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Bibliometric and Scientometric Research in Auditing (2002-2013)

Abstract

We examine the scientific production on auditing between 2002 and 2013, based on a bibliometric/scientometric analysis of articles included in the Web of Science of the Institute for Scientific Information(ISI),with a view to analyzing the temporal evolution in that research activity. A quantitative and qualitative method was applied, including analyses of the period from 2002 till 2013. The results show that 60% of the publications in auditing are located in the category Business Finance, with an increase over time. As a form of contribution, the main characteristics of the auditing publications in the literature were systematically planned through a bibliometric and scientometric analysis with a view to creating its state of the art.

Key words: Scientific production, Social Science Citation Index (SSCI), Literature review.

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1.Introduction

Although researchers in different sciences have used bibliometric/scientometric techniques over the years to get to know what it being produced in a certain scientific area, few studies have been found in Accounting, specifically in Auditing. To give an example, the study by Moya and Prior (2008) can be mentioned, showing the scientific production in accounting published during one decade in Spanish journals, and the research by Neto, Riccio and Sakata (2009),in which the evolution of the publications from the Annual Meeting of the National Association of Graduate Management Programs (Enanpads) held in Brazil was analyzed. Both developed their research between 1996 and 2005.

Recently, studies on international entrepreneurism (Kraus, 2011)and family-owned companies(Chrisman, Kellermanns, Chan & Liano, 2010; Kraus, Filser, Gotzen & Harms, 2011) have been developed to describe the state of the art through a citation analysis, with a view to characterizing the main themes, gaps, research bases and future trends in the area, thus demonstrating the need to get to know what is being published from a holistic perspective to interpret the results.

This study is important in scientific research for future researchers to know the characteristics of publications in auditing, particularly after the enactment of the Sarbanes-Oxley (SOX) Act. In addition, a methodological structure is presented which researchers can replicate to facilitate their future research on the Web of Science.

The objective in this study is to describe and critically analyze the production in Auditing indexed on the Web of Science of the Institute for Scientific Information (ISI) between 2002 and 2013. Thus, the goal is to answer the following concerns in the field of auditing:

- Which category are the auditing publications classified in on the Web of Science?
- Which are the main publication sources in the area?
- How has your production evolved over time?
- How are partnerships closed in the publications?
- Which language are the publications published in?
- Are the publications receiving funding?
- Which countries publish the most?
- Which teaching institutions publish the most?
- Which publications are being used the most as the base for other studies?
- Which authors/co-authors publish the most?
- Which are the most used key words in the studies?

The research will be based on the study by Verbeek, Debackere, Luwel and Zimmermann (2002), in which the main indicators are discussed that should be used to support a bibliometric study.

In line with Verbeek et al. (2002),this study can help junior and senior researchers in their future studies and respond to the lack of bibliometric and scientometric research in accounting, mainly regarding Auditing publications in international databases.

The study is divided in five sections. Besides the introduction, in section 2, the literature review is presented; in section 3, the method; in section 4, the bibliometric and scientometric data are presented and, finally, a discussion is presented in the conclusions about what can be learned from this research, besides indicating limitations and suggesting future research.

2.Literature Review

The concern of researchers in different sciences with what is published in their area is not new. Hence, bibliometrics/scientometrics have been increasingly used in scientific studies as a methodological form to identify the peers' scientific production. Bibliometric studies are found in different areas, including:Risk Capital (Cornelius &Persson, 2006), Economics(Lee, Cronin, McConnell & Dean, 2010), Supply Chain Management(Charvet, Cooper & Gardner, 2008), Corporate Governance(Durisin & Puzone, 2009), Marketing(Stremersch & Verhoef, 2005; Stremersch, Verniers & Verhoef, 2007), Family-Owned Companies(Casillas & Acedo, 2007), among others.

