contabil/article/view/571>
- Rodrigues, J. G. (2014). *Gênero, ciência & tecnologia e saúde: apontamentos sobre a participação feminina na pesquisa na Fundação Oswaldo Cruz*. Tese de doutorado, Fundação Oswaldo Cruz, Instituto de Informação Científica e Tecnológica em Saúde, Rio de Janeiro, RJ, Brasil. Recuperado em 11 dezembro, 2017, de <https://www.arca.fiocruz.br/handle/icict/7821>
- Rodrigues, J. G., & Guimarães, M. C. S. (2016). A Fundação Oswaldo Cruz e a ciência no feminino: a participação feminina na prática e na gestão da pesquisa em uma instituição de ensino e pesquisa. *Cadernos Pagu*, (46), 197-222. DOI: <http://dx.doi.org/10.1590/18094449201600460197>
- Santos, V. M. Dos. (2010). Ciência e tecnologia: expressões sutis da discriminação de gênero?. *Emancipação*, Ponta Grossa, 10 (2), 459-477. DOI: <http://dx.doi.org/10.5212/Emancipacao.v.10i2.459477>
- Silva, C. P., Júnior, & Martins, O. S. (2017). Mulheres no conselho afetam o desempenho financeiro? Uma Análise da representação feminina nas empresas listadas na BM&FBovespa. *Sociedade, Contabilidade e Gestão*, 12(1), 62-76. Recuperado em 22 março, 2019, de <http://www.atena.org.br/revista/ojs-2.2.3-08/index.php/ufrrj/article/view/2989/2408>

- Silva, C. R. M., Oliveira, L. V. C., Morais, C. R. F., & Lima, D. S. V. R. (2018). Análise da produção científica na Revista ABCustos: a participação feminina de 2006 a 2016. *Revista ABCustos*, São Leopoldo, 13(1), 28-57. Recuperado em 3 junho, 2019, de <https://abcustos.emnuvens.com.br/abcustos/article/view/453/472>
- Sims, S. (2017). Surprising new study: Brazil now a global leader in gender equality in Science. *Forbes*. Retrieved Dezembro 11, 2017, from <https://www.forbes.com/sites/shannonsims/2017/03/08/surprising-new-study-brazil-now-a-global-leader-in-gender-equality-in-science/#40c1d26b6f44>
- Soares, M. N. M., Lessa, B. S., Cabral, A. C. A., Pessoa, M. N. M., & Santos, S. M. (2015). A participação feminina nos estudos sobre estratégia. *RAUnP – Revista Eletrônica do Mestrado Profissional em Administração da Universidade Potiguar*, 7(1), 25-37. DOI: <https://doi.org/10.21714/raunp.v7i1.967>
- Soares, S. V., & Nova, S. P. C. C. O. (2016). Qualis reflete o impacto dos artigos de revistas brasileiras de contabilidade?. *Revista de Gestão, Finanças e Contabilidade*, 6(3), 6-23. DOI: <http://dx.doi.org/10.18028/2238-5320/rgfc.v6n3p6-23>
- Soares, V. M. (2001). Mulheres em ciência e tecnologia: ascensão limitada. *Química Nova*, 24(2), 281-285. DOI: <http://dx.doi.org/10.1590/S0100-40422001000200020>
- Souza, E. M., Corvino, M. M. F., & Lopes, B. C. (2013). Uma análise dos estudos sobre o feminino e as mulheres na área de administração: a produção científica brasileira entre 2000 a 2010. *Organizações & Sociedade*, 20(67), 603-621. DOI: <http://dx.doi.org/10.1590/S1984-92302013000400003>
- Thompson, B. M. (2015). Succumbing, surviving, succeeding? Women managers in academia. *Gender in Management: An International Journal*, 30(5),397-413. DOI: <http://dx.doi.org/10.1108/gm-08-2013-0095>
- Vaccari, N. A. D., & Beuren, I. M. (2017). Participação feminina na governança corporativa de empresas familiares listadas na BM&FBovespa. *Revista Evidenciação Contábil & Finanças*, 5(1), 113-131. DOI: <http://dx.doi.org/10.18405/recfin20170107>
- Velho, L., & Prochazka, M. V. (2003). Mulheres na ciência: no que o mundo da ciência difere dos outros mundos?. *ComCiência [online]*. Recuperado em 17 dezembro, 2017, de <http://www.comciencia.br/reportagens/mulheres/09.shtml>

## Participação Feminina na Pesquisa Científica em Administração e Contabilidade no Brasil

### RESUMO

**Objetivo:** Mapear a participação feminina na pesquisa científica em Administração e Contabilidade no Brasil.

**Método:** Foram analisados 3.552 artigos publicados entre 2016 e 2017, disponíveis no banco de dados Spell. Os dados foram analisados por meio de estatística descritiva (características gerais e temas mais recorrentes), Teste do Qui-Quadrado e Anova one-way (comparações por estrato Qualis), e Anova two-way (fatores indicativos da representatividade feminina).

**Originalidade/Relevância:** Estudos têm sido feitos sobre a temática, porém limitados no escopo. Neste estudo, foram investigados todos os artigos publicados no Brasil nessa área, e empregadas técnicas inovadoras de análise.

**Resultados:** Revelou-se efeito significativo apenas do Qualis na representatividade feminina; e, a autoria masculina foi predominante em todos os Qualis, exceto em B4.

**Contribuições teóricas/metodológicas:** Mapeamento que levou em conta a qualidade dos periódicos em que os artigos são publicados e os temas mais recorrentes por pesquisa com participação feminina nessa área.

**Contribuições sociais/para a gestão:** Discute desafios inerentes às relações de gênero na ciência, e possibilita a oportunidade de organizações e pesquisadores posicionar-se e atuar de forma mais efetiva.


**Palavras-chave:** Pesquisa. Feminina. Gênero. Administração e Contabilidade. Brasil.

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