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Management of research and scientific production in private universities of metropolitan Lima

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Abstract

A documentary review was carried out on the production and publication of research papers referring to the study of the variable Scientific Production in Latin American universities, in order to compare research management with private universities in Lima, Peru. The purpose of the bibliometric analysis proposed in this document is to know the main characteristics of the volume of publications registered in Scopus database during the period between 2016 and 2021, achieving the identification of 546 publications. The information provided by said platform was organized by means of graphs and figures categorizing the information by Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics were described, the position of different authors regarding the proposed topic was referenced by means of a qualitative analysis. Among the main findings of this research, it is found that Brazil is the country with the highest production with 243 publications. The Area of Knowledge that made the greatest contribution to the construction of bibliographic material referring to the study of research management and Scientific Production in Latin American Universities was Social Sciences with 318 published documents, and the Type of Publication that was most used during the above-mentioned period was the Journal Article, which represents 77% of the total scientific production.

Keywords: Research Management, Scientific Production, Private Universities.

1. INTRODUCTION

Among the aspects that are taken into account by peer reviewers in quality management in private universities is the level of scientific production, its impact and scope. The above is motivated in both public and private institutions, by Knowledge Management, which arises in response to the need in organizations, to channel the knowledge related to innovation and advances in information and communication technologies (ICTs) which brings with it the automation of some processes carried out within the organization, likewise encourages the growth of information derived from scientific research seeking to meet the changing needs of globalization (Zeña & Arévalo, 2016).

In the educational field, advances in ICT represent an opportunity for growth in terms of scientific research, since academic training requires constant updating, in order to provide educational quality to students who must be

trained under cutting-edge theories aligned with the current context in different areas of knowledge, which represents for Knowledge Management, a challenge in terms of the production of research papers for subsequent publication (Rodriguez, Martinez, & Lozada, 2009). In the case of higher education institutions in Peru, the need has arisen to share experiences in the research field with the purpose of replicating research models in order to achieve a constant growth in the level of scientific production, since for the National Superintendence of Higher Education (SUNEDU) the migration processes in these models have been relatively slow in the universities of that country (Lozano, 2020).

Therefore, it is necessary to know the current situation of the strategies implemented in Knowledge Management in private universities in Lima, Peru for which this article has been raised in order to answer the question: How has been the production and publication of research papers concerning the study of Research Management and scientific production in private universities during the period 2016-2021?

2. General Objective

To analyze from a bibliometric and bibliographic perspective, the production of high impact research papers on the variable Management and Scientific Production in private universities in Latin America during the period 2016-2021.

3. Methodology

Quantitative analysis of the information provided by Scopus is performed under a bibliometric approach on the scientific production related to Management and Scientific Production in private universities in Latin America. Also, from a qualitative perspective, examples of some research papers published in the area of study mentioned above are analyzed from a bibliographic approach to describe the position of different authors on the proposed topic.

The search is performed through the tool provided by Scopus and the parameters referenced in Table 1 are established.

3.1 Methodological design

Table 1. *Methodological design*

	PHASE	DESCRIPTION	CLASSIFICATION
PHASE 1	DATA COLLECTION	Data was collected using the Search tool on the Scopus web page, through which a total of 20 publications were identified.	Published papers whose study variables are related to omnichannel in financial markets. Research papers published during the period 2018-2021. Limited to Latin American countries. Without distinction of area of knowledge. Without distinction of type of publication.
PHASE 2	CONSTRUCTION OF ANALYSIS MATERIAL	The information identified in the previous phase is organized. The classification will be made by means of graphs,	Word Co-occurrence. Year of publication Country of origin of the publication.

		figures and tables based on data provided by Scopus.	Area of knowledge. Type of publication
PHASE 3	DRAFTING OF CONCLUSIONS AND FINAL DOCUMENT	After the analysis carried out in the previous phase, the study proceeds to the drafting of the conclusions and the preparation of the final document.	

Source: Own elaboration (2022)

4. Results

4.1 Co-occurrence of words

Figure 1 shows the co-occurrence of keywords within the publications identified in the Scopus database.