As a result of technological advances and the existence of different publication sources in a wide range of areas, researchers increasingly need to use technological resources in tune with the research method for a systematic literature review and even for the better development of reliable indicators to analyze scientific activities, as the databases are being used as a sampling universe in different scientific studies, including the Web of Science of the Institute for Scientific Information(ISI) (Chang & Ho, 2010; Duan, 2011; Kostoff, Briggs, Rushenberg, Bowles, Icenhour, Nikodym, Barth & Pecht, 2007; Kostoff, Tshiteya, Bowles & Tuunanen, 2006; Machacek & Kolcunova, 2008; Nerur, Rasheed & Natarajan, 2008).

In their study,Verbeek *et al.* (2002) demonstrate how science can be mapped using technological measures. The same authors also report that qualitative analyses by experts in the area should complement the quantitative indicators.

A research involving bibliometrics/scientometrics is commonly linked to quantitative studies. Nevertheless, qualitative studies like Leal, Almeida and Bortolon (2013)andBogdan, Iuliana, Valentin and Vasile (2009)are also used in the literature, mainly to(i) explore how the field has evolved over time, (ii) to identify the research areas that emerged over time and the relations among them, as well as (iii) to identify the assessment of cooperation among authors and countries.

Bibliometric/scientometric studies can be applied in different ways, among which the following stand out:

i) **disclosure of a country's publications**(Butler, 2003; Daraio & Moed, 2011; Fetscherin, Voss & Gugler, 2010; Jacobsson & Rickne, 2004; Jimenez-Contreras, Anegon & Lopez-Cozar, 2003; Kostoff, Briggs, Rushenberg, Bowles, Icenhour, Nikodym, Barth & Pecht, 2007; Kostoff, Del Rio, Cortes, Smith, Smith, Wagner, Leydesdorff, Karypis, Malpohl & Tshiteya, 2005; Kostoff, Johnson, Bowles, Bhattacharya, Icenhour, Nikodym, Barth & Dodbele, 2007; Kostoff *et al.*, 2006; Sarafoglou, 2006; Schoeneck, Porter, Kostoff & Berger, 2011);
ii) **establishment of research networks university-industry-government/university/industry/public-private partnerships (PPP)**(Abramo, D'Angelo, Di Costa & Solazzi, 2009, 2011; Hayashi, 2003; Marsilio, Cappellaro & Cuccurullo, 2011; Park & Leydesdorff, 2010);
iii) **a science area/subarea**(Alfalla-Luque & Medina-Lopez, 2009; Chabowski, Mena & Gonzalez-Padron, 2011; Cornelius, Landstrom & Persson, 2006; Etemad, 2004; Kim & McMillan, 2008; Ma & Stern, 2006; Rubin & Chang, 2003; Serenko & Bontis, 2013; Talukdar, 2011; Uysal, 2010; Walter, 2010);
iv) **an author's specific contributions**(Diamond, 2007; Meyer, Pereira, Persson & Granstrand, 2004; Uslay, Morgan & Sheth, 2009);
v) **scientific production in a scientific journal or group of journals**(Biemans, Griffin & Moenaert, 2007; Casey & McMillan, 2008; Francisco, 2011; Kirchler & Holzl, 2006; Mazzon & Hernandez, 2013; McMillan & Casey, 2007; Ramos-Rodriguez & Ruiz-Navarro, 2004; Salas & Sobrevias, 2011; Valacich, Fuller, Schneider & Dennis, 2006);
vi) **books as knowledge distribution agents**(Serenko, Bontis & Moshonsky, 2012);
vii) **dissemination of a theory in a scientific area**(Weerakkody, Dwivedi & Irani, 2009).

In a study by Groot and Garcia-Valderrama (2006),"the number of publications in top international journals is the best predictor of peer review results",highlighting how significant publishing in international journals is for researchers to enhance their academic reputation and even to help them get funding to invest in research and development.

