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Accounting history: a bibliometric literature review

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Abstract

Accounting is much more than a science, is a branch of our heritage history. Since the dawn of primitive era, it has been a part of us and kept developing. Given its importance, the literature in accounting history has grown but much remains to be unravelled. In this sense, this research is a literature review on the evolution of accounting. The aim is to highlight the accounting timelessness in humanity and to analyse the scientific production in accounting history. A quantitative bibliometric analysis was conducted using VOSviewer and R Bibliometrix software. A total of 236 publications were selected from the Web of Science database, between 1975 and 2021. In this research, we found that the main subtopics in accounting history research are: (1) accounting history and its relevance, (2) the roles of accounting in society, (3) accounting and religion and (3) schools of thought in accounting history. Australia, England, America, and Italy are the countries with most published articles. "Accounting History", "Accounting Organizations and Society" and "Accounting Historians Journal" have been among the top journals, Garry Carnegie, Delfina Gomes and Christopher Napier are the most influential authors and the institutions, like Rmit University, the University of Minho and Cardiff University, stand out on accounting history research, considering the number of publications. The research trend and the progress in accounting history were discussed.

Keywords: Accounting history. historical research. accounting timelessness. bibliometric review.



PROGRAMA DE PÓS-GRADUAÇÃO EM
CONTABILIDADE
MESTRADO E DOUTORADO

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HISTÓRIA DA CONTABILIDADE: UMA REVISÃO BIBLIOMÉTRICA DA LITERATURA.

RESUMO

A contabilidade é muito mais do que uma ciência, é uma parte importante do nosso património histórico. Desde os primórdios da humanidade, a estrutura mental da contabilidade acompanhou o homem e continuou a desenvolver-se ao longo dos tempos. Reconhecendo a sua relevância, a produção científica sobre a história da contabilidade cresceu, mas ainda há muito a ser desvendado. Nesse sentido, este artigo apresenta uma revisão da literatura sobre a história da contabilidade. O objetivo é evidenciar a intemporalidade da contabilidade na humanidade e analisar a produção científica sobre história da contabilidade. Uma análise bibliométrica quantitativa foi realizada com os softwares VOSviewer e R Bibliometrix. Um total de 236 publicações foi selecionado da base de dados Web of Science, entre 1975 e 2021. Nesta pesquisa, descobrimos que os principais subtópicos na pesquisa de história da contabilidade são: (1) história da contabilidade e sua relevância, (2) os papéis da contabilidade na sociedade, (3) contabilidade e religião e (3) escolas de pensamento em história da contabilidade. Austrália, Inglaterra, América e Itália são os países com mais artigos publicados. "Accounting History", "Accounting Organizations and Society" e "Accounting Historians Journal" têm estado entre as principais revistas, Garry Carnegie, Delfina Gomes e Christopher Napier são os autores mais influentes e as instituições, como a Rmit University, a Universidade do Minho e A Cardiff University, destacam-se pelo número de publicações em história da contabilidade. A tendência da pesquisa e o progresso na história da contabilidade foram discutidos.

Palavras-chave: História da contabilidade. Pesquisa histórica. Intemporalidade contábil. Revisão bibliométrica.

1 Introduction

The history of any science is studied to ensure the continuity of its development, so that it is possible to know the feature of that development so that discoveries are not done twice (Mukhametzyanov, Nugaev, & Muhametzyanova, 2017). According to the authors, the study of accounting history must be approached as a phenomenon that emerged from history, as well as it should contribute to the identification of the important stages of its development.

A sufficiently large number of studies by national and foreign scientists are dedicated to the accounting history, and various philosophical, evolutionary, and other known approaches of a very diverse nature cause discussion on this subject.

It is perceptible that, to comprehend accounting timelessness its necessary to see the way the world once looked the accounting and how it looks now. In making this conception we are making problematic but symptomatic assumption about epistemology, meaning, by supposing systematic knowledge as based on non-interpretive data collected on observed particularities, it is possible to show how a series of practices that were undeniably developed, served different agendas, and helped elaborating this assumption about knowledge (Poovey, 1998).

There is no doubt that knowledge of Accounting's past contributes to a better understanding of today's and tomorrow's Accounting, and all this gives rise to the importance that historical studies assume in all technical or scientific disciplines, including, obviously, Accounting (Carmona & Ezzamel, 2007). It is in this search for past knowledge that this work is inserted.

The accounting history is as old as the civilization history itself and links to the earliest human manifestations of social needs and interpretation of events that occurred with the material intent that man has always had in order to achieve the goals he intended (Amorim, 1968). Some historians report that the first signs of account existence arose at approximately 4,000 B.C (Oldroyd & Dobie, 2009). Meanwhile, early man, by inventorying the number of hunting and fishing tools available, by counting his herds, was already practicing a

rudimentary accounting form. Thus, with cultural, social and economic development, accounting began to evolve. In the Renaissance Cultural period, comes the figure of Friar Luca Bartolomeo de Pacioli, considered one of the most studios of the time and became known as the “father of accounting”.

Nowadays, the importance of accounting and the information generated by it is becoming more evident than ever before and in the last centuries there has been a great evolution of accounting techniques such as the development of cost accounting, the emergence of auditing, and the increasing importance of accounting as a management tool.

The history of accounting is a timeless aspect of heritage that does not deserve to be sank into oblivion. With these premises, this paper aims to provide an overview of the state of art in the field of Accounting History, in order to systematize the existing studies and identify trends and gaps in the academic research on this topic. To achieve this overall objective, a bibliometric analysis is carried out on the papers specifically focused on accounting history in journals indexed on the Web of Science (WoS) database by assessing the scientific production by authors, journals, and topics, as well as their temporal evolution. Thus, this study has three specific objectives:

1. To analyze the scientific production on accounting history by quantifying the published articles per year, journal, author, country, subtopic, and keywords.
2. To analyze the influence the published articles on accounting history by identifying the most cited articles, journal, authors, organizations, country/regions.
3. To analyze the structural knowledge groups based on co-citations network between articles, journals, and authors.

Bibliometric analyses have become popular in recent years to explore, organize, and evaluate the scientific production that has been developed on a specific subject of study (e.g., Baker, Kumar & Pandey, 2020; Rajan, Dhir & Sushil, 2020). This type of analysis provides a better understanding of a particular research topic identifying the issues that have received greatest research attention and assessing the characteristics and impact of the published papers (Sáez-Martín, López-Hernandez & Caba-Perez, 2017), which allows researchers to identify trends and gaps in academic research. Thus, this study’s findings depict the current status of research on accounting history and provide a reference frame that could guide researchers regarding the direction of future studies on this subject.

This paper contains six sections. After this introduction, the next section briefly addresses the overall characteristics of accounting history. The third section presents the research questions. The fourth section sets out the empirical framework of the bibliometric study, after which we present the main findings. Finally, in section last, the main conclusions of the study are drawn, the implications of our findings are discussed, the limitations of the study are acknowledged, and some topics for future research are suggested.

2 Accounting History

The emergence and evolution of accounting blends with the very development of humanity. In this context, studies of ancient civilizations show that primitive man was already "taking care of his wealth" by counting and controlling his flock. (Mukhametzyanov et al., 2017). The imperfection of the tools has not always allowed us to earn enough livelihoods, hunting has not always successful, and climate change led to several periods of famine, and for man to survive under such conditions had to calculate food reserves. Subsequently, with the improvement of tools, the development of surpluses and the beginning of the exchange, accounting developed along with the progress of society (Kulikova, 2015).

The first sources of accounting are hidden from forever however, it can be claimed that accounting didn't come immediately, several conditions were necessary for the emergence of written records (Amorim, 1968). Before anything, it was necessary for economic activity to have some dimension and then it was required to

write and develop elementary arithmetic. Through arithmetic the basis was created for the emergence of written records and the development of economic relations contributed to their ubiquitous dissemination (Mukhametzyanov et al., 2017).

Accounting gave the first signs of the existence of accounts in the ancient world and the first complete examples of accounting, even though it is a form of rudimentary accounting, took place approximately 4000 years B.C, more specifically in the Sumerian-Babylonian civilization (Amorim, 1968).

The earliest known texts date from the end of the fourth millennium B.C (3200-3100) and are sequences of pictographic signs, which represent the antecedents of direct cuneiform writing, engraved on clay tablets found in the monumental Eanna district of Uruk city. in southern Iraq (Provasi & Farag, 2013). According to Mukhametzyanov et al. (2017) the content of these texts is mainly administrative, lists of goods inside and outside the rations distributed to employees, among others and emerged as a response to the new obligations of a complex administrative society characterized by a centralized economy with a strong redistributive character. It was governed by an elite priesthood, formed in southern Mesopotamia during the fourth millennium as a result of the so-called "urban revolution" (Provasi & Farag, 2013). Thus, many millennia ago in Mesopotamia, when clay records were being made in Sumer, the very writing that gave rise to the recording of all expressions was born (Mukhametzyanov et al., 2017).

In eastern antiquity beyond Mesopotamia in Egypt there were immense developments in trade and economy across the African soil, the sacred Nile River giving life to the country, turning it into a huge desert oasis. As the economy developed, scribes accurately recorded their expenses and income, always having their accounts in order. Mukhametzyanov et al. (2017), stress that the invention of the Egyptian papyrus made possible a panoply of pages that led us to books, thus resulting in a great contribution to the growth and development of accounting.

Funnell (2001) considers the association between accounting, justice, and property, arguing that the protection of property rights, for which accounting is a jar, is at the heart of capitalist law codes as the ultimate end of justice.

In the case of ancient Egypt, observing Maat was a quality aspired to by all Egyptians, including kings, to observe Maat meant preserving justice and order on earth and in the cosmos. Furthermore, the fourth law of the Hammurabi Code deals with fraud in business: 'If he comes to bear false witness in relation to grain or money, he shall suffer the penalty of this case' (Pritchard, 1969, p. 164).

These forms of accounting and accountability have played key roles in facilitating the economic and social order in these ancient civilizations; in this sense, accounting, since its inception, has been a powerful mediating institution among individuals, organizations, and society (Macve, 2002).

