

Research article

Positioning of accounting research: Evidence from the Colombian universities

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Abstract

Research has become one of the key indicators for positioning universities in rankings, it is also a determining aspect to increase accountability, transparency, and legitimacy at universities. In this context, this study aims to analyze accounting research in Colombian universities. Based on the 116 Public Accounting programs registered in the National System of Higher Education Information (SNIES by its Spanish acronym), the number of published documents and the positioning of the accounting research groups belonging to 59 Colombian universities are analyzed and evaluated through a cluster. The results present three groups of universities that promote accounting research in Colombia, i.e., pioneer, follower, and basic.

Keywords: accounting; research; university; ranking; public accounting.

Posicionamiento de la investigación contable: Evidencia basada en las universidades colombianas

Resumen

La investigación se ha convertido en uno de los indicadores clave para posicionar a las universidades en los rankings y a su vez está sirviendo como aspecto determinante para establecer una mayor responsabilidad, transparencia y legitimidad de las universidades. En este contexto, este estudio tiene como objetivo analizar la investigación contable en el ámbito de las universidades colombianas. Con base en los 116 programas académicos de Contaduría Pública registrados en el Sistema Nacional de Información de la Educación Superior -SNIES-, se analizan y evalúan a través de un clúster, el volumen de documentos publicados y el posicionamiento de los grupos de investigación contable pertenecientes a las 59 universidades colombianas. Los resultados muestran que existen tres grupos de universidades que promueven la investigación contable en Colombia -pioneras, seguidoras y básicas-.

Palabras clave: contabilidad; investigación; universidad; ranking; Contaduría Pública.

Posicionamento da pesquisa contábil: evidência baseada em universidades colombianas

Resumo

A pesquisa tornou-se um dos principais indicadores para posicionar as universidades nos rankings e, por sua vez, está servindo como um aspecto determinante para estabelecer maior responsabilidade, transparência e legitimidade das universidades. Neste contexto, este estudo tem como objetivo analisar a pesquisa contábil no campo das universidades colombianas. Com base nos 116 programas acadêmicos de Contabilidade Pública registrados no Sistema Nacional de Informação de la Educación Superior-SNIES (em português: Sistema Nacional de Avaliação da Educação Superior), analisam-se e avaliam-se por meio de um cluster, o volume de documentos publicados e o posicionamento dos grupos de pesquisa contábil pertencentes às 59 universidades colombianas. Os resultados mostram que existem três grupos de universidades que promovem a pesquisa contábil na Colômbia: pioneira, seguidora e básica.

Palavras-chave: contabilidade; pesquisa; faculdade; ranking; Contabilidade pública.

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1. Introduction

In a global scenario, higher education has developed into an export item, thus becoming a major source of financial resources for some countries (Li et al., 2011). Depending on the source of funding, universities can be public or private (Marginson, 2011), and both compete for financial resources from private and public bodies (Carnoy et al., 2014). Universities, mainly big ones, devote a large amount of their funding to research, which yield some kind of result — publications and/or patents — (Marginson, 2007). In some universities, the appointment or continuation of a vice-chancellor and/or research director may depend largely on the results obtained from academic publications indexed in the most prestigious international journals in the Journal Citation Report (JCR) or Scopus (SJR) databases (Tayyab and Boyce, 2013). The way to account for transferable products — articles and/or patents — is by means of "quality indicators" which are monitored by audits that ensure "objectivity". Quality and objectivity are two pillars that are closely linked to the language of excellence (Carpintero and Ramos, 2018); therefore, research and its results have had an effect on both researchers and universities, thus generating competition circuits.

The search for quality is not new, and the need to legitimize actions has led universities to generate evaluation, accreditation, and recognition mechanisms at both national and international levels (Bendermacher et al., 2016; Villanueva, 2011). Legitimacy is understood as a social contract (Uphoff, 1989); it favors the survival of organizations (Suchman, 1995), and plays a role of success (Dowling and Pfeffer, 1975). Therefore, the evaluation systems, among which the international rankings are found, legitimize the quality of the universities. Academic rankings are considered an indicator of quality and excellence that helps position universities; the best known in the international arena are Shanghai (Flórez-Parra et al., 2014; Garde et al., 2020), the Times Higher Education (THE) (Ordorika and Rodríguez, 2010), and these are closely followed by the Quacquarelli Symonds world ranking of universities, known as QS (Dobrota et al., 2016). Rankings have a methodology to define several selection criteria, there, aspects such as research on scientific publications are usually homogeneous (Gomez-Morales, 2018; Buela-Casal et al., 2007). They establish reputations because positioning can be a determining factor to attract a greater number of students (Taylor and Braddock, 2007). The United States — Anglo-Saxon culture — is the country with the highest volume of institutions in the rankings and many universities follow their guidelines (Flórez-Parra et al., 2014). However, the rankings are also viewed critically and are noted for having a governance model aligned with the neo-liberal performance-based model (Lynch, 2015). They are identified as a new form of social exclusion (Amsler and Bolsmann, 2012) and are seen

as a consumer product and not as quality indicators of universities (Saunders and Blanco, 2017). They promote mercantilism and individualism (Gonzales and Núñez, 2014). In general, the countries that obtain satisfactory results in the rankings are those with the best economic capacity (Marginson, 2007). Each year, the academic rankings usually publish the lists and position of universities.

The Latin American context has been resistant to rankings, as shown by the massive student protests (Ordorika and Lloyd, 2015). There is a proliferation and elaboration of national rankings, some with a higher prestige than others, which indicates there is a comparison between universities and research centers (Escobar-Córdoba, 2009). The rankings established by countries like Colombia are a mechanism that focuses on analyzing the productivity of each university (Albornoz and Osorio, 2017). Therefore, their main function is to enhance the commoditization of higher education following a technical and operational pattern (Lynch, 2006). To do so, they take into account aspects such as training, research, level of influence in the community, and ability to strengthen ties with the productive sector through knowledge transfer (Tomàs-Folch et al., 2015).

In Colombia, there is a uniform model to verify and evaluate the quality of universities managed by the Ministry of National Education (MEN by its Spanish acronym). The academic programs offered by each university are subject to obtaining, renewing, or modifying the qualified registration, which is a mandatory and enabling requirement, and it is valid for periods of 7 years (MEN, 2019). However, universities have a greater interest to increase quality and, as a result, they certify their academic programs and the institution through prestigious organizations such as academic rankings internationally, and at a national level through the high-quality accreditation granted by the MEN (Flórez-Parra et al., 2017).

In Latin America and the Caribbean at the end of the 1990s, research was equivalent to 2.3% of the world total. Although the research lines in the accounting field are broad and diverse (Peru, Ecuador, Mexico, Colombia, Argentina, Brazil, among others), the journals positioned in the Journal Citation Reports (JCR) do not amount to more than 20 (Saavedra and Saavedra, 2015). It would be useful to analyze the research groups from the academic programs of public accounting recognized by Colciencias, and to identify the publications in this field that universities subscribe to that are in the QS ranking. This could serve as a reference point to analyze the productivity of the different universities and compare the degree of influence of both public and private institutions in the national and international context.

Therefore, the objective of this study is twofold. On the one hand, based on the elements used by Colciencias, to analyze the positioning of accounting research groups in Colombian universities, and, on the other hand, to identify

the volume of academic production of higher education institutions in the QS academic ranking. This analysis is relevant because research is considered a determining element to position universities both nationally and internationally.