Nevertheless, funding entities use these resources as one of the indicators to assess the quality of publications, checking whether the research uses renowned publication sources and whether the research references' impact factor (IF) is high before funding the research. According to Groot and Garcia-Valderrama (2006), before funding academic research programs, the funding sources are assessing the quality of their publications and the productivity of their collaborators.

As a result of the global economic recession, the knowledge economy turns into a preponderant factor to increase a nation's Gross Domestic Product (GDP). Investing in research and development (R&D) is one of the means to drive and strengthen the economy. Nevertheless, the high costs of R&D, associated with the limited public resource sources, increasingly restrict the funding for scientific development, which is distributed according to the researchers' merit and productive capacity(Abramo, D'Angelo & Caprasecca, 2009).

Underlining the above, Bengisu and Nekhili (2006)developed a study in which they aimed to align Turkish technological forecasting efforts with international activities in Science and Technology (S&T). In addition, they aimed to collect quantitative information for priority technologies with a view to funding research and investing in technology.

3. Method

The research objective is focused on describing and critically analyzing the characteristics of the scientific production about auditing on the Web of Science since 2002 – the year when the Sarbanes-Oxley Act (SOX) was signed – until 2013 in the Social Science Citation Index (SSCI) through a bibliometric and scientometric analysis.

The sampling period starts in 2002, due to the global impact of the scandals involving Enron's financial statements in auditing, which culminated in the creation of the SOX. The objective of that act is to guarantee the creation of reliable auditing and safety mechanisms in the companies, including rules for the creation of committees in charge of supervising the activities and operations, with a view to mitigating the business risks, avoiding the occurrence of frauds or guaranteeing means to identify them when they occur, guaranteeing transparency in company management.

The word "audit*"was used in the field Topic (involves title, abstract and key words), limiting the research period between 1900 and 2013 in the citation database of the SSCI. After this procedure, the refinement resulted in 40,140 results. The next process was the selection of the document types, refining to the groups Article and Review, which reduced the results to 34,670 documents. Next, the research area Business Economics was selected as, based on a pretest, this is the area with most characteristics of the proposed theme, providing 4,572 results. It should be highlighted, however, that despite the refinement to the abovementioned area, other areas appear because the same publication may be classified in more than one area. Therefore, to maintain the research as comprehensive as possible, the areas that were not refined were not excluded exactly due to the fact that the publications were ranked in another area. If these were excluded, publications in one of the areas desired for the refinement would also be excluded. The data collected here were updated until January 10th2014.

Next, the publications from 2002 till 2013 were selected, totaling 2,480 results and transferred to the software EndNote X5 for the sake of a systematic literature review, with a view to evidencing the results found exclusively in auditing. After this phase, 2,394 publications were found in auditing after excluding the outlines. Then, these references weretransported to the software Nvivo10 in order to elaborate a specific database on the theme, for the sake of a quantitative and qualitative methodological approach based on statistical, mathematic and content analyses.

The results obtained will serve for future research to know the main auditing authors in the Web of Science, besides information like what institutions are researching in the area, what publication sources, authors and countries publish the most and what are the most used key words, among others.

4. Results

Based on the methodological premises used for the period from 2002 till 2013, after the systematic literature review, 86 publications were found, out of 2,480 publications, that were not linked to the Auditing area. Hence, 2,394 publications were used in this research (Table 1).

Table 1
Profile of pu blications analyzed

Profile	P	$F_1(\cong)$
Publications between2002 and 2013in the Web of Science (using the filter term"audit*") in the area Business Economics	2,480	100%
Outlines (articles excluded due to lack of link with the auditing area)	86	3.47%
Publications selected after content analysis linked to Auditing area	**2,394**	**96.53%**
Publications analyzed in this research	2,394	100%

P = Number of publications.

Source: research data.

The auditing publications are basically concentrated in four main categories classified by the Web of Science: Business Finance, Economics, Management and Business. The first category stands out though, as it represents more than half of the publications in the area; the other three are balanced between 19 and 22% of the results found (Table 2).