In Classical Antiquity in which Greece and Rome fall within, the same thing happened, they linked the relevant expressions to the fact of "registering"(Amorim, 1968). According to the author, in Greece it is assumed that there was alphabetic writing since the 10th century B.C, and it is believed that the registration processes were derived from the Egyptians.

In the opinion of Provasi and Farag (2013), the lack of documentation does not allow us to reconstruct accounting, which developed its first steps, but it can be said that in this field the Greeks derived from the Egyptians, because it is the records of Egypt, which the Greeks shed much light on the accounting facilities in use in the mother country. The ancient texts, dating back to the 5th century BC, consist of 49 marble fragments: engraved with long lists of citizens of the empire were required to pay a sixth state tax to the temple of Athena (Provasi & Farag, 2013).

The limitations of pictographic representation gradually led to the use of alphabetic systems. The use of minted currency represented a transition from earlier societies, which used valuation systems based on commodities and weights, so minted currency may have been much less innovative in measuring economic activity than previously thought (Kee, 1993).

According to Oldroyd and Dobie (2009), the monetary unit of measurement was the most notable accounting technique in Greece and Rome compared to the primordial civilisations. Their accounting books contained receipts, payments, receipts, debts, and credits. However, there was no distinction between capital expenditure and revenue. Only the separation of costs from activities and no evidence of double entry (Oldroyd & Dobie, 2009).

Following the fall of the Roman Empire, the feudal system emerged across much of Europe, during which time record keeping became much more localised and centralised around institutions such as the Church and the manorial estates (Oldroyd & Dobie, 2009).

During ancient times, data processing technology evolved over thousands of years from primitive forms to more powerful and attractive forms; however, record keeping after the Babylonian period appears to have advanced very little, despite significant developments in methods of processing, representation, storage, and processing of data (Kee, 1993).

Many historians have investigated the origin of double-entry bookkeeping and have made various contributions, all properly arguing that it is difficult to comment, particularly in the late eighteenth century, where some researchers even suggested the creation of double-entry bookkeeping as far back as the Romans (Provasi & Farag, 2013).

In the Italian model, internal control features such as double entry and balancing requirements were incorporated into their data structures, these features made the detection of errors and omissions an integral aspect of financial data management (Oldroyd & Dobie, 2009). The purpose and utility of keeping double-entry records was to prevent fraud and document financial activities (Scataglinbelghitar & Sangster, 2010). Double entry therefore served the documentation and control functions of earlier record keeping systems within a much more sophisticated model of economic data management (Kee, 1993).

Italian merchants, trading with consignment agents and using short-term partnerships and credit instruments, needed record-keeping systems to track business ventures at various stages of completion. To meet these needs, record keeping evolved from about 1250 and 1440 A.D. to the double-entry bookkeeping system (De Roover, 1956).

The double-entry model developed in northern Italy during the late Middle Ages became the dominant record-keeping system used in Britain and the United States and became the underlying framework in which accountants developed modern accounting. (Oldroyd & Dobie, 2009).

The double-entry chart of accounts and its interrelationships represent one perspective of a company's economic reality, however, the Italian model of organisation plan in today's organisations has been described as useful taxonomies, classification schemes involving conventions rather than entities (Oldroyd & Dobie, 2009).

On the other hand, in recent years, the scientific debate on the origin of a double-entry accounting system has mainly focused on the analysis of the existence of a similar accounting system or even that of ancient China. With the economic growth of the Chinese economy, it paved the way in the search for accounting documents found in archives that after many years of closure were reopened, these documents refer to the debate on the existence of a wide range of accounting knowledge already during the Zhou dynasty (1100-771 BC) (Provasi & Farag, 2013).

Provasi and Farag (2013) report evidence of the existence of records specifically by Cao Liu and Qing Zong in which accounts were structured according to the form of opposing sections, the Ru and Chu symbols were used to detect increases and decreases in possessions of the empire.

Recently, many researchers are investigating the existence in ancient China through a constellation of knowledge and the possibility of developing an accounting system such as that originating from Europe in the 13th century. The same can be said about Persian civilization and those that existed in America. The global picture would emerge as a more holistic view of the evolution of accounting and its practices (Provasi & Farag, 2013).

In the accounting history there is still a lot to unveil, and researchers opt for different areas of study given the panoply of topics that remain open to the present day.

3 Research questions

Accounting historians play a role as "agents of change" (Gomes, Carnegie, Napier, & Parker, 2011) and with this desire to study the state of the art of accounting history, this study, based on a bibliometric review of the literature, aims to answer the following research questions (RQ):

RQ1: How many articles specifically focused on accounting history have been published and how has been their evolution?

RQ2: Which journals, authors, countries/regions, and organizations have more publications specifically focused on accounting history?

RQ3: Which research subtopics can be identified, and which are the main journals, authors, countries/regions, and organizations per subtopic?

RQ4: What are the most used keywords?

RQ6: Which articles, journals, authors, organizations, and countries/regions are the most cited?

RQ7: Which structural knowledge groups can be identified based on co-citations network between articles, journals, and authors?

4 Data and methods

4.1 Sample selection

Following previous studies (e.g., Petruzzelli, Ardito & Del Giudice, 2019), we first conducted a comprehensive research to collect the papers specifically focused on accounting history.

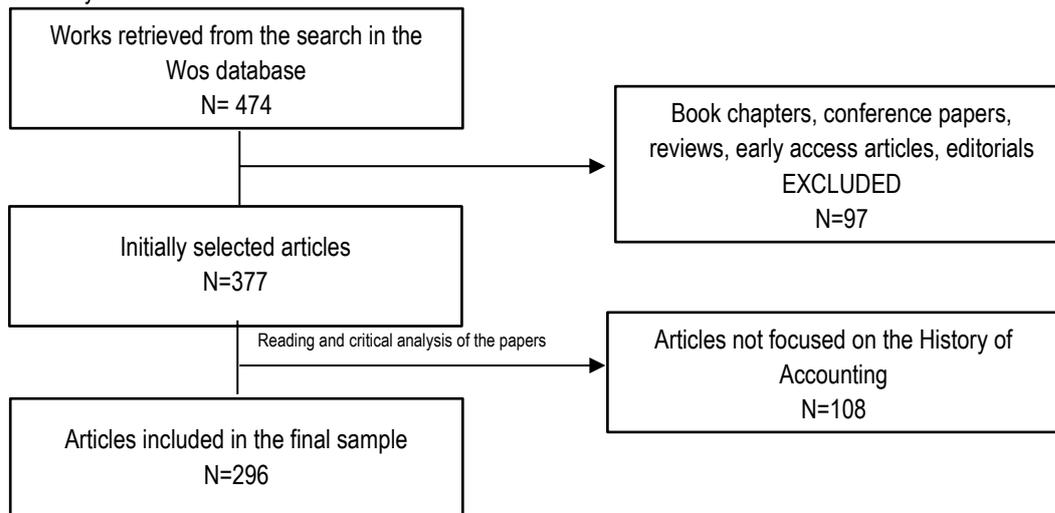
Firstly, a search was performed to identify words or keywords to be used in the search for papers related to the research topic.

The keywords used in the WoS database were "Accounting History". From the search 474 publications were generated, 377 articles, 28 book reviews, 26 editorial material, 21 proceedings papers and 17 review.

Only the articles were selected and of the 377 articles generated in the search, 108 were excluded as they did not relate to the topic under research, as shown in figure 1.

In the end we obtained a total of 269 articles selected on 24 March 2021 from the WoS database. The study includes all articles published until the date of collection.

Figure 1 - Analyse the selection of the database



4.2 Data analysis procedure

This study is based on a quantitative approach which takes as reference bibliometric indicators of scientific production according to their impact on WoS database. In this regard, bibliometric studies use as main indicators the articles, authors, journals or sources, institutions, countries/regions and keywords (Llanos-Herrera & Merigo, 2019).

To carry out the analysis of the data, we use VOSviewer. VOSviewer is a software that pays attention to the graphical representation of bibliometric maps in an easy-to-interpret way (van Eck & Waltman, 2010). Specifically, we used four major bibliometric methods: citation analysis, co-occurrence analysis, bibliographic coupling analysis, and co-citation analysis. In these analyses the relatedness of items is determined based on the number of times they cite each other (citation analysis), the number of documents in which they occur together (co-occurrence analysis), the number of references they share (bibliographic coupling), and number of times they are cited together (co-citation analysis).

5 Findings

In this section, we seek to answer the research questions.

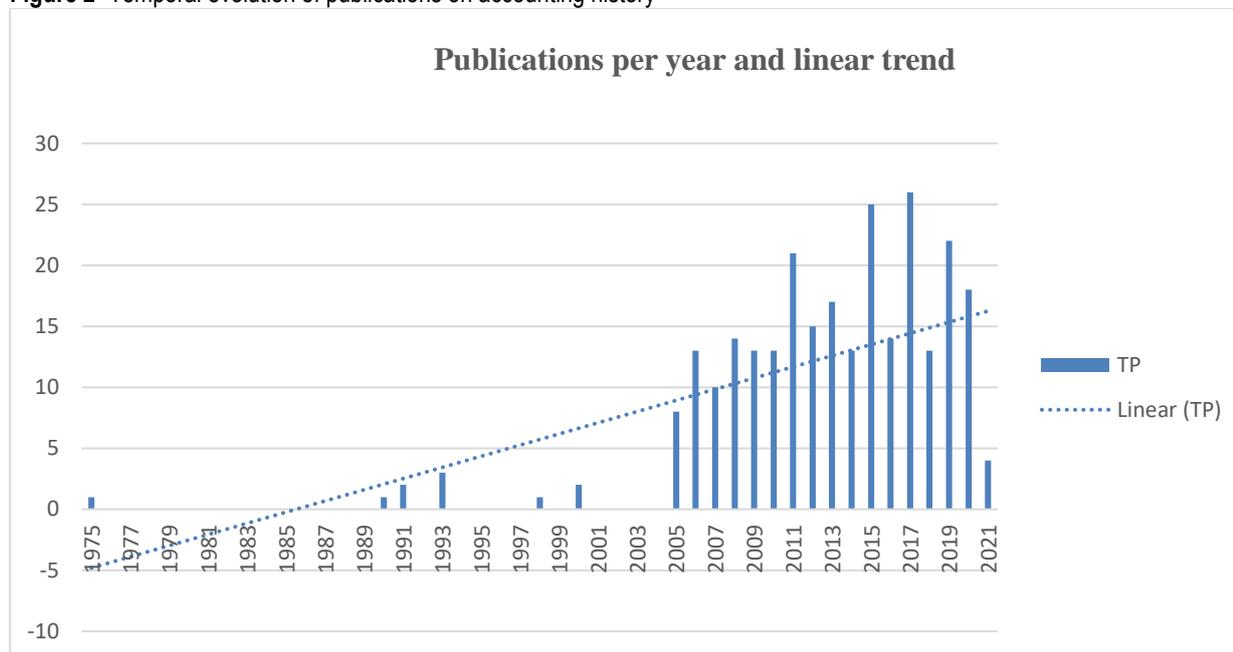
RQ1 - How many articles specifically focused on accounting history have been published and how has been their evolution?