Our study is structured as follows: the next section describes the advances and evolution of accounting research in Colombian universities; the third section explains the used methodology; the fourth section presents the results obtained, finally, the main conclusions are addressed.

2. Background of the accounting research in Colombia

The high quality of universities in Colombia is due to Law 30 of 1992 and the strong influence of the Anglo-Saxon universities led by the United States, which have adopted a more entrepreneurial and research-based management model (Flórez-Parra et al., 2019). Research in Colombian universities is established as a quality indicator since it is one of the 15 requirements for academic programs to obtain the qualified register (Higher Education Quality Assurance System, 2019; MEN, 2015), and is an essential part of the processes that guarantee the high quality accreditation of Colombian universities (MEN, 2008).

In Colombia, research is structured in two large blocks. The first one, called formative research, consists of a methodological process known as problem-based learning where students have the possibility of showing their results in congresses or scientific events. The second one, which deals with research in the strict sense, is characterized by generating knowledge that is universally recognized by the scientific community (Castaño, 2019; Gómez, 2003). Colciencias was created at the end of the 1960s as the official body to promote public policies to foster science, technology, and innovation in Colombia (MEN, 1968). One of the objectives of their national calls is to evaluate and recognize the research groups of diverse institutions such as universities. Research groups are classified into five categories (A1, A, B, C, and recognized) being A1 the most prestigious category; whereas researchers are classified into four levels: emeritus, senior, associate, and junior (Macias, 2016). The first call made by Colciencias took place at the beginning of the 1990s and identified 100 research groups (Villaveces, 2001). Currently, call 781 of 2017 recognizes 5,207 groups categorized as follows: A1, 523; A, 762; B, 1,168; C, 2,113; and recognized, 641. It also recognizes 13,001 researchers endorsed by universities and classified as: emeritus, 124; senior researchers, 1,707; associated researchers, 3,595; and junior researchers, 7,575 (Colciencias, 2018; 2019a). If we compare the results of call 781 in 2017 with the preliminary results published on September 6, 2019 — 833 in 2018 —, there is a slight increase in the research groups from 5,207 in 2017 to 5,727 groups in 2018. Regarding the classification

of the groups endorsed by universities, a substantial improvement is observed in groups A1, A, and B (744, 977, and 1,527, respectively), and a slight decrease in the category C and recognized groups, going from 2,113 to 2,073 and from 641 to 406, respectively (Colciencias, 2019b). Therefore, the change of the university model in Colombia towards a neoliberal model of corporate and/or business and research governance is consolidating to the extent that the classification and improvement in the positioning of research groups and their researchers by both public and private universities is a reality.

The first research group recognized by Colciencias in the accounting area belonged to Universidad del Valle and achieved its category in 2004 (Patiño et al., 2021; Macias-Cardona and Cortés-Cueto, 2009). Research groups in the accounting field are concentrated in the large cities of Colombia i.e., Bogotá, Cali, and Medellín, where a greater volume of academic programs in public accounting are taught (Valero-Zapata and Patiño-Jacinto, 2012). These accounting research groups are grouped into economics and business area according to the OECD, and 457 of them are registered and recognized by Colciencias — call 781 of 2017 (Colciencias, 2019a). In 2015, 33 groups were recognized in the accounting field, they come from 242 public accounting programs authorized by the MEN (Patiño et al., 2016). Similar studies carried out by Patiño-Jacinto et al., (2010) identified 62 groups in 2008, Valero-Zapata and Patiño-Jacinto (2012) found 61 in the 2010 call for applications, and Macias (2016) established 62 groups recognized by Colciencias in 2016. Although there is a slight increase in the number of research groups in the public accounting academic programs, it is still incipient if we compare it with the volume of programs that operate with qualified registration, perhaps the lack of financing in research dedicated to the accounting field is one of the causes of having a smaller number of groups recognized by Colciencias.

Accounting research topics are being developed in accordance with the region's potential and the progress made by groups with research lines related to environmental accounting, social surplus accounting, government accounting, financial accounting, international financial accounting, management performance measurements, and social responsibility reporting, among others (Gómez, 2003a). The academic curricula of public accounting programs with research subjects range from 5% to 12% of the overall weight of the curricula (Patiño and Santos, 2009). The number of teachers who are part of research groups assigned to public accounting programs is 209, being 36.80% of the sample; 84 have a Ph.D., out of which only 43 have a Ph.D. relevant to the economic, administrative, and accounting sciences (Patiño-Jacinto et al., 2010).

Accounting specialized journals are scarce in Colombia and their indexation in databases such as Scopus and/or JCR are limited (Saavedra and Saavedra,

2015). The oldest journal in the accounting field in Colombia — *Contaduría Universidad de Antioquia* — dates to the 1980s and was published by the Universidad de Antioquia, followed by the Pontificia Universidad Javeriana — *Revista de Contabilidad* —, finally, *Revista Lúmina* of the Universidad de Manizales [Saavedra and Saavedra, 2015; Macías and Patiño, 2014]. Other journals in Colombia collect academic articles on accounting such as *LEGIS: Revista Colombiana de Contabilidad*, *Visión Contable*, *Apuntes Contables*, *Facultad de Ciencias Económicas: Investigación y Reflexión*, *Libre Empresa*, *Cuadernos de Administración*, *Innovar*, and *Activos* [Rodríguez and Valdés, 2018; Mendez, 2013]. Publindex is the entity in charge of assigning a positioning and classify scientific journals in Colombia. Four of them are classified as A1, A2, B and C, being A1 the most relevant quartile, and category C the least relevant [Colciencias, 2002]. The two journals positioned in the accounting field — Call 830 of 2018 — are the journal of accounting university of Antioquia classified as C and notebooks of the Pontifical Javeriana University, which obtained the category B [Colciencias, 2019b]. Although the journals indexed in the national databases are scarce, there were 126 accounting journals positioned in Scopus in 2015, out of which 63 are in the Q1 and Q2 quartiles, and the rest in the Q3 and Q4 quartiles. In JCR, 25 journals are identified [Macías, 2016].

3. Methodology

3.1 Sample selection

Our research focuses on Colombian institutions that operate public accounting programs on a face-to-face manner and have the character and/or denomination of university. The sample comprises 59 universities that offer 116 public accounting curricula, 21 are public and 38 are private. The universities were selected according to the National Education Information System (SNIES) data of 2019 (Figure 1).

3.2 Research methodology

3.2.1 Analysis of the information

To analyze the research groups of each university in public accounting, the first step was to identify the research groups classified by Colciencias according to call 781 of 2017 and the results published at the beginning of December 2017. To establish the research groups related to the field of study, a search was conducted using key words such as accounting, finance, tax, audit, control, and/or public management. Then, the web pages of each of the selected universities were analyzed to obtain more information about the research groups in the accounting area.