Table 2
Distribution of the Web of Science categories per quantity of publications (minimum 3%)

Web Of Science Category	P	$F_1(\cong)$
Business Finance	**1.436**	**60%**
Economics	524	22%
Management	507	21%
Business	449	19%
Ethics	114	5%
Public Administration	75	3%

P = Number of publications.

Source: research data.

According to Table 3, the journal/magazine that most publishes in the area is*Auditing-a Journal of Practice & Theory* (299; 12.5%), followed by*Accounting Review* (162; 6.8%) and*Contemporary Accounting Research* (158; 6.6%). TheTop 13 journals add up more than half of the publications in the area (1,233, 51.5%), demonstrating the importance their editors attribute to the theme. *Accounting Review*also stands out because of the number of times its publications were cited (3,577) and without self-citations (3,191),showing the second highest average number of citations (22.08), behind the *Journal of Accounting Research*only, with a mean number of 31.20 citations per publication.

Table 3

Distribution of publication sources per General Data

Publication Source	ABBR	P	$F_1(\cong)$	C1	C2	$\bar{x}$
Auditing-a Journal of Practice &Theory	AJPT	**299**	**12.5%**	2,263	1,531	7.57
Accounting Review	AR	162	6.8%	**3,577**	**3,191**	22.08
Contemporary Accounting Research	CAR	158	6.6%	1,982	1,738	12.54
Journal of Business Ethics	JBE	105	4.4%	668	609	6.36
Accounting Organizations and Society	AOS	80	3.3%	1,043	925	13.04
Corporate Governance-an International Review	CGIR	62	2.6%	386	345	6.23
Journal of Accounting and Public Policy	JAPP	60	2.5%	166	142	2.77
Journal of Accounting Research	JAR	54	2.3%	1,685	1,638	**31.20**
Accounting Horizons	AH	54	2.3%	162	145	3
Journal of Accounting & Economics	JAE	54	2.3%	2,214	2,143	41
African Journal of Business Management	AJBM	52	2.2%	28	24	0.54
Accounting and Finance	AF	50	2.1%	150	126	3
European Accounting Review	EAR	43	1.8%	176	164	4.09
330 other publication sources	–	1,161	48.5%	–	–	–
Total	**–**	**2,394**	**100%**	**–**	**–**	**–**

P = Number of publications; C1 = Number of citations; C2 = Number of citations without self-citations; $\bar{x}$ = Mean citations per item.

Source: research data.

Many publication sources exist whose production is linked to auditing(343). Nevertheless, more than half of the publications(61.5%) are found in only 13 journals/magazines (Table3),only nine of which have an Impact Factor (IF) > 1 (Table 4). The journal/magazine that stands out is the *Journal of Accounting & Economics*, due to its IF close to four and because it is the third source of publication with the highest Eigenfactor (EF),behind the *Journal of Business Ethics* and*Accounting Review*only,besides the highestArticle Influence(AI).

Table 4

Top 13 of publication sources per Impact Factor (IF) and Eigenfactor (EF) andArticle Influence(AI)

Publication Source	ABBR	IF	EF	AI
Journal of Accounting & Economics	JAE	**3.912**	0.00741	2.453
Accounting Review	AR	2.319	0.00795	1.474
Journal of Accounting Research	JAR	2.192	0.00703	2.210
Accounting Organizations and Society	AOS	1.867	0.00364	1.028
Contemporary Accounting Research	CAR	1.564	0.00348	1.094
Corporate Governance-an International Review	CGIR	1.400	0.00164	0.364
Accounting Horizons	AH	1.288	0.00117	not informed
Journal of Business Ethics	JBE	1.253	**0.01395**	0.450
Auditing-a Journal of Practice & Theory	AJPT	1.015	0.00110	0.483
Accounting and Finance	AF	0.875	0.00065	0.192
Journal of Accounting and Public Policy	JAPP	0.770	0.00100	not informed
European Accounting Review	EAR	0.654	0.00102	0.453
African Journal of Business Management	AJBM	not informed	not informed	not informed

Impact Factor (IF) for 2012;Eigenfactor (EF) and Article Influence (AI) updated until 01/10/2014.