In the bibliometric review of the literature, we identified 269 articles in the research area. The first publication on the history of accounting appeared in 1975 with author Tomas Jonson in the journal *The Accounting Review*, with the title “The Role of Accounting History in the Study of Modern Business Enterprise”. After this publication and until 1989, studies on the accounting history was not published in journals. Fourteen long years later, Gary John Previts, Lee David Parker and Edward Coffman publish in 1990 an article in the journal *Abacus* on the definition and relevance of accounting history topic. In the 1990s only 6 more articles were published, two in 1991, three in 1993 and one in 1998.

In 2000, the history of accounting had only two publications and from 2001 to 2004 studies were not published in journals. However, from 2005 to 2021, accounting history did not stop being researched and new

journal publications were obtained. These facts prove the growing trend towards the future of this subject that deserves so much to be studied. Figure 2 shows the temporal evolution on accounting history.

Figure 2 -Temporal evolution of publications on accounting history



Source: Data collected from the WoS database

RQ2: Which journals, authors, countries/regions, and organizations have more publications specifically focused on accounting history?

a) Scientific production per journal

The 3 journals with the most publications are Accounting History, with 108 articles published (40% of the total sample), De Computis-Revista Espanola De Historia De La Contabilidad, with 31 (12%), and Accounting Historians with 29 (11%). Next is the Accounting Auditing & Accountability Journal, with 18, Accounting History Review, with 16, and Accounting Organizations and Society, with 9. All other journals have 6 or fewer publications on accounting history. Table 1 presents scientific production per journal.

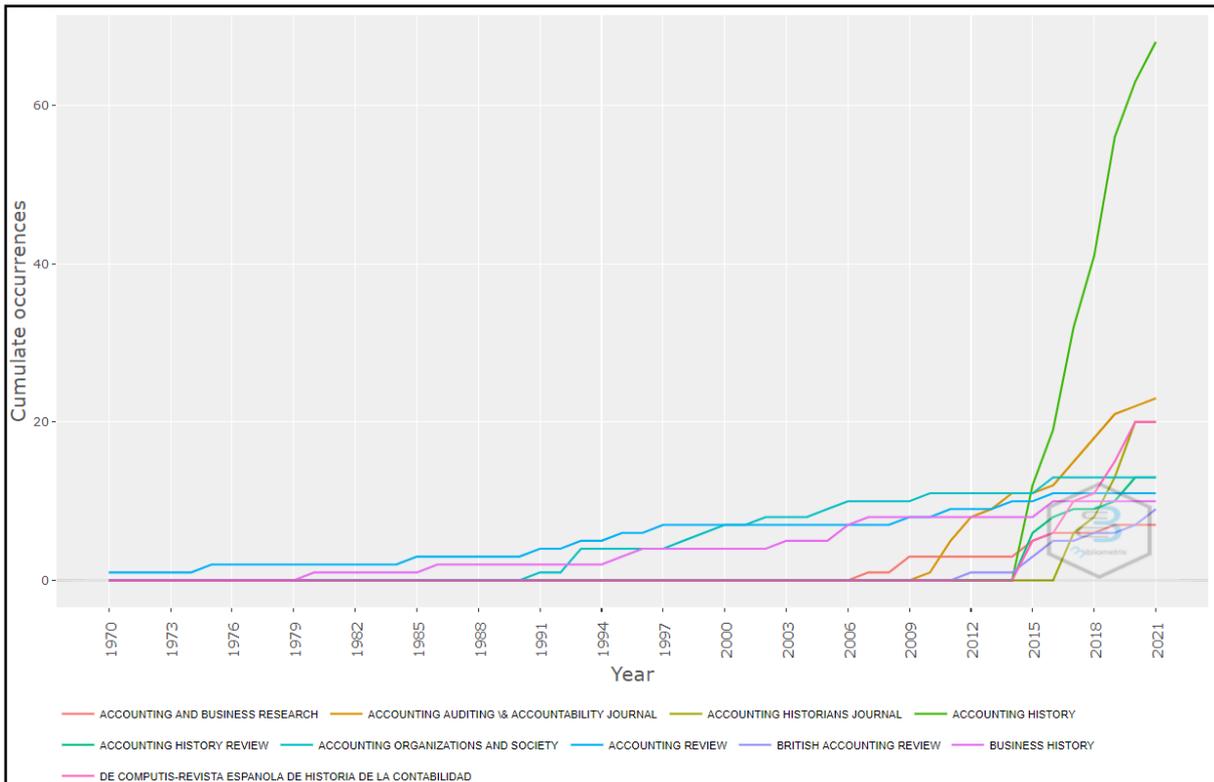
Table 1- Scientific production per journal

Journal	TP	Impact factor - 2019
Accounting History	108	JCR (0.61)
De Computis-Revista Espanola de História de La Contabilidad	31	ESCI (0.11)
Accounting Historians Journal	29	JCR (0.33)
Accounting Auditing & Accountability Journal	18	JCR (1.46)
Accounting History Review	16	JCR (0.48)
Accounting Organizations and Society	9	JCR (1.92)
British Accounting Review	6	JCR (1.10)
Abacus-A Journal of Accounting Finance And Business Studies	3	JCR (0.45)

Accounting and Business Research	3	JCR (0.86)
Accounting Review	3	JCR (5.45)
Critical Perspectives on Accounting	3	JCR (1.82)
Issues in Accounting Education	3	JCR (0.41)
Accounting Education	2	JCR (0.52)
Australasian Accounting Business and Finance Journal	2	JCR (0.31)
Business History	2	JCR (0.60)
European Accounting Review	2	JCR (0.97)
Journal of Accounting and Organizational Change	2	JCR (0.39)
Journal of Management History	2	JCR (0.40)
Pacific Accounting Review	2	JCR (0.21)
Public Finance Quarterly-Hungary	2	ESCI (0.23)
Rbgn-Revista Brasileira de Gestao de Negocios	2	JCR (0.29)
Transylvanian Review	2	JCR (0.21)
African Journal of Business Management	1	JCR (0.16)
Australian Economic History Review	1	JCR (0.26)
Austrian Journal of Forest Science	1	JCR (0.18)
Behavioral Research in Accounting	1	JCR (0.82)
Contemporary Accounting Research	1	JCR (2.21)
Economic Research-Ekonomiska Istrazivanja	1	JCR (0.49)
Gestao e Desenvolvimento	1	ESCI
Intangible Capital	1	JCR (0.27)
International Journal of Accounting	1	JCR (0.45)
International Journal of Public Administration	1	JCR (0.48)
Journal of Business Economics and Management	1	JCR (0.46)
Journal of Business Ethics	1	JCR (1.97)
Meditari Accountancy Research	1	JCR (0.95)
Politicka Ekonomie	1	JCR (0.16)
Revista de Administracao Publica	1	JCR (0.28)
Revista de Contabilidad-Spanish Accounting Review	1	JCR (0.41)

In Figure 3, we can observe the dynamics of growth of the 10 journals that have recorded the highest evolution concerning the publication of scientific papers in this area of knowledge.

Figure 3 – Source Growth



Source(s): Source: Data collected from R Bibliometrix

We found that the journal Accounting History (h_index 28; SJR=0.6; Q1) leads the ranking, having observed a spontaneous growth of publications from 2014. The two pioneer journals in this type of publications were Accounting Review (h_index 156; SJR=5.68; Q1) and Business History (h_index 35; SJR=0.86; Q1).

b) Scientific production per author

In total, 501 authors with publications in accounting history were identified. The author with the most journal publications is Garry Carnegie (14 articles), followed by Valerio Antonelli, Charles Baker and Christopher Napier, with published 8 articles, Frances Miley and Andrew Read, with 7 articles, Jayne Bisman and Delfina Gomes with 6 articles. All other authors published between 6 and 1 articles in journals. Table 2 presents scientific production per authors with 2 or more published articles.

