



THE ROLE OF INFORMATION TECHNOLOGY IN THE MODERNIZATION OF ACCOUNTING: A CASE STUDY IN THE COLOMBIAN BUSINESS CONTEXT

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Summary

Through this document, it was possible to analyze the main characteristics of the volume of scientific production related to the study of the variables Information Technology, Accounting and Business by Latin American institutions. A bibliometric analysis was proposed to analyze details such as Year of Publication, Country of Origin of the publication, Area of Knowledge in which the published research is carried out and the Type of Publication most frequently used by the authors of each document published in high-impact journals indexed in the Scopus database during the period between 2013 and 2023. Among the main findings, it was possible to determine that, for the execution of the different research methodologies, the report of 25 scientific documents related to the study of Information Technology, Accounting and Companies was achieved. The maximum number of publications made in a year was 6 papers submitted in 2016. The country of origin of the institutions that reported the highest number of records in Scopus was Colombia with 8 documents. The area of knowledge with the greatest influence at the time of executing the research projects that resulted in scientific publications was Social Sciences and Computer Science with 10 documents. Finally, the type of publication most frequently used to publicize findings from the analysis of the aforementioned variables was Conference Papers, which represented 48% of the total scientific production.

Keywords: Information Technology, Accounting, Business

1. INTRODUCTION

The development of new technologies worldwide has brought with it the implementation of strategies in different countries, in the case of Colombia, through the Ministry of Information and Communication Technologies, it has been possible to control and develop strategies for the proper use of these technological resources. According to him, technological advances have facilitated the handling of large amounts of data and the proper use of the accounting information of the entities, achieving that the recipients have greater clarity of the data that is provided for decision-making in administrative and financial areas. This fact has allowed a process of technology transition to achieve the reduction of manual processes. (Olmedo, 2017)

In the accounting environment within organizations in Colombia, accounting has had significant advances throughout history, this due to the implementation of information technologies, these advances have undoubtedly allowed accounting processes to be carried out in a more efficient and lighter way. According to him, there is a significant impact of ICT on accounting systems and performance within organizations. Two of these advancements are accounting software programs and electronic money. (Taiwo, 2016)



According to , the integration of ICT in Colombia has been transformed and evolved in such a way that the need has been seen from the accounting profession to be at the forefront and to mix with each other, to update itself in terms of accounting software in which it is intended to have a completely systematized and real-time accounting, therefore, it is necessary for professionals in this area to be related to topics such as Big Data, Cloud Computing, Electronic Invoicing, On-line Accounting.(Jaramillo, 2020)

Loss of information may occur

ADVANTAGES OF ACCOUNTING SOFTWARE	DISADVANTAGES OF ACCOUNTING SOFTWARE
Reduce reporting time	Requires some implementation time
Reduces information errors	All users must be trained in the proper management of the accounting program.
Links between different areas	Generates an additional cost
Real-time and updated reports	Loss of information may occur

Board 1: Advantages-Disadvantages of Accounting Software

Source: Authors' own creation

The impact that accounting software has had throughout history has been of great relevance in Colombian accounting. This type of scheme has been favored by technological advances, which makes it possible to monitor the current status of data, operations and information presentations in a timely manner, for the financial decision-making of entities.

Based on this premise, Colombia is in a process of convergence of international standards where a large number of small and medium-sized companies are adapting to the new legal framework, since this would not only imply improving current accounting systems, but also the way of collecting accounting information, complying with the provisions of legal standards. This convergence has allowed accountants to be in constant change in order to provide an efficient service to entities that acquire accounting software. However, this update has implied greater investment to be more competitive in the labor field. For this reason, this article seeks to describe the main characteristics of the compendium of publications indexed in the Scopus database related to the variables Information Technology, Accounting and Business by Latin American institutions. Such as the description of the position of certain authors affiliated with institutions, during the period between 2013 and 2023.

2. GENERAL OBJECTIVE

To analyze, from a bibliometric approach, the characteristics in the volume of scientific production related to the study of Information Technology, Accounting and Business, registered in Scopus during the period 2013-2023 by Latin American institutions.

3. METHODOLOGY

This article is carried out through a research with a mixed orientation that combines the quantitative and qualitative method.