Source: research data.

According to Table 5, the authors with almost 1/3 of the publications (758) in the Top 13 publication sources are concentrated in only six journals/magazines (AOS, CAR, CGIR, AH, JBE andAJPT) with IF between]1;2]. The result gets even better when considering the publication sources with IF between]1;3], including eight publication sources (JAE, AR, JAR, AOS, CAR, CGIR, AH, JBEandAJPT),which add up to 974 publications, being responsible for practically 40% of the publications in the field of auditing.

Table 5

Distribution of Impact Factor (IF) in Top 13 publication sources

Impact factor in 2012	J	P	$F_1(\cong)$
0 < FI ≤ 1	3	153	6.4%
1 < FI ≤ 2	**6**	**758**	**31.7%**
2 < FI ≤ 3	2	216	9%
3 < FI	1	54	2.3%
Not informed	1	52	2.2%
Not analyzed (N/A)	330	1,161	48.5%
Total	**343**	**2,394**	**100%**

J = Number of publication sources; P = Number of publications.

Source: research data.

As perceived, over time, more journals/magazines tend to publish about auditing, particularly in 2011, according to data in Figure 1, when 311 studies were published, considering that the number of publications may also have increased due to the creation of the Sarbanes-Oxley Act in 2002.

The research cannot explain the reason for the increase in the number of publications. Nevertheless, it should be reminded that, in 2005, the publicly traded companies in the European Union were obliged to adopt the International Financial Reporting Standards(IFRS), which may be an indicator of the increased number of auditing publications. Research should be developed to verify the actual reason for the increase in these publications, thus complementing the information reported in this research.

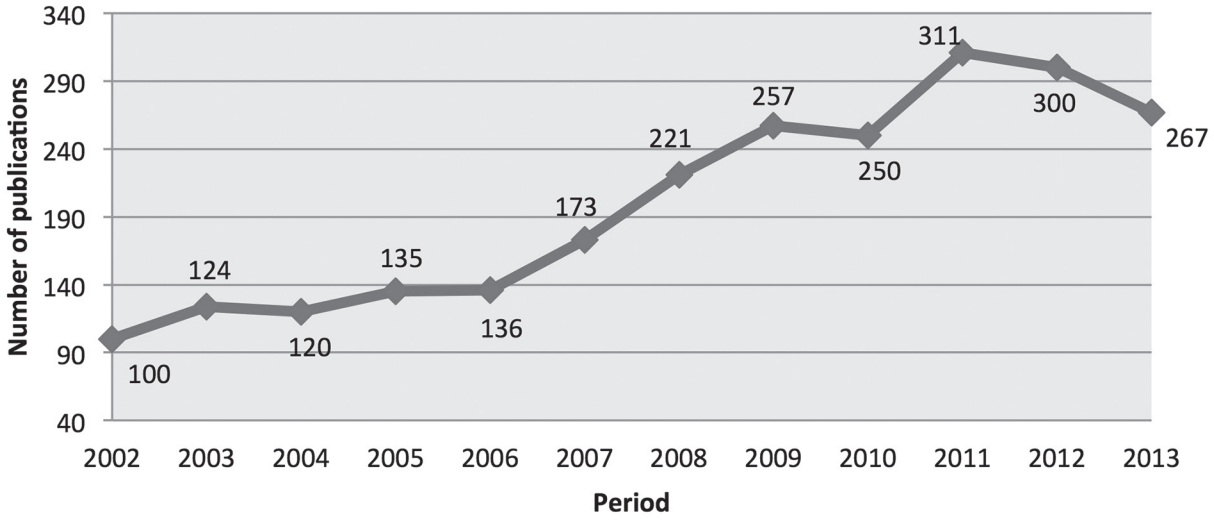

Figure 1. Distribution of publications per year

Source: research data.