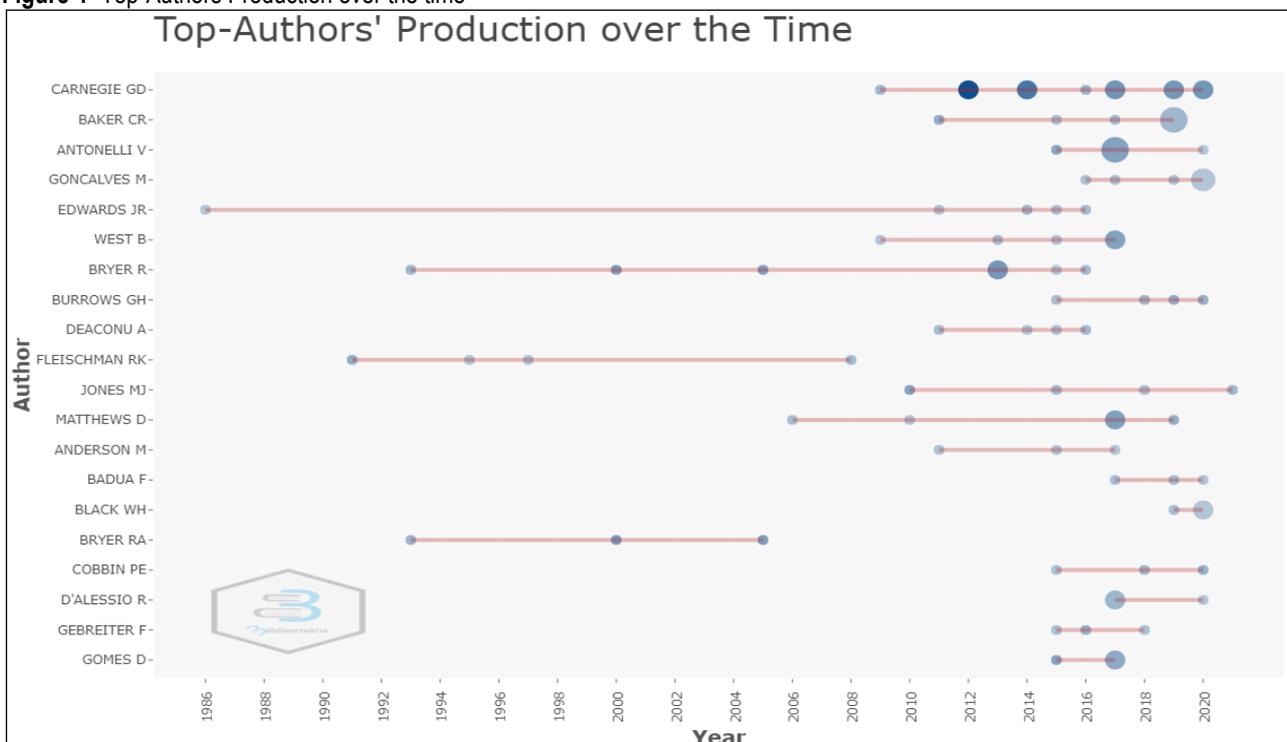
Table 2 - Scientific production per authors with 2 or more published articles

Authors	TP	Authors	TP	Authors	TP	Authors	TP
Carnegie, Garry D.	14	Burrows, Geoffrey H.	3	Cafaro, Emanuela Mattia	2	Moreno, Alonso	2
Antonelli, Valerio	8	Gebreiter, Florian	3	Cinquini, Lino	2	Napier, Christopher	2
Bisman, Jayne	6	Hernandez Esteve, Esteban	3	Clarke, Peter	2	Pareschi, Luca	2
Gomes, Delfina	6	Jones, Michael John	3	Cobbin, Phillip	2	Parker, Ld	2
Napier, Christopher J.	6	Matthews, Derek	3	Cobbin, Phillip E.	2	Parker, Lee D.	2
D'alessio, Raffaele	5	Nistor, Cristina Silvia	3	Cordery, Carolyn	2	Persson, Martin E.	2
Miley, Frances	5	Oldroyd, David	3	Davis, Nicholas	2	Pinto, Ofelia	2
Moreno Fernandez, Rafael	5	Rennie, Morina D.	3	Ferri, Paolo	2	Quere, Bertrand P.	2

Read, Andrew	5	Walker, Stephen P.	3	Flesher, Dale	2	Radcliffe, Vaughan	2
Baker, C. Richard	4	Anderson, Malcolm	2	Fowler, Carolyn	2	Rico Bonilla, Carlos	2
Banos Sanchez-	4	Andrei, Paolo	2	Gaffikin, Michael	2	Rodrigues, Lucia	2
Deaconu, Adela	4	Badua, Frank	2	Giovannoni, Elena	2	Rooney, Jim	2
Edwards, John Richard	4	Baker, C.	2	Greer, Susan	2	Schmidt, Paulo	2
Goncalves, Miguel	4	Baker, Charles Richard	2	Gutierrez Hidalgo,	2	Solotko, John	2
Sangster, Alan	4	Bayramoglu, Fatih	2	Gutierrez-Hidalgo,	2	Stevenson-Clarke,	2
Sargiacomo, Massimo	4	Black, William H.	2	Guvemli, Batuhan	2	Tenucci, Andrea	2
West, Brian	4	Borbely, Katalin	2	Hollister, Joan	2	Toraman, Cengiz	2
Baker, Ron	3	Boyns, Trevor	2	Keenan, Michael	2	Tyson, Thomas N.	2
Bloom, Robert	3	Buhr, Nola	2	Lemarchand, Yannick	2	Xu, Lina	2
Bryer, Rob	3	Burrows, Geoff	2	Lusiani, Maria	2	Zimnovitch, Henri	2

In terms of longevity, four authors, pioneers in this research area, stand out, as shown by Figure 4, Edwards, JR. of Cardiff University (began researching this topic in 1986), Fleischman, RK. of John Carroll University (he in started 1991), Bryer, R. (started in 1993) of Warwick Universit. These authors continued their research on this topic until 2016. From 2016 onwards, several authors have continued this type of research. The most recent group includes Carnegie, GD. of RMIT University, Baker, CR. of Adelphi University, Antonelli, V. of Salerno University and Gonçalves, M of Coimbra Business School. Other authors also stand out in the Top 20 most relevant authors in research on the topic of Accounting History. They are all authors with considerable scientific impact, measured by indicators such as h-index, m-index, g-index, citation and co-citations networks.

Figure 4 -Top-Authors Production over the time

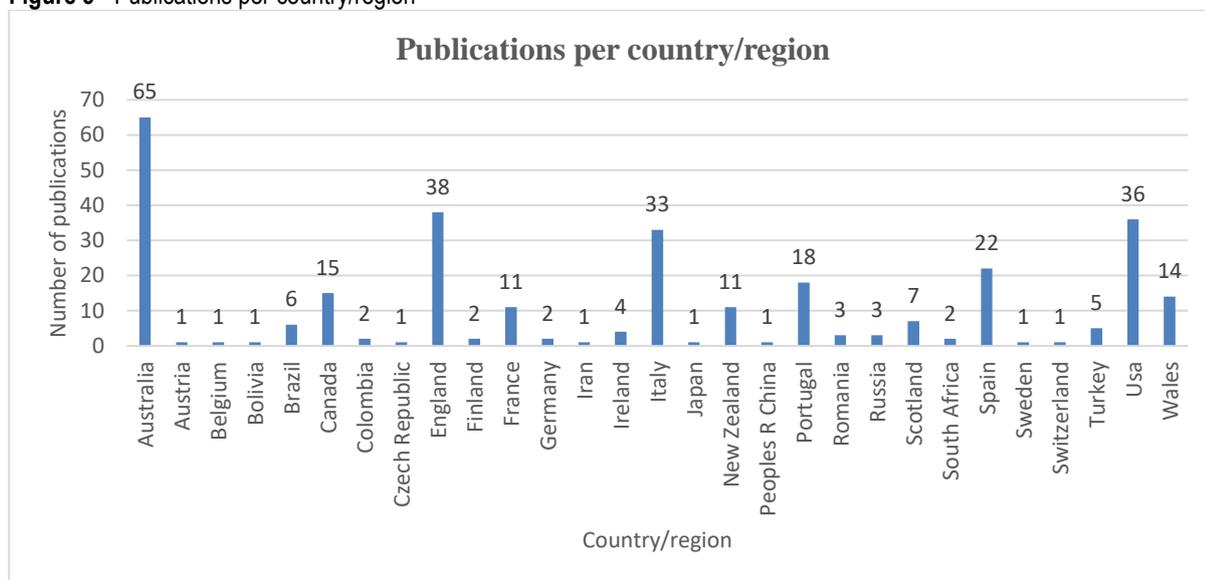


Source: Data collected from R Bibliometrix

c) Scientific production per country

Australia is the country with the most published studies on the history of accounting (65 articles). It is followed by England with 38, America with 36, Italy with 33, Spain with 22, Portugal with 18 and all other countries have 15 or fewer publications, as shown in Figure 5.

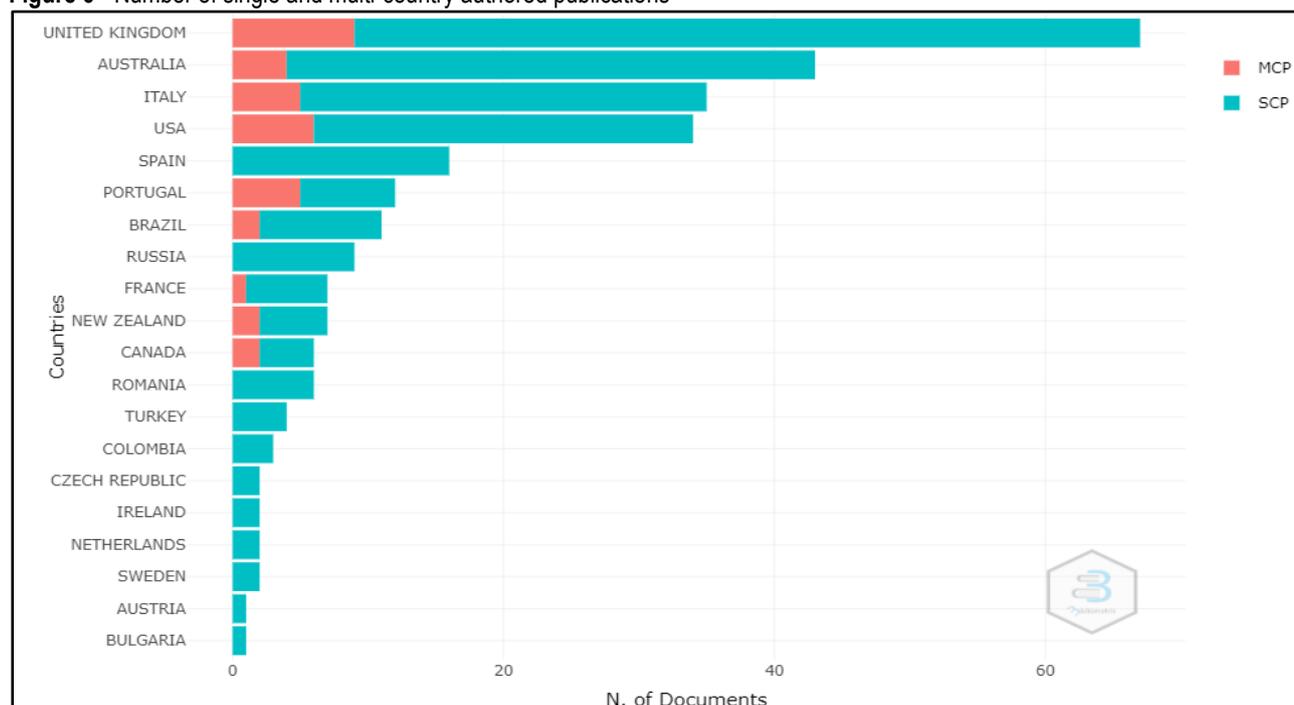
Figure 5 - Publications per country/region



Source(s): Data collected from WoS database and VOSviewer

In addition, we verify that 36 articles were published by multi country authors (MCP) and 260 by single country authors (SCP) as per Figure 6.