On the one hand, a quantitative analysis of the information selected in Scopus is carried out under a bibliometric approach of the scientific production corresponding to the study of Information Technology, Accounting and Business. On the other hand, examples of some research works published in the area of study indicated above are analyzed from a qualitative perspective. based on a bibliographic approach that allows us to describe the position of different authors on the proposed topic.

It is important to note that the entire search was carried out through Scopus, managing to establish the parameters referenced in Figure 1.



3.1 Methodological design

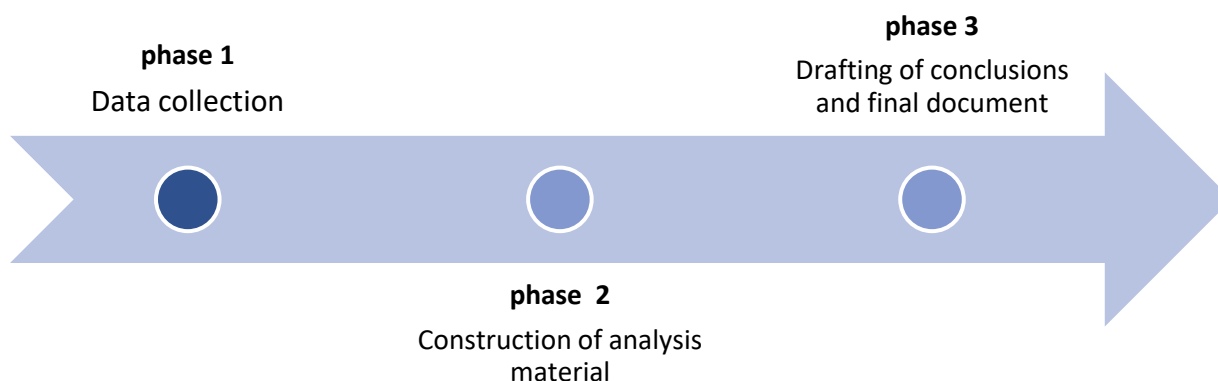


Figure 1. Methodological design

Source: Authors' own creation

Data collection was carried out from the Search tool on the Scopus website, where 25 publications were obtained from the following filters:

TITLE-ABS-KEY (information AND technology, AND accounting, AND business) AND PUBYEAR > 2012 AND PUBYEAR < 2024 AND (LIMIT-TO (AFFILCOUNTRY , "Colombia") OR LIMIT-TO (AFFILCOUNTRY , "Brazil") OR LIMIT-TO (AFFILCOUNTRY , "Peru") OR LIMIT-TO (AFFILCOUNTRY , "Mexico") OR LIMIT-TO (AFFILCOUNTRY , "Ecuador") OR LIMIT-TO (AFFILCOUNTRY , "Chile"))

- Published documents whose study variables are related to the study of Information Technology, Accounting and Business
- Works published in journals indexed in Scopus during the period 2013-2023.
- Limited to Latin American countries.
- No distinction in areas of knowledge.
- No distinction of type of publication.

3.1.2 Phase 2: Construction of analytical material

The information collected in Scopus during the previous phase is organized and then classified by graphs, figures and tables as follows:

- Co-occurrence of Words.
- Year of publication.
- Country of origin of the publication.
- Area of knowledge.
- Type of Publication.

3.1.3 Phase 3: Drafting of conclusions and outcome document

In this phase, the results of the previous results are analysed, resulting in the determination of conclusions and, consequently, the obtaining of the final document.

4. RESULTS

4.1 Co-occurrence of words

Figure 2 shows the co-occurrence of keywords found in the publications identified in the Scopus database.