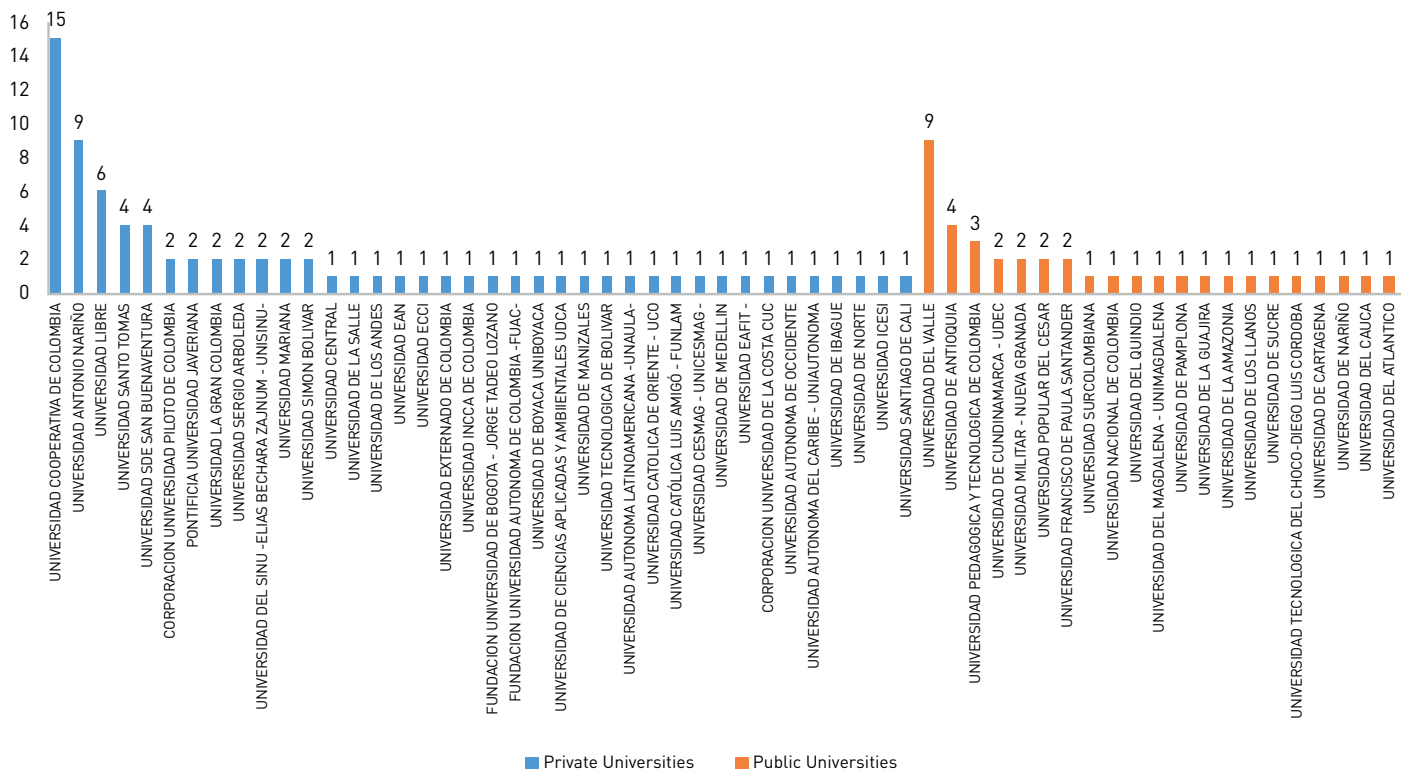


Figure 1. Colombian Universities and number of public accounting programs. Source: own elaboration.

Once the groups recognized by Colciencias were determined, we proceeded to analyze the universities and the volume of academic publications registered in Scopus. This database was selected because it is one of the indicators considered by the QS ranking to classify the universities. This ranking was preferred because it is the most appropriate to analyze Latin America, and a greater number of Latin American universities are positioned in it (King et al., 2018). To identify the academic production of the universities in the Scopus database, the field of business, management, and accounting knowledge was chosen, where the greatest number of contributions from the accounting area are registered. The data from both the research groups — Sciences — and the publications made by the educational institutions — Scopus — between July and December 2019 have been consulted.

Once the data was obtained, a classification was made according to the relation of the academic public accounting programs attached to the universities (public-private) with the results obtained in the call for applications 781 carried out by Colciencias and the documents they published in Scopus. Subsequently, a cluster analysis was made, which groups the elements showing similarities to identify the public accounting research programs and groups linked to the universities, and to make a distinction and identify potential leaders in accounting research.

Hierarchical analysis was used to do the clustering, specifically the Ward method, and to obtain the number of groups that presented homogeneous characteristics (Ketchen and Shook, 1996). This technique was applied as seen in the dendrogram (Figure 2), three groups were formed with a distance of 5.0 points.

After carrying out the hierarchical analysis and identifying the clusters, we proceeded to compare the means obtained by the different groups. Therefore, the first group was composed of 49 universities, cluster two

by 8, and cluster three by 2 (Figure 3). The statistical package used was SPSS version 21.0.

The first conglomerate is made up of 49 universities, where private institutions predominate (65.31%) compared to public ones (34.29%); in the second cluster, only 8 universities were grouped (3 public and 5 private); finally, the third cluster grouped 2 universities, 50% private and 50% public (Figure 3). In summary, we could say that there are three types of institutions: one that we could call pioneers, i.e., cluster 3; followers, cluster 2; and basic, cluster 1. Using the data taken from Colciencias, Scopus, and the clustering, we will try to analyze and identify the universities with the greatest influence in accounting research in Colombia.

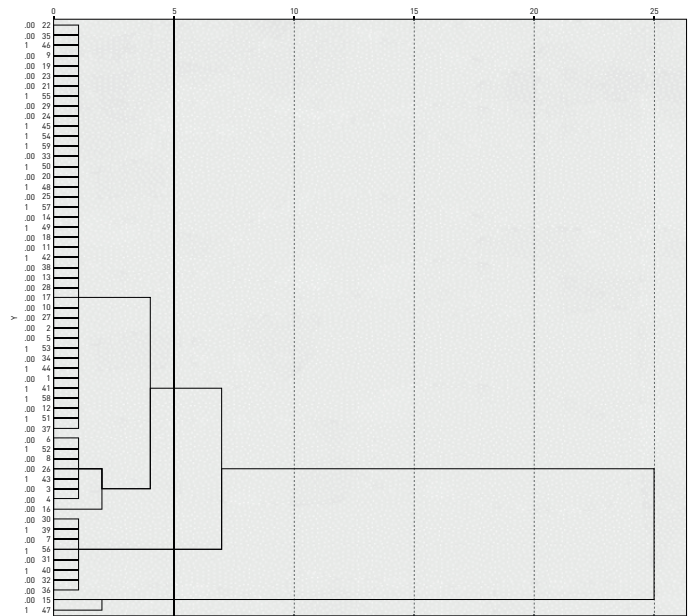


Figure 2. Dendrogram obtained with the Ward method. Source: own elaboration.