Figure 6 - Number of single and multi-country authored publications



Source(s): Source: Data collected from R Bibliometrix

d) Organizations with more publications

Table 3 shows the organizations with 5 or more publications. Highlights the Rmit University has the most publications (19), followed by Minho University with 11, and Cardiff University with 9.

Table 3 - Organizations with more publications

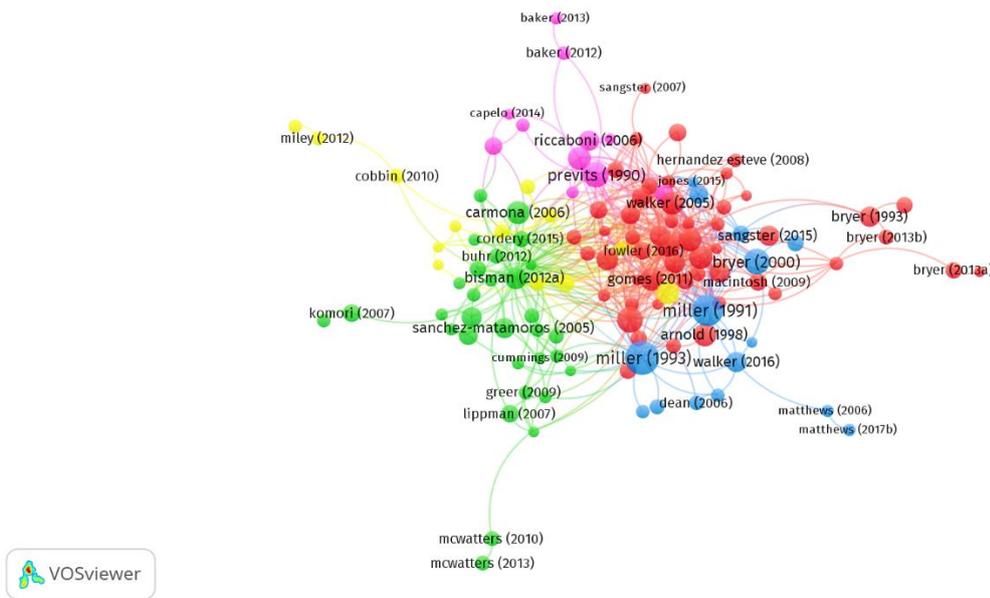
Organization	TP
Rmit University	19
University of Minho	11
Cardiff University	9
Adelphi University	8
Charles Sturt University	8
University of Salerno	8
Royal Holloway University London	5
University Bristol	5
University Canberra	5
University G Dannunzio	5
University of Melbourne	5
University of Sydney	5
Univ Wollongong	5
Victoria Univ Wellington	5

Source(s): Data collected from WoS database and VOSviewer

RQ3: Which research subtopics can be identified, and which are the main journals, authors, countries/regions, and organizations per subtopic?

As shown in Figure 7, the bibliographic coupling analysis generated five clusters (each color represents one cluster). In this regard, according to van Eck and Waltman (2017, p. 1062), the “clusters that are located close to each other tend to be strongly related in terms of citations, while clusters that are located further away from each other tend to be less strongly related”. Furthermore, “the curved lines between the clusters also reflect the relatedness of clusters, with the thickness of a line representing the number of citations between two clusters” (van Eck & Waltman, 2017, p. 1063).

Figure 7 - Bibliographic coupling analysis of the publications



Source(s): Data collected from WoS database and VOSviewer

For each cluster, we identified different research subtopics, as follows:

Cluster 1 (color red) - The importance of accounting history, review of history, the past and the future.

Table 4 shows the five most cited publications. The most cited article, by Carnegie, G and Napier, C (2012), identifies developments in the accounting history literature, and pays particular attention to advocates of critical and interpretive histories of accounting's past as they have driven subsequent research. In the same line of study, Fleischman, R., and Radcliffe, V. (2005) describe developments in the accounting history literature during the 1990s and highlight the broadening of publication opportunities in accounting history that characterised the decade. The paper identifies and discusses "traditional" and "critical" forms of accounting history and reviews work within the paradigms of economic-rationalist, Foucauldian, and Marxist studies.

Analysis of Walker's (2005) study reveals that the production and dissemination of accounting history knowledge until 2005 focused predominantly on Anglo-American settings and the era of modernity. Walker notes that many accounting history practitioners are also substantially disconnected from the wider community of historians, with this review the author aims to stimulate the study of interdisciplinary history theoretical and methodological creativity and greater inclusivity in the accounting history academy.

Still on the importance of Accounting History, Gomes et al. (2011) question whether history still matters and their article answers with a big yes and also presents several suggestions for the advancement of the quality, relevance and significance of historical research in accounting, starting with the need to correct the persistent misconceptions about the discipline.

To close cluster 1, the study by Gomes (2008) addresses accounting in the last two decades and shows us the distinction between the traditional and the new schools of research in accounting history and highlights the importance of seeing accounting as a social practice.

Table 4 - Top 5 papers belonging to Cluster 1 ordered by total links

RO	Authors (year)	TL	Title	Journal	Authors' affiliation
1	Carnegie, G. and Napier, C. (2012)	73	Accounting's past, present and future: the unifying power of history	Accounting, Auditing & Accountability Journal	School of Accounting, RMIT University, Melbourne, Australia; School of Management, Royal Holloway, University of London, Egham, UK
2	Fleischman, R. K. and Radcliffe, V. S. (2005)	54	The roaring nineties: accounting history comes of age	Accounting Historians Journal	Carrol university; University of Western Ontário
3	Walker, S. P. (2005)	53	Accounting in history	Accounting Historians Journal	Cardiff University
4	Gomes, D.; Carnegie, G. D.; Napier, C. J.; Parker, L.D. (2011)	51	Does Accounting History Matter?	Accounting History	University of Minho, Portugal; RMIT University, Australia, University of London; UK University of South Australia, Australia; University of Ballarat, Australia
5	Gomes, D. (2008)	51	The interplay of conceptions of accounting and schools of thought in accounting history	Accounting History	University of Minho, Portugal

Cluster 2 (color green) - The historical perspective of accounting and religion

Table 5 shows the five most cited articles in the cluster 2. Carmona et al. (2006) study on accounting and contemporary religious institutions, in their study it was possible to conclude that research in this area remains in an embryonic state. Bisman (2012), meanwhile, made a dedication to the journal History of Accounting by analysing and commenting on the articles published in the journal from 1996 to 2010, using a series of thematic landscapes that portray the dominant trends and trajectories of research. Sánchez-Matamoros et al. (2005), on the other hand, focused their study on new perspectives in the history of accounting by analysing the role of accounting in two organisations located in southern Spain in the second half of the 18th century: the New Settlements of Sierra Morena and Andalusia and the Royal Tobacco Factory of Seville. The authors conclude that accounting is a practice for the domain of the population regardless of the discourse of the institution. Still on the development of accounting in institutions, Napier (2009) studied how the development of Islamic banks and other financial institutions since the 1970s has stimulated a modern literature that has been identified as addressing 'Islamic accounting'.

However, Napier notes that much remains to be discovered before historians can determine the influence of Middle Eastern accounting ideas and practices on other parts of the world. Thus, and given the importance of governance practices in the evolution of accounting, Yayla (2011) analyses the relationship between accounting changes and governance practices by examining accounting and accountability changes in Sultan Süleyman Waqf of the Ottoman Empire. In her study, Yayla highlighted how accounting and accountability techniques were used to in the organisational spaces of an Islamic state.

Table 5 - Top 5 papers belonging to Cluster 2 ordered by total links

RO	Authors (year)	TL	Title	Journal	Authors' affiliation
1	Carmona, S. and Ezzamel, M. (2006)	51	Accounting and religion: a historical perspective	Accounting History	Instituto de Empresa, Madrid, Spain; Cardiff Business School, Cardiff University, País
2	Bisman, J. (2012)	44	The census as accounting artefact: A research note with illustrations from the early Australian colonial period	Accounting History	Charles Sturt University, Australia
3	Sánchez-Matamoros, J. B.; Hidalgo, F. G.; Espejo, C. A-D and Fenech, F. C. (2005)	37	Govern(mentality) and Accounting: the Influence of Different Enlightenment Discourses in Two Spanish Cases (1761–1777)	Accounting Historians Journal	University Pablo de Olavide of Seville, Spain
4	Napier, C. J. (2009)	35	Defining Islamic accounting: current issues, past roots	Accounting History	Royal Holloway, University of London, UK
5	Yayla, H. (2011)	51	Operating regimes of the government: Accounting and accountability changes in the Sultan Süleyman Waqf of the Ottoman Empire (The 1826 Experience)	Accounting History	University of Gümüşhane, Turkey

Cluster 3 (color blue) - The evolution of accounting history

Table 6 presents the five most cited publications on evolution of accounting history subtopic. Accounting and society go hand in hand and so Miller and Napier (1993) studied the genealogies of computation, evoking the importance of accounting in the social development of humanity rather than the view of the study of accounting as it exists today, as a particular accounting technique.. In addition they describe so-called traditional accounting as links between double-entry bookkeeping and capitalism in the writings of Weber and Sombart; the links between accounting practice and decision-making in the writings of Yamey; and the search for examples of 'early management accounting' in the writings of those such as Edwards and Fleischman and Parker. Over the last decade, accounting history has changed significantly and so Miller et al. (1991) have found that new accounting history is located in relation to changes in the discipline of history itself, and is considered to have implications for the current flourishing of interest in accounting 'field studies'. Marx's theory and history of accounting has been much studied, so Bryer (2000) argues that the history of accounting during the English agricultural, commercial and bourgeois revolutions is consistent with this theory. In his study document examines evidence from farmer's accounts of the 16th to 18th centuries and agricultural texts and literature as well as evidence on mercantile accounting in the 16th and 17th centuries. In this way he reinforced the importance of accounting history and the need for archival research.