Based on Table 6, it is observed that 79% of the publications found here were developed in partnership, thus demonstrating the need to work in groups in order to obtain more expressive results. Nevertheless, partnerships with two and three authors are highlighted, representing approximately 69% of the studies.

As shown in Table 6, the studies are clearly published in English (96%). Next, much less representative, the publications were written in German, Spanish, Russian and French. Unfortunately, the results demonstrate that only 1% of the studies received funding, confirming that governments/companies are not always willing to invest in new auditing research.

Table 6

Profile of author partnership, publication language and research funding

Perfil	P	F_i (≅)
Nº of publications analyzed	**2,394**	**100%**
Nº of authors per publications		
Publications with one author	495	21%
Publications with two authors	**853**	**36%**
Publications with three authors	797	33%
Publications with four authors	205	9%
Publications with more than four authors	44	2%
Publication language		
English	**2,298**	**96%**
German	28	1.2%
Spanish	21	0.9%
Russian	16	0.7%
French	12	0.5%
Other languages	19	0.8%
Research funding		
Funded	23	1%
No information about funding	**2,371**	**99%**

P = Number of publications.

Source: research data.

In total,70 countries published in the Auditing area. In 35 publications, the country of affiliation for the publication was not informed. American publications stood out with more than half of the publications, followed by Australia, Canada, England, China, Germany, among others (Table 7).

Table 7

Top 10 of countries with publications

Countries	P	F_i (≅)
USA	**1.234**	**51.5%**
Australia	213	8.9%
Canada	199	8.3%
England	177	7.4%
China	145	6.1%
Germany	83	3.5%
Taiwan	82	3.4%
Spain	76	3.2%
The Netherlands	74	3.1%
New Zealand	59	2.5%
60 other countries	657	27.4%

P = Number of publications.

Source: research data.

According to the results, more than half of the publications are American and seven out of the 11 institutions that published in Auditing are also American, particularly theFlorida International University System with 130 publications (Table 8).

Table 8

Distribution of institutions(organizations-enhanced) with publications (authors and co-authors)

Institutions (Organizations-Enhanced)	Country	P	F_i (≅)
Florida International University System	USA	**130**	**5.4%**
University of California System	USA	55	2.3%
University of New South Wales	Australia	54	2.3%
University of Wisconsin System	USA	52	2.2%
Pennsylvania Commonwealth System of Higher Education Pcshe	USA	51	2.1%
Hong Kong Polytechnic University	Hong Kong	42	1.8%
Northeastern University	USA	42	1.8%
Nanyang Technological University	Singapore	39	1.6%
Nanyang Technological University National Institute of Education Nie Singapore	Singapore	39	1.6%
Florida International University	EUA	38	1.6%
University of Wisconsin Madison	EUA	38	1.6%

P = Number of publications.

Source: research data.

The article with the largest number of citations is "*Theorizing change: The role of professional associations in the transformation of institutionalized fields*", by Greenwood, Suddaby and Hinings, cited 437 times since 2002 and also showing the highest average citations per year 33.32 (Table 9).