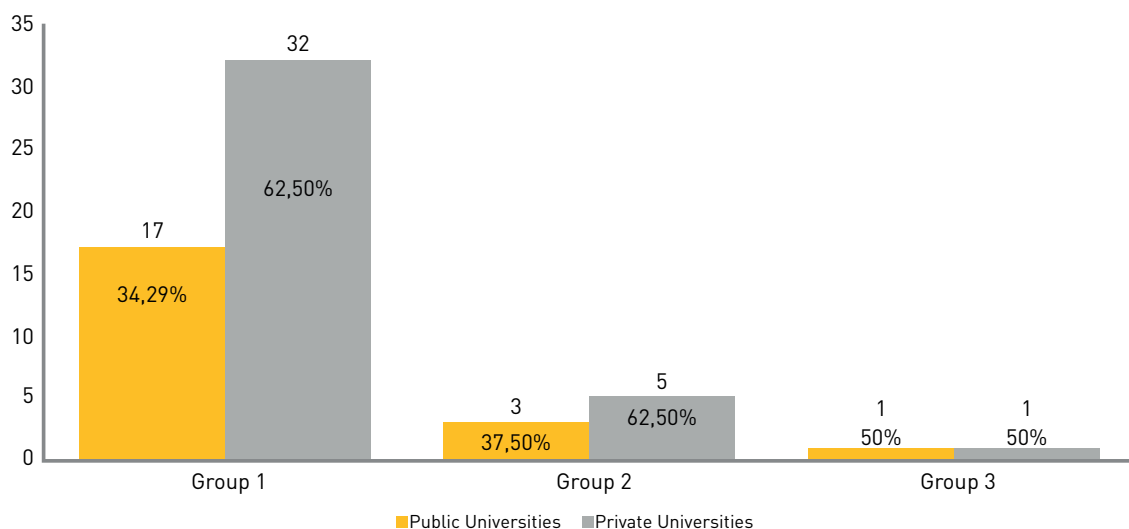


Figure 3. Universities included in each Cluster. Source: own elaboration.

Table 1. Descriptive cluster.

N	Variables	Cluster 1		Cluster 2		Cluster 3	
		N	Mean	N	Mean	N	Mean
1.	Documents on accounting published in Scopus by university (Table 3, business, management, and accounting)	49	24.88	8	172.63	2	593.00
2.	Number of recognized groups in the accounting field by university (Colciencias) (tables 1 and 2).	49	1.14	8	1.00	2	2.00
3.	Total number of researchers in the accounting field by university according to creation date (Colciencias) (tables 1 and 2).	49	41.63	8	36.00	2	55.50
4.	Number of researchers currently active in accounting research groups by university (Colciencias) (Web Minciencias)	49	14.08	8	15.88	2	40.00
5.	Number of women researchers in accounting research groups by university (Colciencias) (Web Minciencias)	49	16.14	8	12.8	2	20.09
6.	Number of men researchers in accounting research groups by university (Colciencias) (Web Minciencias)	49	4.79	8	4.2	2	4.18
7.	Number of researchers recognized in call 781 of 2017 in the accounting field by university (Colciencias) (tables 1 and 2).	49	3.14	8	3.75	2	9.00

Source: own elaboration. Based on Colciencias website (Minciencias) and tables 2, 3, and 4.

4. Discussion and analysis of results

4.1 Analysis of the results of call 781 of 2017

Before characterizing the clusters, we will analyze the results of the Colciencias call 781 of 2017 and the volume of publications in Scopus. First, most of the research groups belong to private universities (46), compared to public ones (28) (see tables 2 and 3). The presence of a greater number of research groups in private universities may be due to a massive privatization of the education in Colombia, since 38 out of the 59 universities that offer the public accounting program are private.

Regarding the analysis results, it is evident that the classification with the greatest presence is category C with 32 groups; followed by category B with 15 groups; recognized, 9 groups; category A1, 6 groups; finally, category A, 5 groups (see Figure 4). The measurement carried out by Colciencias highlights that most of the research groups meet around category C, which may indicate that research in the accounting field is in an embryonic stage, and that the economic resources allocated to this area of knowledge are scarce. Although in Colombia there is a will to set a minimum percentage of university budgets for research, many universities may not allocate the economic resources set for this purpose. Additionally, if we consider what Ariza and Soler (2004) have proposed regarding a series of factors such as economic recessions and salary policies implemented by companies, it is possible to state that there is a crisis in Colombian universities, which would directly affect the economic resources allocated to research.

On the other hand, Figure 4 shows that the number of groups categorized in A1 come mainly from private universities. It may seem coherent because private institutions get more resources for research than public entities, although most of the first ones have low tuition fees and few universities in Colombia offer doctorates. In the accounting field, specifically, there are no programs

of this type yet. It may also be one of the causes of the doctoral professors' shortage (Macias, 2019), who are fundamental for the advancement of accounting research (Brink et al., 2012).

Regarding category A and category B groups, there is a small difference between public and private universities. The first ones depend on the state budget and have a greater bureaucracy than the second ones. These aspects could be a determining factor for the presence of private university's research groups being greater in those categories (see Figure 4).

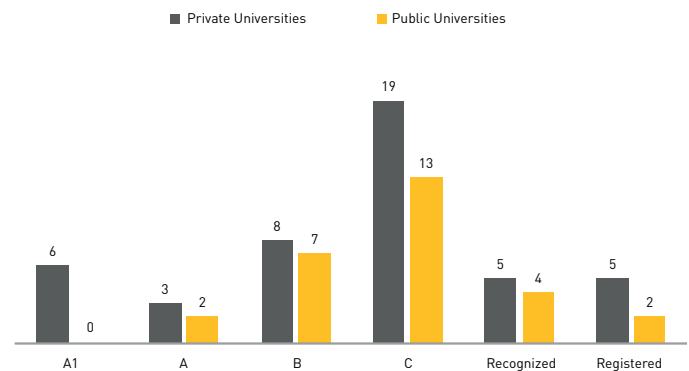


Figure 4. Research groups classified by categories.

Source: Own elaboration. Based on Colciencias.

About the recognized groups, we can say, in the first place, that some of the public universities' research groups barely manage to obtain the minimum category in the Colciencias classification. It also happens in the private sphere (see Figure 4). Moreover, there are some universities that enjoy a reputation perhaps forged by their trajectory at an institutional level or because some of their members have occupied some relevant positions in institutions such as the Central Board of Public Accountants, the General Accounting Office, the General Attorney's Office, and the General Comptroller's Office. At present, some of these institutions are not promoting the accounting research, the approaches of

the profession are more prone to the market and to be the guardians of capital. Therefore, accounting is based exclusively on the values of change protected with a series of practices and procedural norms that guarantee objectivity and legitimize activities and/or processes (Gómez, 2003b; 2006).

The results in Figure 4 also show that some research groups in public and private universities are registered but were not evaluated in call 781 of 2017. Thus, research is conducted in the institutions, which is logical because it is one of the criteria to obtain the qualified register or accreditation, the latter is of a voluntary nature. Universities must validate some minimum parameters focused on research to become endorsed institutions and to be able to compete in the educational market. Ironically, there may be universities with a qualified register or accredited institutions without research groups endorsed by Colciencias. The basic criteria requested by the Colombian Ministry of National Education may be too flexible facing the new role and approach of universities based on the paradigm of excellence and/or quality.

Tables 2 and 3 also allow us to analyze the number of researchers per university and the category assigned to them, i.e., emeritus, senior, associate, and junior. It is evident that private universities have a greater number of researchers, which guarantees better results in the Colciencias ranking. One of the ways in which universities, especially private ones, attract or recruit researchers is through economic remuneration — salaries. Stability is not a factor being considered, since in most cases the contract term in private universities is less than 12 months. In public universities, researchers are recruited through public calls; the criteria are exclusive and only the merits of the applicants are taken into account or valued. Colombian public universities should assume complementary and non-exclusive objective criteria, which could attract and/or guarantee a greater number of researchers.