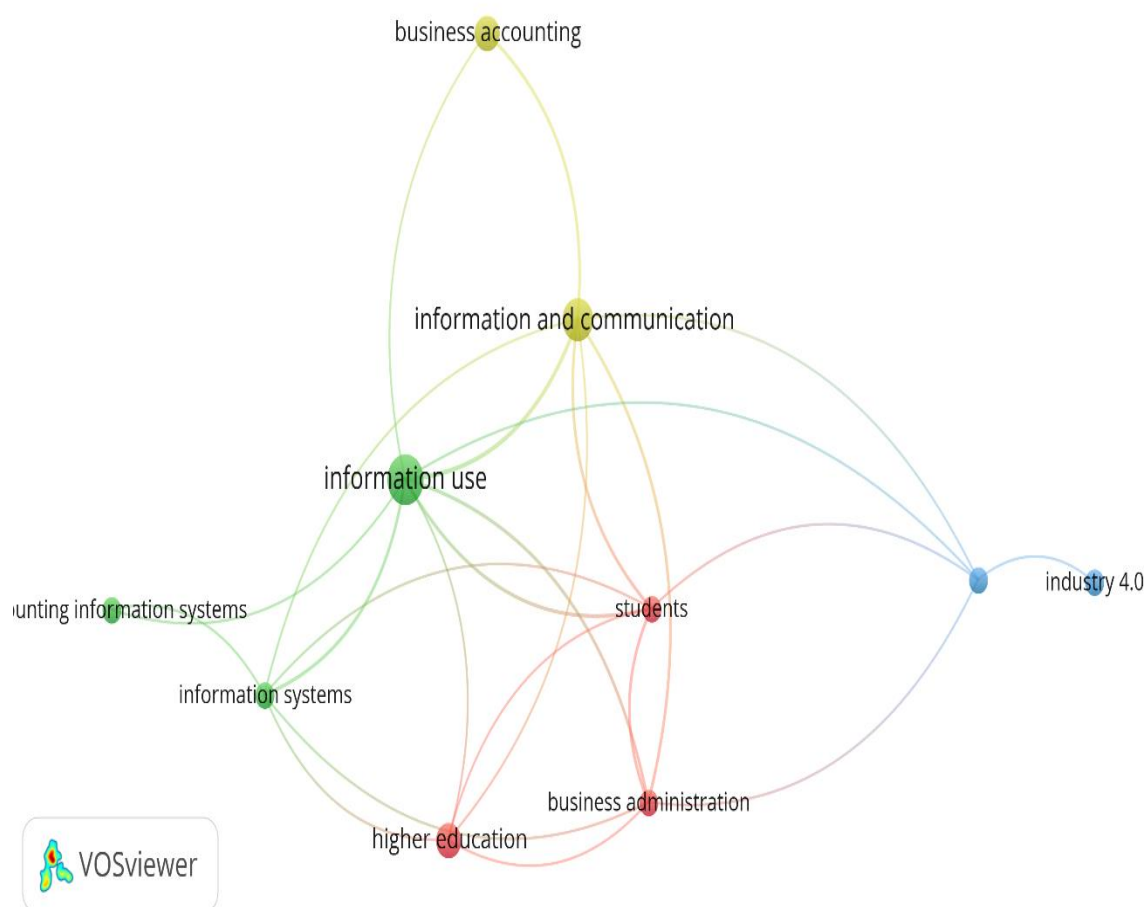


Figure 2. Co-Occurrence Of Words

Source: Authors' own elaboration (2024); based on data exported from Scopus.

Information and Communication was the most frequently used keyword within the studies identified through the execution of Phase 1 of the Methodological Design proposed for the development of this article. Information Systems is among the most frequently used variables, associated with variables such as Business Administration, Business Accounting, Accounting Information System, Big Data. From the above, it is undeniable to witness the advances in accounting systems, these advances have significantly favored the professionals in charge of this area, currently thanks to ICT accounting processes can be carried out in an efficient and effective way. As we well know, accounting professionals are a fundamental piece for companies, because it depends on them that the reports are delivered in a clear and detailed way, so the decision-making that is made in a pertinent way depends on this. That is why nowadays accounting software helps accounting processes a lot, as this improves accounting practices, faster process and can be obtained instantly.

4.2 Distribution of scientific production by year of publication

Figure 3 shows how scientific production is distributed according to the year of publication.