In order to facilitate the development of new research agendas, Walker's (2016) study outlines the problems of linking accounting and the social, indicates how social historians have addressed similar issues, and reveals the possibility of drawing on other notions of the social that have the potential to broaden the historical understanding of accounting's roles in society.

Finally, Jones (2010) in order to prove that the role accounting plays in power and governance is a key issue in accounting history, analysed a crucial development in accounting history, the emergence in the 12th century of treasury accounting. Treasury accounting played a significant role in the rise of the European administrative state.

Table 6 - Top 5 papers belonging to Cluster 3 ordered by total links

RO	Authors (year)	TL	Title	Journal	Authors' affiliation
1	Miller, P. and Napier, C. (1993)	171	Genealogies of calculation	Accounting, Organizations and Society	The London School of Economics and Political Science, UK
2	Miller, P.; Hopper, T. and Laughlin, R. (1991)	171	<u>The new accounting history: An introduction</u>	Accounting, Organizations and Society	London School of Economics and Political Science, UK; University of Manchester, UK; University of Sheffield, UK
3	Bryer, R. A. (2000)	65	A Marxist accounting history of the British industrial revolution: a review of evidence and suggestions for research	Accounting, Organizations and Society	Warwick Business School, University of Warwick, Coventry
4	Walker, S. P. (2016)	53	<u>Revisiting the roles of accounting in society</u>	Accounting, Organizations and Society	University of Edinburgh Business School, Pais
5	Jones, M. J. (2010)	45	<u>Sources of power and infrastructural conditions in medieval governmental accounting</u>	Accounting, Organizations and Society	School of Economics, Finance and Management, University of Bristol, Pais

Cluster 4 (color yellow) - Accounting records and the development of management accounting accounting

Fleischman and arker (1991) found between 1760 and 1850 substantial evidence of relatively mature man-agent costing in four main areas of activity: cost control techniques-niques, overhead accounting, costing for routine and special decision-making, and standard costing.

The study by Schäffer and Binder (2008) addresses the development of management accounting and management control research in German-speaking countries between 1970 and 2003 as well as to the literature on "Comparative International Accounting History".

On the other hand, Bisman (2009) made with a vision of the present and future of accounting through its past, an analysis of an artefact resulting from a series of needs to render accounts and satisfy accountability obligations. Thus based on a variety of historiographical approaches, as a means of broadening and complementing existing research agendas in accounting history.

Bisman went even further and in 2012 published a study analysing a unique sixteenth-century budget document prepared for the Crown to facilitate decision-making and the (re)allocation of resources through the market in a period of scarcity. The document checks a budgetary process is detailed, along with discussion of the economic, political and social contexts, and the significance of the Commissions as a basis for subsequent developments in English public welfa.

Using the same methodology, Hollister and Schultz (2010) explored slavery and emancipation in the northeastern USA using account books kept in the Hudson River Valley of New York during the first half of the nineteenth century.

Table 7 - Top 5 papers belonging to Cluster 4 ordered by total links

RO	Authors (year)	TL	Title	Journal	Authors' affiliation
1	Fleischman, R. K. and Parker, L. D (1991)	54	British Entrepreneurs and Pre-Industrial Revolution Evidence of Cost Management	Accounting Review	College of Social Sciences > Adam Smith Business School
2	Utz Schäffer and Christoph Binder (2008)	21	"Controlling" as an academic discipline: the development of management accounting and management control research in German-speaking countries between 1970 and 2003	Accounting History	WHU-Otto Beisheim School of Management
3	Jayne Bisman (2009)	12	The first 15 years of Accounting History as an international journal	Accounting History	Charles Sturt University
4	Jayne Bisman(2012)	5	The census as accounting artefact: A research note with illustrations from the early Australian colonial period	Accounting History Review	Charles Sturt University
5	Joan Hollister and Sally M. Schultz (2010)	5	Slavery and emancipation in rural New York: Evidence from nineteenth-century accounting records	Accounting History	State University of New York at New Paltz

Cluster5 (color purple) - Contributions from the history of accounting

Previts and Coffman (1990) made a definitive distinction between history as a social science, with its emphasis on interpretation, criticism and method, and history as a descriptive narrative form. In addition they present arguments for the relevance of published accounting history studies to accounting pedagogy, policy and practice. Similarly, Sargiacomo and Gomes (2011) provide an analysis of published historical research on accounting and accountability in local government and in public organisations that have links to local government. In this way they demonstrate that accounting, besides being seen as a technical practice, is also a social practice, with implications for organisational and social functioning.

Still on the exploration of the potential role played by accounting systems in influencing power relations Riccaboni et al (2006) examine a case from the 14th century, that of the Opera della Metropolitana di Siena, an institution responsible for the construction and maintenance of the cathedral of the city of Siena, analysing institutional and organisational change as well as the evolution of accounting practices.

In a different way, Sargiacomo et al (2012) reveal Fabio Besta (1845-1922) as an important accounting thinker and underline his influence on accounting theory, and his great impact on the development of knowledge of accounting history.

As well as Cordery (2007) study the early Methodist missionaries in New Zealand provide an example where acculturation requires men tempted with a strong sacred focus to eschew secular accounting for their mission. Yet their letters and diaries regularly included stocks of trade goods and ledger accounts, suggesting economic responsibility. When a missionary embezzled mission money for personal purposes, he was ostracised. The dependence of Wesleyan Methodist missionaries on their supporters demanded commitment to the mission and to the stewardship of the mission's "sacred treasures," but not a sacred-secular bifurcation that denigrated accounting duties.

Table 8 - Top 5 papers belonging to Cluster 5 ordered by total links

RO	Authors (year)	TL	Title	Journal	Authors' affiliation country
1	Gary John Previts Lee D. Parker Edward N. Coffman (1990)	72	Accounting History: Definition and Relevance	Abacus	Case Western Reserve University
2	Massimo Sargiacomo and Delfina Gomes (2011)	46	Accounting and accountability in local government: Contributions from accounting history research.	Accounting History	University G. d'Annunzio and University of Minho
3	Angelo Riccaboni Elena Giovannoni Andrea Giorgi Stefano Moscadelli (2006)	31	Accounting and power: evidence from the fourteenth century.	Accounting History	University of Siena, University of Trento and University of Siena
4	Massimo Sargiacomo Stefania Servalli Paolo Andrei (2012)	30	Accounting and accountability in local government: Contributions from accounting history	Accounting History Review	University G. d'Annunzio
5	Carolyn Cordery (2007)	20	Charity financial reporting regulation: a comparative study of the UK and New Zealand	Accounting History	Victoria University

RQ4: What are the most used keywords?

Figure 8 shows the frequency of the major keywords based on the co-occurrence analysis. The most used keyword was "accounting history" followed by "history" and "accountability" and the time root focuses on the 21st century as it is the century with the most published articles. The words most used in the articles more former were "19th century", "world war ii", "religion", "microhistory", "archival research", combining with the articles existing in that period of time that focused on parts of history with relevance in war periods. In the middle of the time period, the words "accounting history", "accounting", "history", "capitalism" and "historiography" appear, which are reflected in the published articles that focused on the review, explanation and relevance of accounting history. Recently, the words "future", "power", "organizations", "management" and "charity" have appeared, characterizing new research trends.

4	Previts, G. J.; Parker, L. D. and Coffman, E. N.	1990	Accounting History: Definition and Relevance	Abacus	72	4	5
5	Bryer, R. A.	2000	The history of accounting and the transition to capitalism in England. Part two: evidence	Accounting, Organizations and Society	65	6	3
6	Fleischman, R. K. and Parker, L. D.	1991	British Entrepreneurs and Preindustrial Revolution Evidence of Cost Management	Accounting Review	54	8	1
7	Walker, S. P.	2006	Revisiting the roles of accounting in society	Accounting, Organizations and Society	31	7	3
8	Carmona, S. and Ezzamel, M.	2006	Accounting and religion: a historical perspective	Accounting History	51	1	2
9	Gomes, D.	2011	The interplay of conceptions of accounting and schools of thought in accounting history	Accounting History	51	5	1
10	Gomes, G.; Carnegie, G. D.; Napier, C. J.; Parker, D.; Brian West	2008	Does accounting history matter?	Accounting History	51	10	1

RO: Ranking; TC: Total Citation (until March 24, 2021); AC: Average Citations per year; St: Subtopic
Source(s): Data collected from WoS database using VOSviewer

According to Table 10, Garry Carnegie and Delfina Gomes are the most cited authors, both framed in cluster 3 with the topic "the evolution of accounting history". The most cited journal was Accounting History and Accounting Organizations and Society. The most cited organizations were Rmit University and the University of Minho. The countries with the most cited publications are Australia and England. Table 10 shows the top 10 most cited journals, authors, organizations and countries.