4.2. Analysis of positioning in the QS ranking

The results obtained by universities in terms of the volume of documents published in the QS academic ranking in the business, management, and accounting field up to 2019 are 1,749 publications in the public sector and 2,037 in the private sector (see tables 4). Although the predominance of private universities seems evident, public universities are not immune to the change that is gradually taking place in positioning and competitiveness. The resistance of Colombian universities to a management model based on short-term results — rankings — is due to public institutions and the heterogeneity of university management models — collegial, managerial, and mixed — (Flórez-Parra et al., 2019).

The first publications registered in the Scopus database in the Business, Management and Accounting area come from the Universidad de los Andes and date back to the 1970s with approaches to accounting from 1997.

In the public sector, Universidad Nacional de Colombia published its first document in 1995. In the same way, the private universities that contribute the greatest volume of publications are, first, the Universidad de los Andes with 452 publications; followed by Universidad EAFIT with 221; Universidad de la Costa (CUC), 188; Universidad de Medellín, 165; Universidad del Norte, 164; and Pontificia Universidad Javeriana, 140. Other institutions with less than 100 publications are the Universidad ICESI, Simón Bolívar, Libre, and even the Universidad Externado de Colombia (89, 72, 62 and 55 documents, respectively). With less than 50 published documents there are Universidad of Manizales with 46 publications, both the Universidad of La Salle and the Universidad EAN with 41 documents, the Universidad Santo Tomas with 34 publications, and the Universidad Cooperativa de Colombia as well as the Universidad Jorge Tadeo Lozano with 29 contributions each (see Table 4).

The universities in the public sector that are positioned in the first places in the QS ranking are 1) Universidad Nacional de Colombia with 734 publications; 2) Universidad de Antioquia, 214 documents; 3) Universidad del Valle, 157 contributions; and 4) Universidad de Cartagena, 134 published documents. With less than 100 publications, universities are ranked as follows: Universidad de la Guajira, Universidad del Cauca, Universidad Pedagógica y Tecnológica de Colombia, and Universidad del Atlántico (67, 64, 63, and 54 contributions, respectively). Other universities such as the Universidad Francisco de Paula Santander and Universidad del Magdalena reach 39 publications in the Scopus database (see Table 4).

However, the increase of publications in recent years in the university context in Colombia is largely due to the economic bonuses established in each university — public and private — and subject to the renewal of contracts, mainly in private universities, along with impact product publications — articles, books, or book chapters — by various types of research, which indicates that the rankings are distancing themselves from the faculty and becoming a product with exchange value (Gonzales and Nunez, 2014). In fact, the positioning of universities in academic rankings currently attracts a greater volume of students, which puts more pressure on universities to obtain better results in a short time and it can prevent intellectual creativity (Marginson, 2013).

Scopus databases are used by the QS ranking to position universities. One of the objective indicators is the number of citations of the published documents, which has a weight of (20%) of the index. However, the most influential academic journals are not produced by academics but by multinational corporations (Rowlinson et al., 2015). In Latin America, only 93 universities are classified in the QS ranking: Brazil is in the first position with 22 universities; Argentina, 12 institutions; Mexico, 14 institutions; Chile and Colombia, 11 universities each; Venezuela, 5 institutions; Costa Rica, 4 entities; Peru and Ecuador, 3 universities each; Uruguay, 2 universities; finally, Puerto Rico, Cuba, and Panama with 1 university each (see Figure 5).

Table 2. Colciencias Classification of Private Universities.

PRIVATE UNIVERSITIES	Number of Groups per University	Knowledge Area Social Sciences (Economy and Business)	Name of the Groups	Category in Call 781 of 2017	Researchers			
					Emeritus	Senior	Associated	Junior
1. UNIVERSIDAD COOPERATIVA DE COLOMBIA	63	12	Accounting and Social Environment	B	-	-	1	
			SINERGIA-UCC	C	1	-	2	
			Administrative, Accounting and Economic Sciences Research Group (CACE)	B	-	1	-	
2. UNIVERSIDAD ANTONIO NARINO	37	4	Accounting Office	Recognized	-	-	-	
3. UNIVERSIDAD LIBRE	95	15	Harmonization and Accounting Valuation	B	-	-	3	
			Accounting Management and Productivity	C	-	-	2	
			Accounting, Economic and Administrative Trends	B	-	1	3	
			Accounting Builders	A1	-	-	-	
			Accounting Alternatives	C	-	-	-	
4. UNIVERSIDAD SANTO TOMAS	75	11	Research group in Administrative and Accounting sciences	B	-	-	1	
			Research for Accounting Development INDERCON	Recognized	-	-	-	
			Accounting: Information, control, and social impact	C	-	-	1	
5. UNIVERSIDAD DE SAN BUENAVENTURA	71	5	Organizational Management and Human Development	B	-	-	2	
6. UNIVERSIDAD PILOTO DE COLOMBIA	9	3	Innovation and Competitiveness in Organizations (ICO)	C	-	-	3	
7. PONTIFICIA UNIVERSIDAD JAVERIANA	123	8	Accounting Integration and Context	C	-	-	2	
8. UNIVERSIDAD LA GRAN COLOMBIA	27	8	Accounting, Financial and Tax Management.	C	-	-	1	
			Contemporary Accounting Trends: Control, Management and Governance	C	-	-	1	
			Interdisciplinary Studies in Accounting	C	-	-	-	
9. UNIVERSIDAD SERGIO ARBOLEDA	22	3	-	-	-	-	-	
10. UNIVERSIDAD DE SINU ELIAS BECHARA ZAINUM - UNISINU -	19	2	FACEAC Accounting and Administration	C	-	-	1	
11. UNIVERSIDAD MARIANA	18	3	Accounting Identity	B	-	-	3	
12. UNIVERSIDAD SIMON BOLIVAR	31	2	Accounting Thought and International Management	A	-	-	4	
13. UNIVERSIDAD CENTRAL	17	3	ATARALAWAA AMAA	Recognized	-	-	-	
14. UNIVERSIDAD DE LA SALLE	41	7	Responsibility, Accountability and Transparency	Recognized	-	-	1	
15. UNIVERSIDAD DE LOS ANDES	155	10	Studies in finance and financial economics	A1	-	2	1	
16. UNIVERSIDAD EAN	13	5	G3PyMES: Management group in large, small, and medium-sized companies	A1	-	1	4	
17. UNIVERSIDAD ECCI	11	1	Research Group in Economic and Administrative Sciences -GICEA-	B	-	-	-	

Table 2. Colciencias Classification of Private Universities (Continuación).