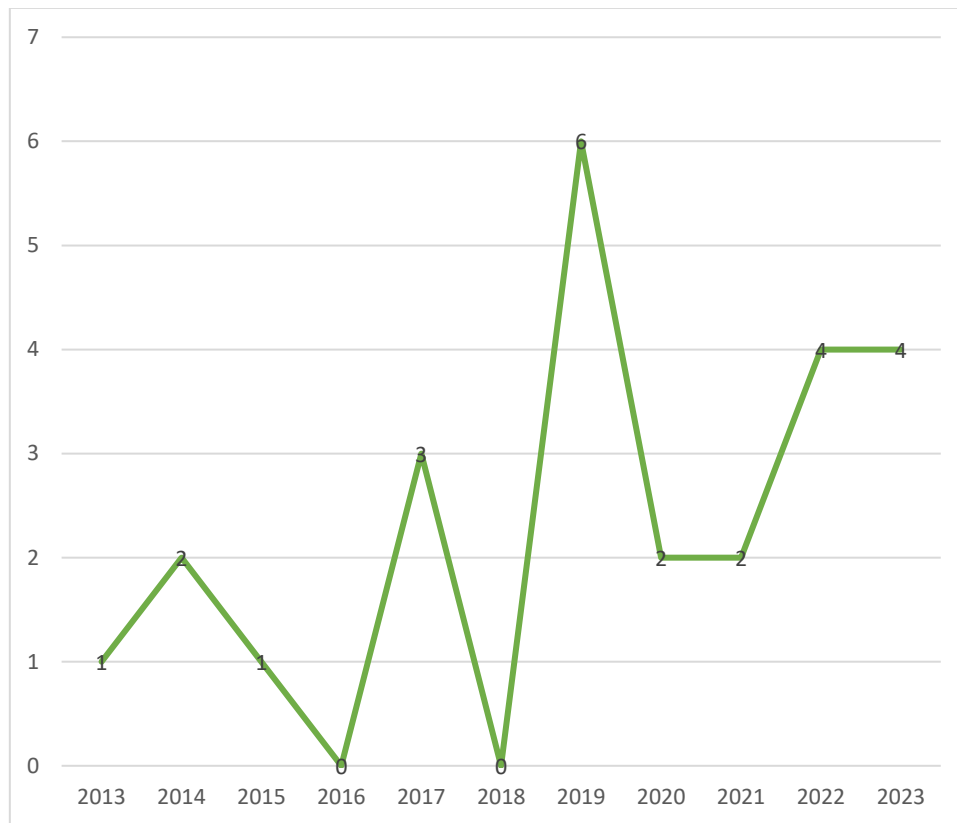


Figure 3. Distribution Of Scientific Production By Year Of Publication.

Source: Authors' own elaboration (2024); based on data exported from Scopus

Among the main characteristics evidenced by the distribution of scientific production by year of publication, there was an increase in the number of publications registered in Scopus during the years 2013-2023, reaching a total of 6 documents published in journals indexed on this platform. This can be explained thanks to articles such as the one entitled "Thinking Public Accounting in Practice: Contexts and Premises" The institutionalization of public accounting as a liberal profession in Colombia has been permeated by an instrumentalized environment typical of the ideas of globalization. In this context, it is important to reflect on the accounting profession and its educational models, recognising the importance of accounting education and research and its response to stakeholders. The challenge here is to train professionals with theoretical and instrumental tools to address the dynamics of a changing and turbulent business environment. Thus, the accounting profession is defined as a technology capable of presenting a certain type of rational information based on the analysis of the transactions of an economic organism operating in a globalized world. Based on this, it is necessary to inquire about the contextual and subjective assumptions (of accounting students and professionals) with which the evaluation of this profession is thought and projected. Is it important to rethink the organizational climate currently framed by the principles of efficiency and productivity? How does consumption affect professional practice? This paper aims to explore how organizational and social reality affects the formation and development of accounting practice. The text is oriented from the critical perspective of accounting, considering that professional practice involves the construction of social reality, the management of life, the control and organization of activities. (Rojas Rojas, 2021)

4.3 Distribution of scientific output by country of origin

Figure 4 shows how the scientific production is distributed according to the nationality of the authors.