Table 9

Top 15 of most cited studies

Nº	Times cited	$\bar{x}$	Authors	Article Title	Year
1	437	33,62	Greenwood, R; Suddaby, R; Hinings, CR	Theorizing change: The role of professional associations in the transformation of institutionalized fields	2002
2	355	27,31	Klein, A	Audit committee, board of director characteristics, and earnings management	2002
3	238	18,31	Frankel, RM; Johnson, MF; Nelson, KK	The relation between auditors' fees for nonaudit services and earnings management	2002
4	217	21,70	Ball, R; Shivakumar, L	Earnings quality in UK private firms: comparative loss recognition timeliness	2005z
5	214	17,83	Ball, R; Robin, A; Wu, JS	Incentives versus standards: properties of accounting income in four East Asian countries	2003
6	187	15,58	Ashbaugh, H; LaFond, R; Mayhew, BW	Do nonaudit services compromise auditor independence? Further evidence	2003
7	184	14,15	Mitton, T	A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis	2002
8	170	13,08	DeFond, ML; Raghunandan, K; Subramanyam, KR	Do non-audit service fees impair auditor independence? Evidence from going concern audit opinions	2002
9	159	12,23	Morrison, EW	Newcomers' relationships: The role of social network ties during socialization	2002
10	137	11,42	Joh, SW	Corporate governance and firm profitability: evidence from Korea before the economic crisis	2003
11	135	13,50	Agrawal, A; Chadha, S	Corporate governance and accounting scandals	2005
12	128	11,64	Palmrose, ZV; Richardson, VJ; Scholz, S	Determinants of market reactions to restatement announcements	2004
13	125	15,62	Olken, Benjamin A.	Monitoring corruption: Evidence from a field experiment in Indonesia	2007
14	125	9,62	Nelson, MW; Elliott, JA; Tarpley, RL	Evidence from auditors about managers' and auditors' earnings management decisions	2002
15	124	10,33	Xie, B; Davidson, WN; DaDalt, PJ	Earnings management and corporate governance: the role of the board and the audit committee	2003

$\bar{x}$ = Mean citations per year.

Source: research data.

It should be highlighted that the content of the citations was not analyzed. Future research could discuss this aspect to provide parameters as to how these citations occurred.

The author with the largest number of auditing publications is Kannan Raghunandan,with 26 publications, cited 525 times and showing the second best citation average per study cited(20.19),behind Jere R. Francis only,with an average of 26.76 citations (Table 10).Similarly, whether in the most cited articles or in the publications per author, the content of the citations was not considered, for which further research would be needed.

Table 10

Top 10 of most productive authors and co-authors

Author	P	Times Cited	Times cited without self-citations	$\bar{x}$	H-index
Raghunandan, Kannan	**26**	**525**	**501**	20.19	10
Knechel, W. Robert	22	201	175	9.14	7
Gul, Ferdinand A.	19	197	184	10.37	8
Francis, Jere R.	17	455	430	**26.76**	**11**
Krishnan, Jayanthi	17	246	223	14.47	6
Tan, Hun-Tong	17	194	179	11.41	8
Bedard, Jean C.	16	267	245	16.69	9
Trotman, Ken T.	16	140	126	8.75	7
Johnstone, Karla M.	15	172	160	11.47	7
Rama, Dasaratha V.	15	173	168	11.53	7

P = Number of publications; $\bar{x}$ = Mean citations per year.

Source: research data.

Figure 2, popularly known as a tag cloud, displays the most repeated words in the publications found. In the database of 2,394 publications, about 2,275 included key words, corresponding to 95% of the total. The words printed in a larger font show common key words in the theme discussed. The term audit clearly stands out since it was used as a research filter. Nevertheless, the results also highlight nine other terms: management, earnings, quality, performance, corporate, governance, auditor risk, information.

Figure 2. Tag cloud of key words

Source: research data.

The database of 2,394 publications involves 23,162 citations, leaving 13,010 when excluding self-citations. It should be highlighted that, in more than ten thousand studies, the publications analyzed in this research were cited. Excluding self-citations, this figure drops to 9,210 studies, that is, a mean number of 9.68 citations per publication and a H-index of 66 (Table 11).

Table 11
H-index profile of publications analyzed

Profile	P
Publications analyzed in this research (a).	2.394
Number of times the publications analyzed were cited (b).	23.162
Number of times the publications analyzed were citedwithout self-citations among the publications analyzed.	13.010
Number of publications that cited the publications analyzed.	10.695
Number of publications that cited the publications analyzedwithout self-citations among the publications analyzed.	9.210
Mean number of times the publications were cited (b÷a).	9,68
H-index.	66

P = Number of publications.