18. UNIVERSIDAD EXTERNADO DE COLOMBIA	35	4	Information Systems and Organizational Control - SICO.	Registered			
19. UNIVERSIDAD INCCA DE COLOMBIA	10	-		-			
20. FUNDACIÓN UNIVERSIDAD DE BOGOTÁ - JORGE TADEO LOZANO	29	7	Study Group on Accounting Information and Control.	C	-	-	-
21. UNIVERSIDAD AUTÓNOMA DE COLOMBIA -FUAC-	23	3	Accounting Universe	C	-	-	-
22. UNIVERSIDAD DE BOYACA UNIBOYACA	16	-	GISEDE Business Sector Research and Economic Development Research Group	Registered			
23. UNIVERSIDAD DE CIENCIAS APLICADAS Y AMBIENTALES -UDCA-	12	-	Compensation With Social Justice	Registered			
24. UNIVERSIDAD DE MANIZALES	16	4	Accounting Theory	Recognized	-	-	1
25. UNIVERSIDAD TECNOLÓGICA DE BOLIVAR	18	1		-			
26. UNIVERSIDAD AUTÓNOMA LATINOAMERICANA -UNAUULA-	10	1	GICOR Accounting and Organizations Research Group	C	-	-	1
27. UNIVERSIDAD CATÓLICA DE ORIENTE -UCO-	17	1	FACEA	C	-	-	1
28. UNIVERSIDAD CATÓLICA LUIS AMIGÓ -FUNLAM-	13	3	CONTAS - Environment and Society Accounting	C	-	-	2
29. UNIVERSIDAD CESMAG - UNICESMAG-	14	2	LUCA PACCIOLI SYNERGY	C Registered	-	-	-
30. UNIVERSIDAD DE MEDELLIN	31	9	Accounting Research and Public Management Group	C	-	-	-
31. UNIVERSIDAD EAFIT	43	7	Information and Management	A	-	-	2
32. CORPORACIÓN UNIVERSITARIA DE LA COSTA -CUC-	22	3	Research Group in Accounting, Administration and Economics - GICADE	A	-	2	3
33. UNIVERSIDAD AUTÓNOMA DEL OCCIDENTE	24	4	Grupo de Investigación en Contabilidad y Finanzas-GICOF	C	-	-	-
34. UNIVERSIDAD AUTÓNOMA DEL CARIBE UNIAUTONOMA	27	3	ERCONFI: Education and Technology, Economy and Region, Public Accounting, Business, Finance, and related.	A1	-	1	2
35. UNIVERSIDAD DE IBAGUE	9	-	UNIDERE Research Group	Registered			
36. UNIVERSIDAD DEL NORTE	18	3	Innovate in the Caribbean	A1	-	2	3
37. UNIVERSIDAD ICESI	14	4	Investment, financing, and control	A1	-	1	1
38. UNIVERSIDAD SANTIAGO DE CALI	21	-	GICONFEC Accounting, Financial and Economic Research Group	C	-	-	1
Total				46	1	12	55

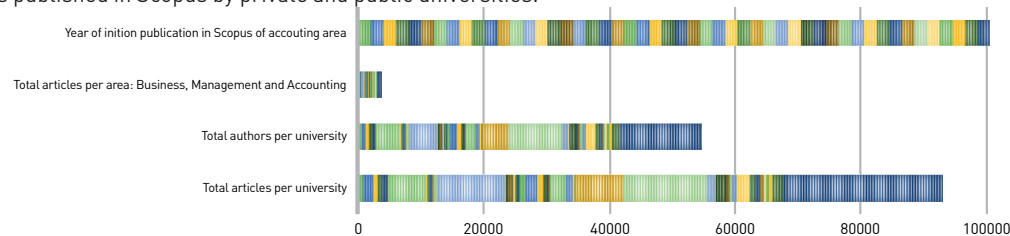
Source: Own elaboration. Based on Colciencias data (781-2017).

Table 3. Colciencias classification of Public universities.

PUBLIC UNIVERSITIES	Number of Groups per University	Knowledge Area Social Sciences (Economy and Business)	Name of the groups	Category in Call 781 of 2017	Researchers			
					Emeritus	Senior	Associated	Junior
39. UNIVERSIDAD DEL VALLE	173	12	Contemporary Topics in Accounting, Control, Management and Finance	C	-	-	-	-
40. UNIVERSIDAD DE ANTIOQUIA	272	10	Accounting Research and Consulting Group - GICCO - UDEA-	C	-	-	1	1
41. UNIVERSIDAD PEDAGÓGICA Y TECNOLÓGICA DE COLOMBIA	135	14	Accounting Dynamics Group -GIDICON-	C	-	-	-	1
42. UNIVERSIDAD DE CUNDINAMARCA –UDEC-	24	3	History, Education, Economy, Accounting and Society: HECOS DOPYS, Organizational, prospective, and sustainable development	C	-	-	1	2
43. UNIVERSIDAD MILITAR NUEVA GRANADA	64	4	Group of Contemporary Studies in Accounting, Management and Organizations - GECCGO	B	-	-	2	2
			GECS (Group of Studies in Education, Accounting and Society)	Recognized	-	-	-	1
44. UNIVERSIDAD POPULAR CESAR	39	3	Infinite apollo	B	-	-	-	5
45. UNIVERSIDAD FRANCISCO DE PAULA SANTANDER	50	10	CINERA Accounting Research Group	C	-	-	-	1
46. UNIVERSIDAD SURCOLOMBIANA	42	3	-	-	-	-	-	-
47. UNIVERSIDAD NACIONAL DE COLOMBIA	585	25	Accounting, Organizations and Environment	B	-	1	1	-
			Accounting Observatory	C	-	-	-	1
			Interdisciplinary studies on management and accounting (INTERGES)	A	-	1	4	4
48. UNIVERSIDAD DEL QUINDIO	53	4	Research Group in International Comparative Accounting	Recognized	-	-	-	1
49. UNIVERSIDAD DE MAGDALENA - UNIMAGDALENA	49	4	Research group in Accounting, Finance and Auditing: CONFIA	Registered	-	-	-	-
50. UNIVERSIDAD DE PAMPLONA	51	3	CE and CON Business and Accounting Sciences Research Group	C	-	-	1	1
51. UNIVERSIDAD DE LA GUAJIRA	53	12	GECAES. Accounting, Administrative, Economic and Social Management. Interdisciplinary group of Socio-Economic, Accounting, Administrative, Technological, Innovation, ICTs, and Public Policies management.	A	-	1	1	1
			Research in Budget Accounting and Finance – ICOPREFI-	C	-	-	-	-
52. UNIVERSIDAD DE LA AMAZONIA	29	3	CIFRA - UMBER - Collective of Financial Research in the Amazon Region-	C	-	-	-	1
			Amazon footprint	C	-	-	-	3
			SINAPSIS	B	-	-	1	3
53. UNIVERSIDAD DE LOS LLANOS	32	6	GYDO Organizational Management and Development	C	-	-	-	-
54. UNIVERSIDAD DE SUCRE	26	3	Research Group on Production Management and Organizational Quality	C	-	1	-	1
55. UNIVERSIDAD TÉCNICA DE CHOCO -DIEGO LUIS CORDOBA-	16	-	Accounting Innovation	Recognized	-	-	-	-
56. UNIVERSIDAD DE CARTAGENA	94	7	GIDEA Environmental Studies Research Group	Recognized	-	-	-	-
57. UNIVERSIDAD DE NARIÑO	55	3	REPCONTA	Registered	-	-	-	-
58. UNIVERSIDAD DEL CAUCA	65	7	Accounting, Economic and Administrative Research -GICEA-	B	-	-	-	-
			Accounting, Society and Development	B	-	-	1	-
59. UNIVERSIDAD DEL ATLÁNTICO	82	3	Sustainable Organizations	B	-	1	1	5
Total				28	0	5	14	36

Source: Own elaboration. Based on Colciencias data (781-2017).

Table 4. Documents published in Scopus by private and public universities.