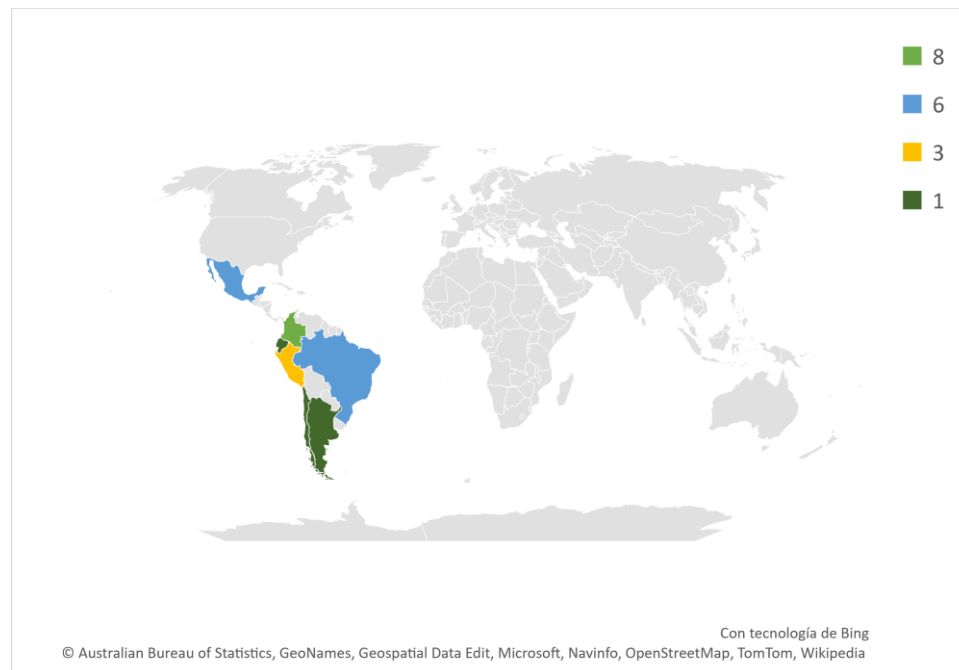


Figure 4. Distribution of scientific production by country of origin.

Source: Authors' own elaboration (2024); based on data provided by Scopus.

Within the distribution of scientific production by country of origin, the records from institutions were taken into account, establishing Colombia as the country of that community, with the highest number of publications indexed in Scopus during the period 2013-2023, with a total of 8 publications in total. In second place, Brazil and Mexico with 6 scientific papers, and Peru occupying the third place presenting to the scientific community, with a total of 3 documents among which is the article entitled "Cost Accounting in Rural Enterprises: Analysis of the Grain Producer's Vision" With increasing technology, agribusiness faces a new era, in which the importance of professional management is very important in the increasingly competitive scenario of commodities. In this sense, the role of cost accounting comes in, to guide management in decision-making and financial control, encompassing accurate accounting administration. In this context, the development of this work aims to evaluate, together with a group of grain producers, what level of use and what degree of importance these producers attribute to cost accounting. As for the research method, it is characterized by being exploratory, applied and qualitative. A field research was carried out with twenty-one rural grain-producing enterprises, as well as a bibliographic research in books and articles. The data were separated into ten variables and analysed into graphs. It was observed that cost accounting provides rural property with better management of external and internal information, achieving profit maximization and that, despite this, there are still many rural companies that do not use this tool as an aid in decision-making. (Rothemann, 2022)

4.4 Distribution of scientific production by area of knowledge

Figure 5 shows the distribution of the elaboration of scientific publications based on the area of knowledge through which the different research methodologies are implemented.