Table 10 - The top 10 most cited journals, authors, organizations, and countries

RO	Journal	TC	St	Author	TC	St	H-i	Organizations	TC	St	Country or region	TC	St
1	Accounting History	1,146	1	Carnegie, G. D.	257	1	33	Rmit university	240	2	Australia	873	1
2	Accounting Organizations and Society	517	2	Gomes, D.	175	4	17	University of Minho	229	2	England	780	2
3	Accounting Historians Journal	277	1	Napier, C.	154	1	28	Cardiff University	125	1	Usa	344	1
4	Accounting Auditing & Accountability Journal	195	1	Sargiacomo, M	95	2	18	università g d'annunzio	95	3	Portugal	250	1
5	Accounting History Review	123	2	Bisman, J.	88	1	13	Charles sturt university	93	1	Italy	229	3
6	Abacus-A Journal of Accounting Finance and Business Studies	117	1	Sangster, A.	87	3	27	Wollongong university	70	4	Canada	220	1
7	Accounting Review	113	1	West, B.	65	-1	15	Victoria university wellington	68	2	Spain	194	2
8	British Accounting Review	38	7	Antonelli, V.	57	-2	12	Royal holloway university london	65	2	Wales	172	1
9	De Computis-Revista Espanola de Historia De La Contabilidad	26	3	Sanchez-Matamoros, B.	37	1	9	Salerno university	57	3	France	101	2
10	Australian Economic History Review	13	6	Edwards, J. R.	34	-3	28	Adelphi university	45	3	New Zealand	92	2

RO: Ranking Order; TC: Total Citations; St: Subtopic; H-i: H-Index in WoS
Source(s): Data collected from WoS database using VOSviewer

RQ6: Which structural knowledge groups can be identified based on co-citations network between articles, journals and authors?

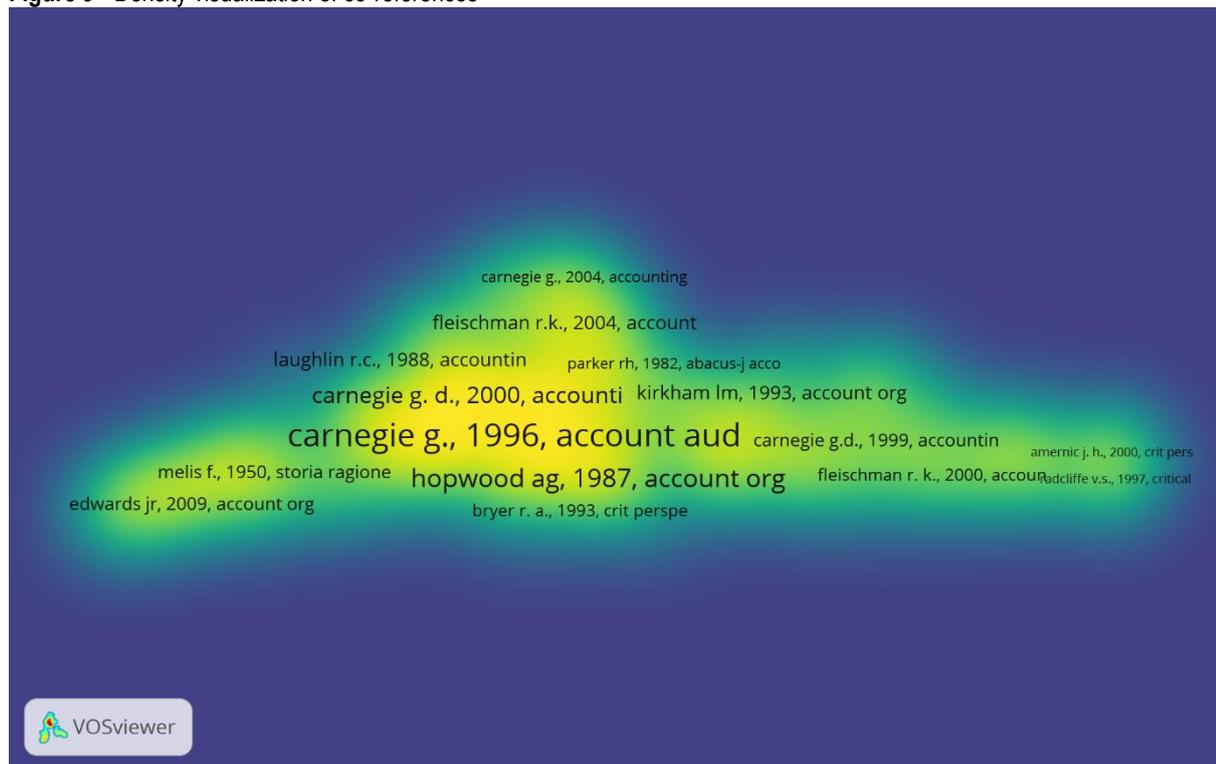
The co-citation analysis has the purpose of identifying what structural knowledge groups exist in the research on accounting history. In this regard, according to [Bruns, Christensen and Pilkington \(2020\)](#), a structural knowledge group is established when a set of references tend to be often associated. Co-citation visualization, in VOSviewer software, results from the analysis the citations and links of the references, journals and authors.

a) Co-Citation network of references

Our findings indicate that 14526 references have been cited by the analyzed publications on accounting history, considering the total link strength, in Figure 9 stands out the article written by Carnegie (1996). As indicated earlier, this author developed one of the most influential studies on accounting history research. On the other hand the study through the figure analysis shows that Hopwood's (1987) study was very influential.

In the study the author highlights the diversity of factors that accompany accounting change, in the constitutive and reflective roles of accounting and the ways in which accounting change can change the preconditions for subsequent organizational change.

Figure 9 - Density visualization of co-references



Note: Density visualization map of co-references was raided for the minimum of cited reference of the 5.

Source(s): Data collected from WoS database using VOSviewer

Table 11 presents the Top 10 co-references, considering the total link strength. As can be seen, among them there are references related accounting history. The most referenced authors were Carnegie and Napier with a total link strength of 476, followed by Miller, Hopper and Laughlin with 384 and Napier with 373. The

journal of most referenced articles are Accounting, Auditing & Accountability Accounting, Organizations and Society.

Table 11 - Top 10 most refereced ordered by total link strength

RO	Authors	TLS	TL	Title	Journal	Authors' affiliation, country
1	. Carnegie, G. D. and Napier, C. J.	476	65	Critical and interpretive histories: insights into accounting's present and future through its past	Accounting, Auditing & Accountability Journal	Deakin University, Victoria, Australia; University of Southampton, UK
2	Miller, P.; Hopper, T. and Laughlin, R.	384	45	The new accounting history: An introduction	Accounting, Organizations and Society	London School of Economics and Political Science, UK; University of Manchester, UK; University of Sheffield, UK
3	.Napier, C. J.	373	45	Accounts of change: 30 years of historical accounting research	Accounting, Organizations and Society	School of Management, University of Southampton, Highfield, Southampton, UK
4	Carnegie, G. D. and Napier, C. J.	278	40	Exploring comparative international accounting history	Accounting, Auditing & Accountability Journal	School of Accounting and Finance, Deakin University, Geelong, Victoria, Australia; School of Management, University of Southampton, Southampton, UK
5	Carmona, S.	260	37	Accounting history research and its diffusion in an international context	Accounting History	Instituto de Empresa, Sapain
6	Fleischman, R. K. and Radcliffe, V. S.	324	33	The roaring nineties: accounting history comes of age.	The Accounting Historians Journal	The University of Western Ontario Ivey Business School, london
7	Hopwood, A. G.	241	33	The archeology of accounting systems	Accounting, Organizations and Society	London School of Economics and Political Science, UK
8	Previts, G. J. Parker, L.D. And Coffman, E. N.	288	32	An Accounting Historiography: Subject Matter and Methodology	Abacus - A Journal of Accounting, Finance and Business Studies	Case Western Reserve University; UK, University of South Australia, Australi, Virginia Commonwealth University, USAs
9	Miller, P. and O'Leary, YT.	178	30	Accounting and the construction of the governable person	Accounting, Organizations and Society	Division of Economic Studies, University of Sheffield, USA; Department of Accounting, University College, Cork, UK
10	Walker, S. P	252	30	Innovation, convergence and argument without end in accounting history	Accounting, Auditing & Accountability Journal	Business School,

RO: Ranking Order; TLS= Total Link Strength; TL: Total Links; n.a.: not applicable

Source(s): Data collected from WoS database using VOSviewer

b) Co-Citation network of authors and journals

We found 7989 journals and 8637 authors cited by publications on accounting history. The total strength of the co-references links with other authors was calculated. Table 12 shows the top 10 authors and journals for

co-referencesnetwork, considering the total link strength. Three authors stand out with the greatest linking force (Carnegie, G. D; Walker, S. P and Fleischman, R. K) and the journal that stands out most of all is the Accounting, Organizations and Society.