	Total articles per university	Total authors per university	Total articles per area: Business, Management and Accounting	Year of initiation publication in Scopus of accounting area
1. UNIVERSIDAD COOPERATIVA DE COLOMBIA	675	614	29	2016
2. UNIVERSIDAD ANTONIO NARINO	1.745	512	16	2008
3. UNIVERSIDAD LIBRE	580	528	62	2014
4. UNIVERSIDAD SANTO TOMAS	808	633	34	2009
5. UNIVERSIDAD DE SAN BUENAVENTURA	764	385	18	2008
6. UNIVERSIDAD PILOTO DE COLOMBIA	129	116	8	2015
7. PONTIFICIA UNIVERSIDAD JAVERIANA	5.962	3.866	140	2000
8. UNIVERSIDAD LA GRAN COLOMBIA	57	57	9	2010
9. UNIVERSIDAD SERGIO ARBOLEDA	285	151	15	2013
10. UNIVERSIDAD DE SINU ELIAS BECHARA ZAINUM - UNISINU -	216	156	1	2018
11. UNIVERSIDAD SIMON BOLIVAR	562	440	72	2013
12. UNIVERSIDAD CENTRAL	225	146	7	2009
13. UNIVERSIDAD DE LA SALLE	592	486	41	2010
14. UNIVERSIDAD DE LOS ANDES	10.660	4.427	452	1997
15. UNIVERSIDAD EAN	182	134	41	2009
16. UNIVERSIDAD EXTERNADO DE COLOMBIA	416	251	55	2009
17. UNIVERSIDAD INCCA DE COLOMBIA	0	0	0	0
18. FUNDACIÓN UNIVERSIDAD DE BOGOTÁ - JORGE TADEO LOZANO	668	384	29	2012
19. UNIVERSIDAD AUTÓNOMA DE COLOMBIA -FUAC-	0	0	0	0
20. UNIVERSIDAD DE BOYACA UNIBOYACA	143	183	9	2018
21. UNIVERSIDAD DE CIENCIAS APLICADAS Y AMBIENTALES--UDCA-	273	183	0	0
22. UNIVERSIDAD DE MANIZALES	290	295	46	2008
23. UNIVERSIDAD TECNOLÓGICA DE BOLIVAR	418	211	32	2007
24. UNIVERSIDAD AUTÓNOMA LATINOAMERICANA -JNAULA-	56	45	15	2017
25. UNIVERSIDAD CATOLICA DE LA ORIENTE--UCO-	0	0	0	0
26. UNIVERSIDAD CATÓLICA LUIS AMIGÓ--FUNLAM-	0	0	0	0
27. UNIVERSIDAD CESMAG - UNICESMAG-	0	0	0	0
28. UNIVERSIDAD DE MEDELLIN	851	404	165	2005
29. UNIVERSIDAD EAFIT	1.842	1.129	221	2005
30. CORPORACIÓN UNIVERSITARIA DE LA COSTA--CUC-	999	596	188	2013
31. UNIVERSIDAD AUTÓNOMA DEL OCCIDENTE	524	366	19	2013
32. UNIVERSIDAD AUTÓNOMA DEL CARIBE UNIAUTONOMA	360	156	32	2009
33. UNIVERSIDAD DE IBAGUE	274	178	9	2010
34. UNIVERSIDAD DEL NORTE	2.421	1.593	164	2009
35. UNIVERSIDAD ICESI	1.128	711	89	2007
36. UNIVERSIDAD SANTIAGO DE CALI	324	280	9	2014
37. UNIVERSIDAD ECCI	144	106	10	2013
38. UNIVERSIDAD MARIANA	0	0	0	0
39. UNIVERSIDAD DEL VALLE	7.606	4.190	157	1997
40. UNIVERSIDAD DE ANTIOQUIA	13.292	8.490	214	2003
41. UNIVERSIDAD PEDAGÓGICA Y TECNOLÓGICA DE COLOMBIA	1.232	999	63	2009
42. UNIVERSIDAD DE CUNDINAMARCA--UDEC-	156	88	3	2014
43. UNIVERSIDAD MILITAR NUEVA GRANADA	1.427	1.088	37	2009
44. UNIVERSIDAD POPULAR CESAR	247	206	30	2008
45. UNIVERSIDAD FRANCISCO DE PAULA SANTANDER	450	393	39	2006
46. UNIVERSIDAD SURCOLOMBIANA	418	392	10	2015
47. UNIVERSIDAD DEL ATLÁNTICO	808	617	54	2013
48. UNIVERSIDAD DE NARIÑO	596	477	26	2002
49. UNIVERSIDAD DEL QUINDIO	856	655	25	2010
50. UNIVERSIDAD DE MAGDALENA - UNIMAGDALENA	820	479	39	2006
51. UNIVERSIDAD DE PAMPLONA	530	332	20	2014
52. UNIVERSIDAD LA GUAJIRA	206	167	67	2013
53. UNIVERSIDAD DE LA AMAZONIA	0	0	0	0
54. UNIVERSIDAD DE LOS LLANOS	298	287	8	2015
55. UNIVERSIDAD DE SUCRE	395	360	27	2007
56. UNIVERSIDAD TÉCNICA DE CHOCO -DIEGO LUIS CORDOBA-	0	0	0	0
57. UNIVERSIDAD DE CARTAGENA	1.966	1.456	132	2007
58. UNIVERSIDAD DEL CAUCA	1.674	1.186	64	2006
59. UNIVERSIDAD NACIONAL DE COLOMBIA	25.431	13.179	734	1995
Total Public Sector			1749	
Total Private Sector			2037	

Source: Own elaboration. Based on Scopus 2019.

In Colombia, only 11 universities are positioned in the QS ranking, 4 public sector and 7 private. The best universities, at the top of the QS ranking are Universidad de los Andes, ranked 272; Universidad Nacional de Colombia, ranked 275; and Universidad Externado de Colombia, ranked 407 (see Table 5). Since universities depend on a volume of citations in the databases — Scopus —, the low visibility of Colombian universities may be partly due to what Marginson (2007) states: documents published in languages other than English are less published and less cited.

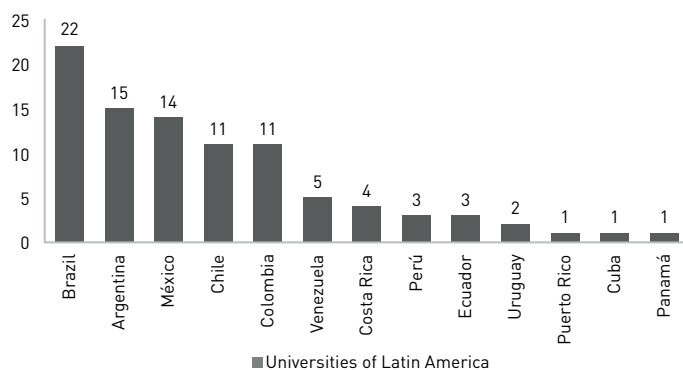


Figure 5. Universities positioned in the QS ranking 2019. Source: Own elaboration. Based on the QS ranking.

Table 5. Colombian Universities the QS ranking 2019.

Colombian Universities	Position	Character
Universidad de los Andes	272	Private
Universidad Nacional de Colombia	275	Public
Universidad Externado de Colombia	407	Private
Pontificia Universidad Javeriana	521-530	Private
Universidad de Antioquia	701-750	Public
Universidad de la Sabana	801-1000	Private
Universidad del Norte	801-1000	Private
Universidad del Rosario	801-1000	Private
Universidad del Valle	801-1000	Public
EAFIT University	801-1000	Private
Universidad Industrial de Santander - UIS	801-1000	Public

Source: Own elaboration. Based on the QS ranking.