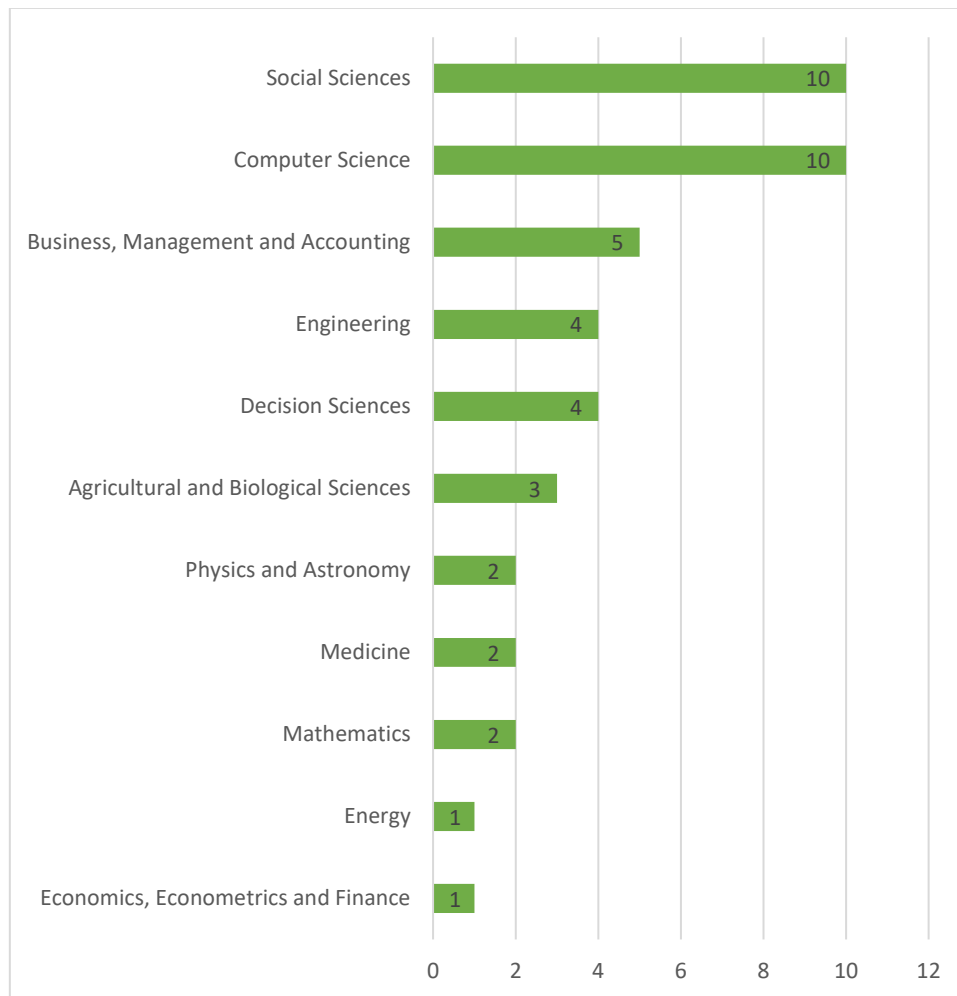


Figure 5. Distribution of scientific production by area of knowledge.

Source: Authors' own elaboration (2024); based on data provided by Scopus.

Social Sciences was the area of knowledge with the highest number of publications registered in Scopus with a total of 10 documents that have based their methodologies Information Technology, Accounting and Business by Latin American Institutions. In second place, Computer Science with 10 articles and Business, Accounting and Commerce in third place with 5. The above can be explained thanks to the contribution and study of different branches, the article with the greatest impact was registered by Social Sciences entitled "Role of emerging technologies in accounting information systems to achieve strategic flexibility through performance in decision-making: an exploratory study based on North and South American companies" The objective of the study is to identify the role of infrastructure integration Information Systems Practices (ISII) in Strategic Flexibility and Innovation (SFI) through the mediated role of Strategic Business Management Practices and Decisions (IS-SEM) enabled by Information Systems (IS). Manufacturing Performance (DMP). The study draws on contemporary literature in the field of emerging technologies in accounting information systems, particularly business intelligence and analytics (BI&A). A resource-based view was applied to create novel constructs to test the research framework and hypotheses. The research framework and hypotheses are tested based on 388 organizations in Brazil and the United States. The results show that the integration of information systems infrastructure impacts strategic flexibility and innovations in organizations. In addition, there is no difference between North American and South American organizations. (Yoshikuni, 2023)

4.5 Type of publication

In the following graph, you will see the distribution of the bibliographic finding according to the type of publication made by each of the authors found in Scopus.