Source: research data.

The results found here draw a picture of the auditing publications, providing a global perspective, based on a bibliometric and scientometric study developed in the Web of Science.

5. Conclusion

The analysis of the results revealed a considerable quantitative growth in the academic Auditing production in journals indexed in the Web of Science, a renowned database in the academic context. This demonstrates a positive factor. Nevertheless, some points deserve more in-depth reflection. Although the number of studies published increased, from 100 publications in 2002 to the best result in 2011 with 311 publications, these figures suggest that researchers need to continue publishing in Auditing. Therefore, editors need to open more space in accounting and management journals, launch special issues or elaborate exclusive Auditing journals. Even if the Auditing publications divide space in the journals with other accounting themes, and even with business administration themes, why has the number of auditing publications dropped since 2011? Could that represent a trend? Are the researchers no longer interested in auditing or has its space in the journals been reduced after that period? These are valid reflections because the results reflect a slight drop in the auditing publications after their significant growth as from 2002. Although the data surveyed do not provide empirical evidence on the theme, it is supposed that, due to the adoption of the international accounting standards in many countries and due to global reports on corporate scandals in the course of that period, the number of Auditing publications is stabilizing.

As verified, 82% of the Auditing publications are classified in the categories Business Finance and Economics in the database Web of Science, which allows researchers to use those categories as filters in their system to facilitate the search for articles in the area. The study also reveals that the journal *Auditing-a Journal of Practice & Theory* has contributed more expressively regarding the number of publications in the area. This evidences the importance of specialized journals in the area, so that the researchers gain more space for their publications.

As verified, developing research alone is not easy, as the results demonstrate that 79% of the productions in Auditing are developed in partnership and that English is the predominant language of publications in the area. In addition, it is surprising that only 1% of the production in the area received research funding. These results suggest the importance of authors engaging in research bases with a view to further knowledge exchange among peers and with a view to having their publications approved successfully. Based on these findings, the following concerns arise: what is the reason for the insignificant funding percentage in the area? Is this also true for research in Brazil?

Another important piece of information is that the American universities dominate the auditing publications, with more than half of the publications in the area, particularly the *Florida International University System* with 130 indexed publications. It would be interesting for future researchers to compare the approach of American auditing publications, in order to identify similar and diverging parameters in the research styles.

One noteworthy fact in the results is the existence of publications with very high citation rates, particularly *Theorizing change: The role of professional associations in the transformation of institutionalized fields*, by Greenwood, Suddaby and Hinings, cited 437 times since 2002 and also showing the highest mean number of citations per year(33.32). In addition, the author Kannan Raghunandan stands out with 26 publications, cited 525 times and showing the second best average number of citations per publication cited(20.19). It would be interesting to understand why these publications and authors stand out in the area. What innovation do they offer? Are these citations really all positive?

Finally, it was verified that the words management, earnings, quality, performance, corporate, governance, auditor risk and informationare the most used key words to classify the studies. Hence, researchers can use these terms as filters for their research in the Web of Science. It would be interesting for future studies to investigate if these terms truly mirror the main publication themes in Auditing.

For the sake of future research, the publications found on the Web of Science could be compared with publications on Scopus and comparative analyses could be developed between Brazilian publications and productions in Anglo-Saxon countries, highlighting the cause of possible differences that may be related to the harmonization date of the international accounting standards in each country, to economic and cultural aspects, besides the other abovementioned concerns raised in this conclusion.

The main contribution this study offers is that it systematically displays the fundamental characteristics of Auditing publications in the wider literature through a bibliometric and scientometric analysis in the area, thus favoring the preliminary work of many researchers, who can start their studies based on the data presented here.

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