Although Table 5 shows that Colombian universities manage to obtain a representative number in the QS ranking, their influence in the region is scarce. This may indicate that the research in Colombian universities is not having a significant impact although there are some exceptions, e.g., Universidad de los Andes and Universidad Nacional de Colombia, which are positioned within the top 300 of the QS ranking. However, the results are framed by university and not by the contributions of the public accounting academic programs.

4.3. Cluster Analysis

Finally, we will perform the cluster analysis (Table 1). Cluster 3 is composed by two universities (public and private). The first one has a higher volume of

publications in the accounting field than the second one, these results coincide partially with the ones disclosed by the QS ranking. Furthermore, it is relevant that only two universities lead and concentrate a greater number of publications in the Scopus database than the other groups, which are integrated by a greater number of universities (see Figure 6)¹. Although there are still few universities positioned in the rankings, it is worrying that public institutions are joining the market-based university management model. This approach could be due to the regulatory frameworks established in Colombia.

Cluster 2 universities are mostly in the private sector. The cluster shows an interest in publications and is positioned in the second place if we compare it with cluster 3. In relation to the number of active researchers and the number of researchers recognized by Colciencias, its scores are higher than those obtained by Cluster 1. This is logical to the extent that private universities depend mainly on sources of funding, enrolment, and private capital investments, which generates more competitive institutions and yield short-term results. Therefore, they are directly related to the management model, as they seek indicators of quality and excellence to attract a greater number of students and researchers.

Likewise, Cluster 1 is characterized by the high number of universities (49) and by the predominance of private universities. This group presents some results that show the high rotation of researchers. On the one hand, the scores related to researchers that create the groups in Colciencias are high (41.63), contrary to the number of researchers that the universities currently have (14.08). This finding shows that some universities hire researchers for a specific period of time; those hiring times coincide with the renewal or application for accreditation and/or qualified register by the institutions. Therefore, they focus more on teaching than on research. On the other hand, this is the only cluster that obtains a higher value in attracting male researchers, although in the variable documents published in Scopus, it does not obtain the best results. This may be a result of a structural exclusion that makes the processes that are not captured by the measurement models invisible, which generates a passive and unconscious resistance towards the rankings.

5. Conclusions

The change in the management model at universities and the strong influence of the Anglo-Saxon sphere in Colombia is evident, and the public accounting programs have not been unaware of these changes, to the extent that universities are increasingly focused and positioned on the criteria to measure research and quality, i.e., rankings. Quality based on international rankings generates great inequalities and favors universities with large economic resources, thus generating new priorities that benefit universities that are geographically located in

¹ The numbers shown in graph no. 6 are linked to each of the universities listed in table 4.

developed countries. Therefore, Latin American universities, especially Colombian ones, must focus their efforts on building a university management model in accordance with the needs of the territory, considering aspects such as identity, administrative culture, or the ability to strengthen public sector universities with greater funding.

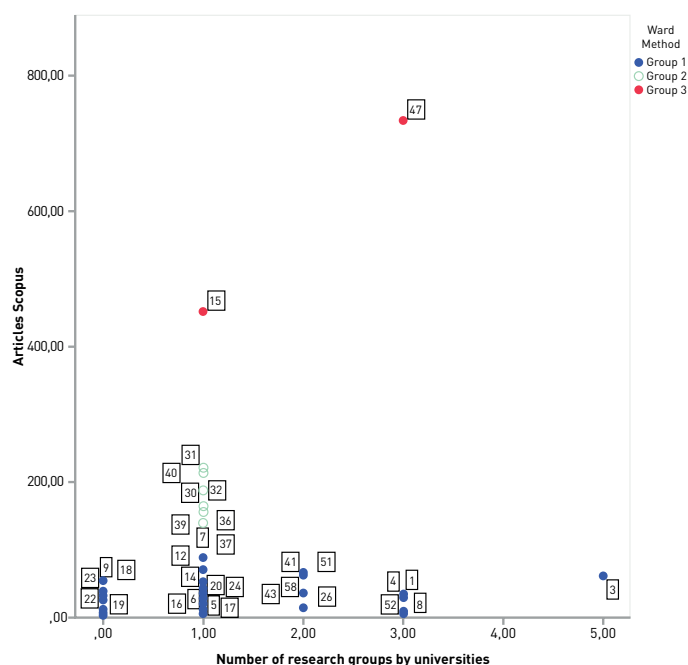


Figure 6. Clusters according to the documents published in Scopus. Source: Own elaboration.

Research in the accounting field in Colombia is supported by minimum parameters regulated by the Ministry of National Education, i.e., qualified register, high quality accreditation and/or Colciencias. The processes to classify research groups together with the paradigm of high quality universities guarantee a homogenization in the educational system. However, at the same time, they take away and anesthetize the universities' social mission by making them focus on the market. In addition, the measurement systems could be generating, in turn, a new type of researchers, some very oriented to write papers (articles), and others very interested in meeting the minimum criteria (emeritus, senior, associate, and junior) established by the entities that regulate the positioning of research in Colombia. In this way, if universities and researchers have been assuming this new market-oriented role, the universities may be losing the critical, reflective, and paused character that has characterized them.

It is evident that accounting research in Colombian universities is at an embryonic phase, maybe because it has not been given the relevance and/or support it requires by the different institutions. The lack of a complete diagnosis and greater traceability of the current state of research in Colombia poses significant questions about the system that regulates and establishes indicators and metrics such as Minciencias

[Gómez, 2022]. Although the results may have improved compared to the number of research groups recognized by Colciencias' previous calls, most of the research groups fall into a basic category (C), which is worrying for the progress of research in the accounting field. The question is whether the proliferation of academic programs with qualified records, together with the virtualization of the public accounting career in Colombia, may be generating, on the one hand, a greater commodification of the profession and this in turn be seen more as an accounting technique and not as a science that analyzes and studies the phenomena and social relations of production and distribution of its environment [Rojas-Rojas et al., 2021; Arévalo and Quinche, 2008]. Therefore, universities may be in a crisis linked to three characteristics currently accentuated in the university sphere: hegemony, legitimacy, and institutionality; the latter is very much associated with the financial crisis, which generates large cuts in the public sector [De Sousa, 2010].

Minciencias' metrics to classify groups and researchers through different calls with changing evaluation criteria generates, on the one hand, an unstable horizon for the projection of research programs in the accounting field. On the other hand, there is not a response time in accordance with the efforts made and demanded by the research processes. Furthermore, the lack of transparency and more efficient access to the information provided by the Higher Education System (SES by its Spanish acronym) and the Science and Technology System (SCYT by its Spanish acronym) makes it very difficult to compare, track, consolidate, and verify information.

One of the limitations of this document is that it is based on Minciencias measurement systems and on the 2017 call, prior to the last one. This would lead to differences in the analysis of the measurement model established by Minciencias.

This study can contribute to the literature, particularly to analyze the progress and/or state of research in the various academic programs and the impact and influence obtained in academic rankings. This could serve as a starting point to compare the environment at universities and countries, thus allowing a more in-depth study of the phenomenon and a comparison of results with other countries.

Conflict of interest

The authors declare no conflict of interest.

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