Table 12 - The TOP 10 for co-citation network of authors and journals

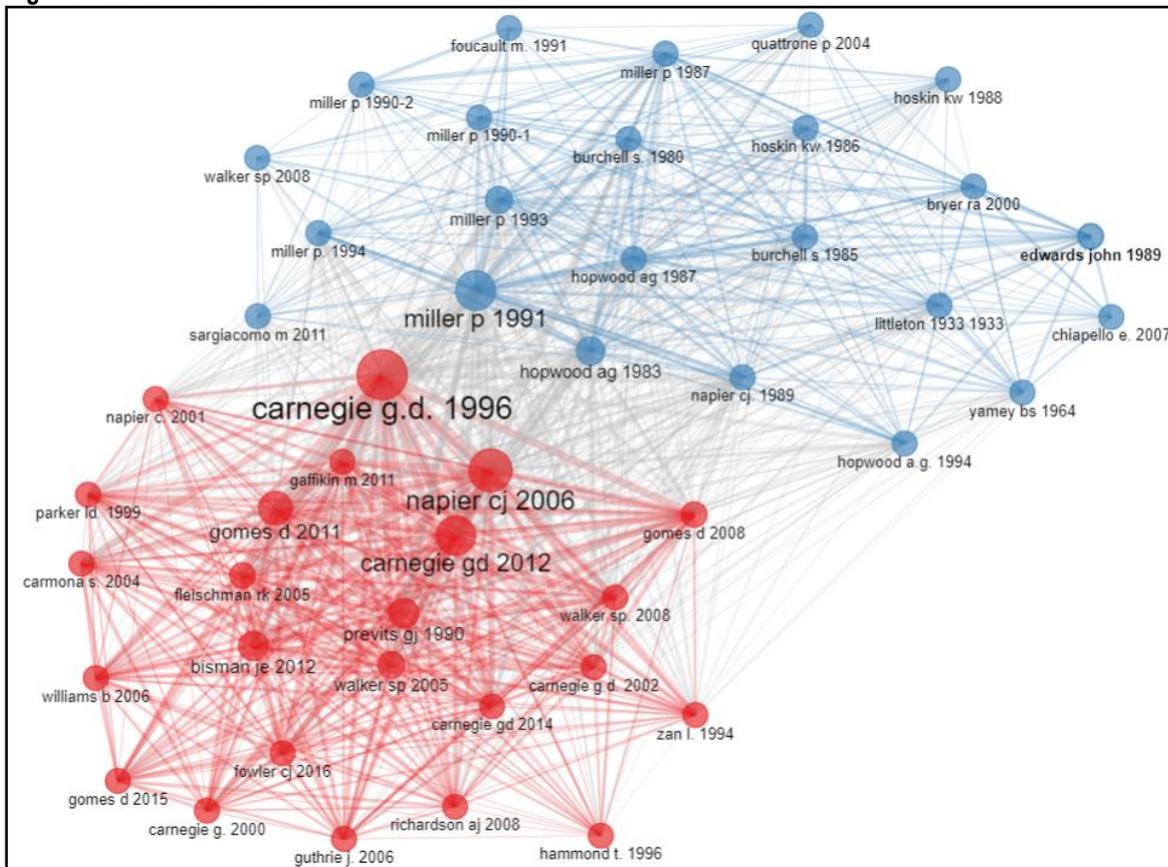
RO	Authors	TL	TLS	H-i	Journals	TL	TLS
1	Carnegie, G. D.	323	11,881	33	Accounting, Organizations and Society	1.226	64,916
2	Walker, S. P.	223	10,393	34	Accounting Business	633	48,597
3	Fleischman, R. K	184	9,152	n.a	Accounting History	789	45,581
4	Carmona, S.	192	7,512	n.a	Accounting, Auditing & Accountability Journal	611	42,597
5	Miller, P.	203	7,460	73	Accounting History	523	39,475
6	Napier, C. J.	155	6,488	28	Accounting History Journal	429	33,868
7	Edwards, J. R	116	5,330	28	Crit Perspect	366	31,275
8	Carnegie, G.	117	4,986	n.a	Accounting History Journal	324	20,150
9	Bryer, R. A.	86	4,970	n.a	Accounting, Auditing & Accountability Journal	314	18,109
10	Funnell, W.	85	4,813	n.a	Abacus	201	14,864

RO: Ranking Order; TLS= Total Link Strength; TL: Total Link; H-i: H-index in WoS; n.a.: no applicable

Source(s): Data collected from WoS database using VOSviewer

In Figure 10 we can see the co-citation network between database authors. This figure is a network of co-citation between authors that allows identifying the most relevant works and authors cited by more authors, highlighting, among others, the article by Carnegie, GD. (1996) in red cluster and the article by Miller, P. (1991) are the more relevant.

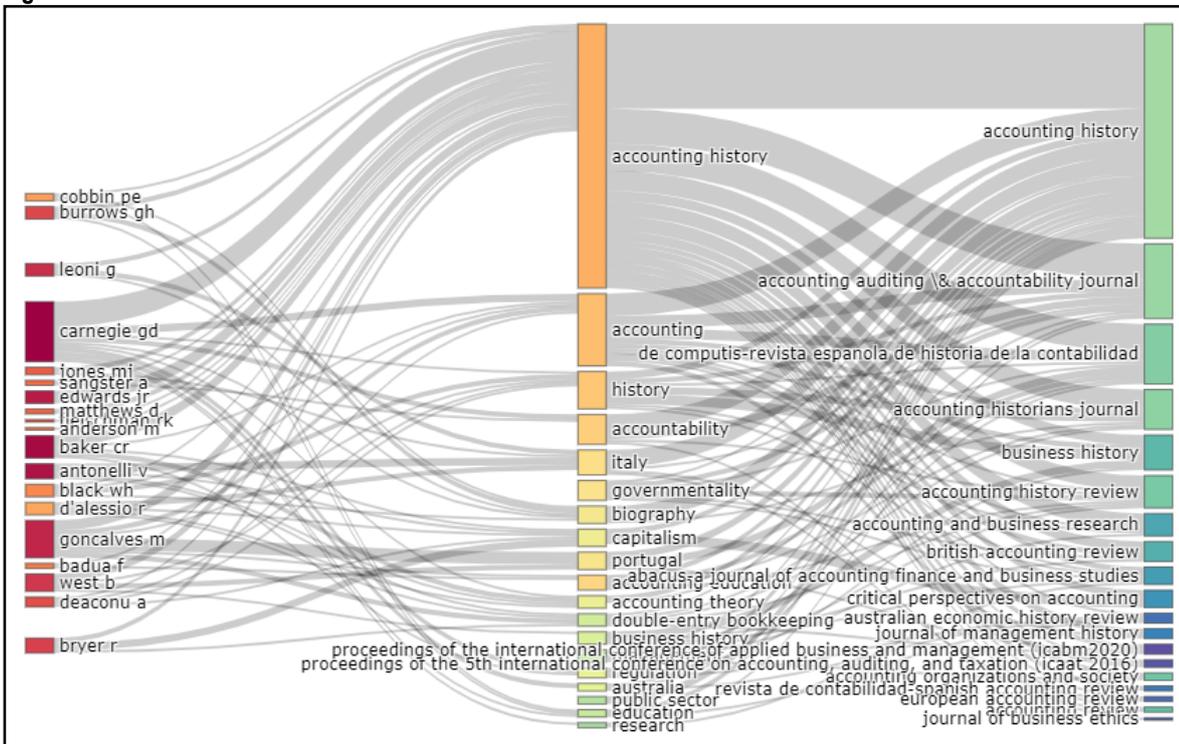
Figure 10 - Co-Citation Network



Source(s): Source: Data collected from R Bibliometrix

Two major groups or clusters of authors are also evident here. The first with works related to the issues of Accounting History, Accounting Management, Accountability, Regulation and Accounting Standards (blue), the second with work related to the issues of Accounting Education, Business History, Auditing, Legitimacy and Archival Research (red). In order to visualize the existing network of scientific collaboration between authors, most prominent topics, and journals where the outputs are published, a graph of three fields or Sankey's Diagram (Figure 11) was used, which allows the visualization of the prominent authors, topics (keywords) and international journals where the publications were made. The representation of the network in graphic format facilitates the visualization of the interactions between the three fields analyzed. In this graph, the larger the size of the colored rectangles, the greater the frequency/importance of a given magazine, keyword, or author in the collaboration network (Rodrigues et al., 2021). In this figure we can see collaborative network between authors (left), topics (center) and subsequent publication in a journal (right).

Figure 11 - Three-Fields Plot



Source(s): Source: Data collected from R Bibliometrix

6 Discussion and concluding remarks

In this study a bibliometric analysis was carried out on the papers specifically focused on accounting history in journals indexed on the WoS database by assessing the impact of authors, journals, countries/regions, organizations and topics as well as their temporal evolution in order to systematize the existing research and answer several research questions (RQ).

Regarding the RQ1, the results show that there are 269 articles on accounting history and the first publication in journals on the subject of accounting history was in 1975 by Tomas Jonson. Fourteen long years later, Gary John Previts, Lee David Parker and Edward Coffman published in 1990. After that break publications grew each year until the date of data collection. However, the year with more publications is 2017. As for RQ 2, we found that the journal with the most publications is Accounting History followed by De Computis revista Espanola de Historia de la Contabilidad and Accounting Historians. In the sample under study, 501 researchers

contributed to the literature in accounting history. The author with the most journal publications was Garry D. Carnegie with 14 articles. This was followed by Valerio J. Antonelli, Charles R. Baker and Christopher Napier with 8 articles each, Frances Miley and Andrew Read with 7 published articles, Jayne Bisman and Delfina Gomes with 6. The countries with the highest production of articles are Australia, England, America, Italy, Spain and Portugal. On the other hand, the organisations with the highest number of publications are Rmit University, the University of Minho and Cardiff University. In order to respond to RQ3, we verify that there are 6 research topics: the importance of accounting history, review of history, the past and the future; the historical perspective of accounting and religion; accounting and Society; accounting as a discipline and contributions from the history of accounting). Relatively to RQ 4, the most used words are accounting history, history, construction, historiography and capitalism. Regarding RQ5, the most cited publication is Carnegie in 1996 by Accounting, Auditing & Accountability Journal under the title " Critical and interpretive histories: insights into accounting's present and future through its past ", one of the first articles to be published in the field of accounting history. Finally, in response to RQ6, in this study we identified journal, author, organisation and country most influence in accounting history research. We concluded that it was the journal Accounting History, the author Garry Carnegie, the organisation Rmit university and Australia that obtained the most cited articles from the whole sample under study.

This research has contributed to illuminate the importance of accounting and highlight its timelessness, since it exists from the root of the difficulties of our ancestors to the ease of our daily lives.

With these premises, this article provided an overview of the state of the art in the field of History of Accounting with the systematization of existing studies and identification of trends and gaps in academic research on this topic. In the literature under study, the lack of studies on the history of accounting and the need to motivate historians and accountants to contribute to the future of the history of accounting were always explicit. On the other hand, future research lines include the future of accounting and all its changes and adaptations for the benefit of society, the study of the relevance and analysis of the discipline of accounting history and the importance of accounting in management. There is still a need for further study and investigation into the history of accounting, because there is a universe full of stories that still haven't reached us. Over the years study trends in the area have tended to diverge and topics such as Early Accounting have become less focused, rather than computerized accounting have become more fashionable.

The limitation of this study is found in the few studies done on accounting history and reinforces its importance in understanding human evolution.

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1. Conception of the research subject and theme	√	√	√	√
2. Definition of the research problem	√	√		
3. Development of the theoretical platform	√	√		
4. Outline of methodological procedures	√	√	√	
5. Data collection process	√		√	
6. Analyzes and interpretations of collected data	√	√	√	
7. Final considerations or research conclusions	√	√	√	√
8. Critical review of the manuscript				√
9. Writing of the manuscript	√	√	√	

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