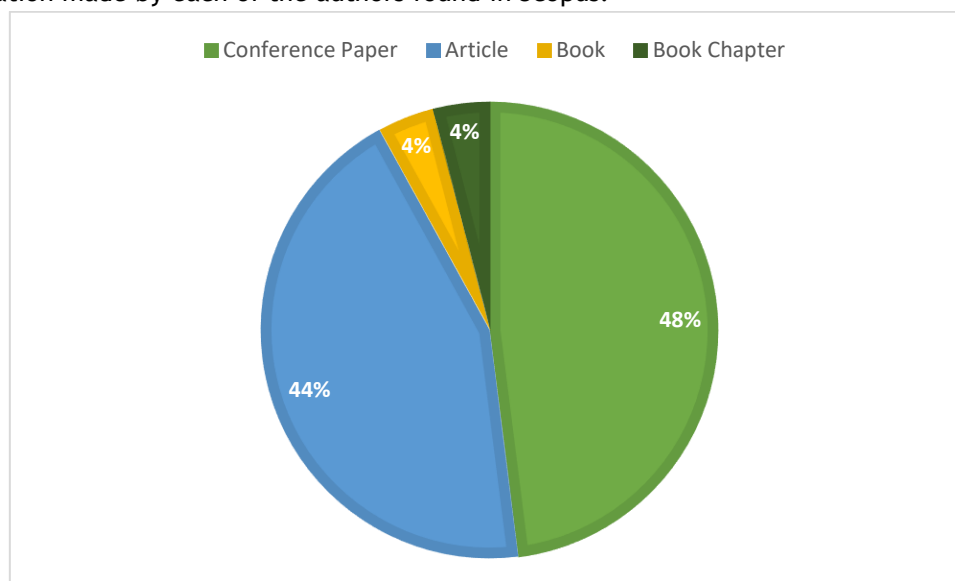


Figure 6. Type of publication.

Source: Authors' own elaboration (2024); based on data provided by Scopus.

The type of publication most frequently used by the researchers referenced in the body of this document was Session Papers with 48% of the total production identified for analysis, followed by Article with 44%. Books are part of this classification, representing 4% of the research papers published during the period 2013-2023, in journals indexed in Scopus. In this last category, the one entitled "Journal Titles and Mission Statements: Lexical Structure, Diversity and Readability in Business, Management and Accounting Research" stands out. This study aims to make a comprehensive view of the titles and lexical structure of JMS and to identify significant differences between the prestige and type of access of journals and their JMS content in the field of business. management and accounting (BMA), considering the field's experience in developing and applying mission statements. The titles and structural analysis of the JMS reflected the current and critical discussion at BMA: a predilection for counterintuitive findings and information and communication technology (ICT) tools. JMS are mainly expressed in customers and target markets. JMS from authoritative journals showed greater intermediation for key terms related to rigorous characteristics. Conversely, JMS from less reputable journals highlighted indexing attributes. The Wilcoxon and Kruskal-Wallis rank summation tests showed significant differences in the diversity of JMS medians with respect to the type of journal access and the best quartiles. (Cortés, 2023)

5. CONCLUSIONS

Through the bibliometric analysis carried out in this research work, it was possible to establish that Colombia was the country with the highest number of records published in the Information Technology, Accounting and Business variables by Latin American institutions. With a total of 8 publications in the Scopus database. In the same way, it was possible to establish that the application of theories framed in the area of Social Sciences, As previously stated in the bibliometric analysis, it can be concluded that accounting software has marked in a significant way the accounting processes, therefore it is possible to evidence the changes that companies have presented since they in particular benefit by obtaining in a clear and exact way; This allows to minimize errors and possible frauds within companies since the information reflected in this technological tool allows verifying,



with a comparison of the system and the accounting books of a mandatory nature, which will allow to know if the information is true.

In addition, the transition processes have not been an easy process to manage since the people in charge of the accounting processes, whether professionals or empirical people, due to the change that the software has generated in the work environment, this makes organizations that do not have this resource to be able to acquire such a system, allowing these entities to continue managing their accounting processes in a traditional way based on the regulations regulated in Colombia.

We can also analyze that although it is true that innovation in accounting software significantly benefits the processes of companies and helps public accounting professionals, this technological advance is not exempt from presenting disadvantages and challenges, since there is a risk that the information of entities is exposed to cyber theft. loss of data and loss of information if they are not carried out by keeping the accounting software on time, therefore, it is important that companies when updating their servers try to have security in the same programs, and that they are trained personnel to handle this information.

When analyzing the importance of Information and Communication Technologies in the accounting field, it can be determined that those in charge of the accounting area of companies must offer services in an automated way and with characteristics that allow them to be competent in the market where they must be able to demonstrate their capabilities in the management of information and accounting and decision-making.

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