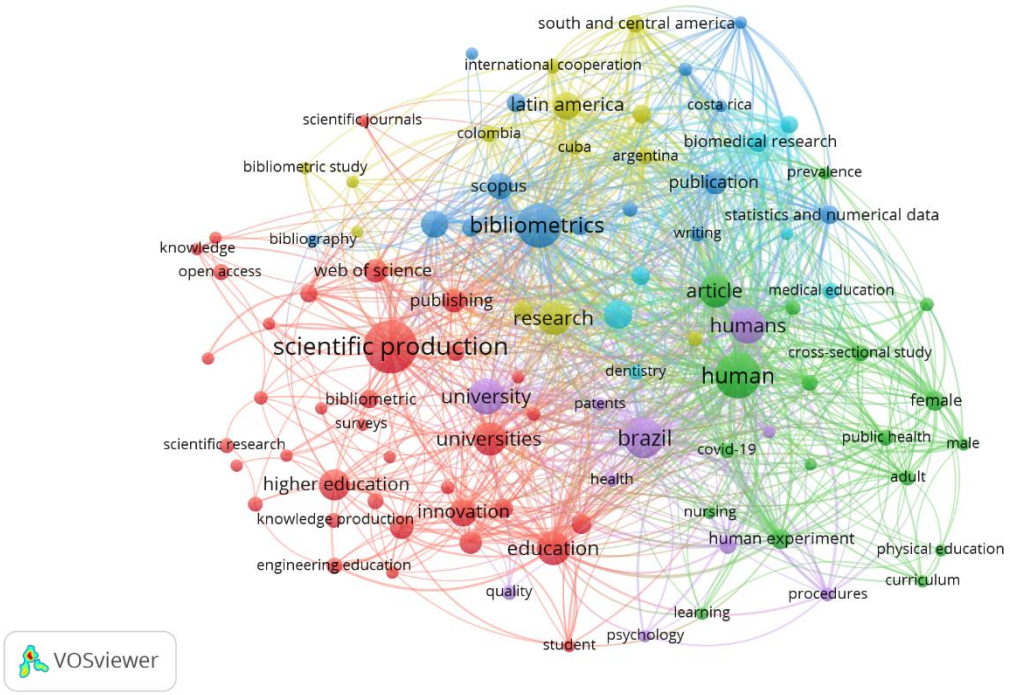

Figure 1. *Co-occurrence of words*

Source: Own elaboration (2021); based on data provided by Scopus.

In Figure 1, there is a strong presence of words such as: Scientific Production, Human, Research, since the inclusion and interpretation of these words are of vital importance in determining the quality of an educational institution of higher education in Latin American countries and will also be frequently used in this research. On the other hand, there

are also words such as University, Education and Articles, which have a strong demand in its implementation, since as it was exposed in an introductory way in this scientific document, it is about preponderating the production and academic-scientific management of both public and private Universities, to establish in any case the quality indexes of the same and to determine in the last instance the measures to safeguard the institutional principles, fundamental rights and a social state of law, for which reason the words Bibliography, Bibliometric Production and publication also appear throughout this debit object of study, taking into account that they are the determining factors to infer the quality in the educational processes established in the population and within the period referred to in the general objective of this document.

4.2 Distribution of scientific production by year of publication

Figure 2 shows how the scientific production is distributed according to the year of publication, taking into account the period from 2016 to 2021.

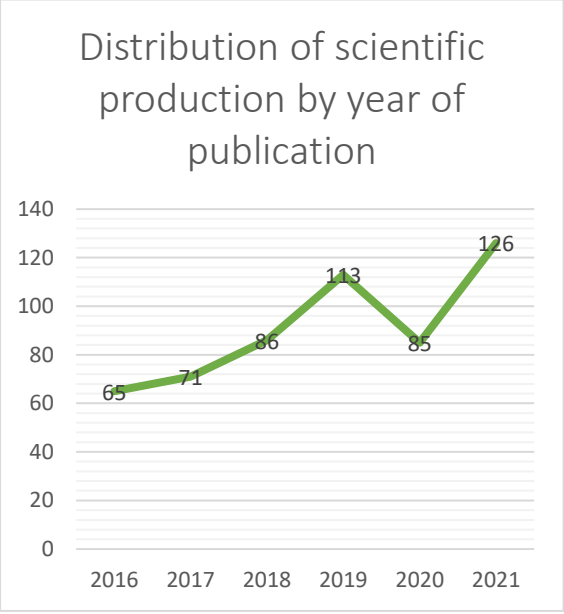

Figure 2. *Distribution of scientific production by year of publication.*

Source: Own elaboration (2022); based on data provided by Scopus.

As shown in Figure 2, the scientific production of the variable Management and Scientific Production in private universities in Latin America in the Scopus Database had a considerable increase from 65 documents in 2016 to 126 publications in 2021, establishing the highest peak, so it is important to point out the article entitled "Governance and Quality in Higher Education: A Bibliometric Description", which aimed to identify trends in scientific production in private universities in Latin America (Pedraja, Rodríguez, & Muñoz, 2021). The purpose of this article was to identify trends in scientific production, in order to restructure management practices through the implementation of a bibliometric analysis of journal articles in various databases, for which it was concluded that the active participation of the various actors of the academic community is vital for the achievement of high-quality standards, establishing educational reforms and the key commitment of the student body. The article entitled "Bibliometric and scientometric analysis of the scientific production of Peru and Ecuador from Web of Science (2009-2018)" also stands out (Limaymanta, Zulueta, Zulueta, & Zulueta, 2020). whose objective was focused on the comparison of the scientific production between Peru and Ecuador in the period between 2009 and 2018, through the evaluation of the trend and growth of scientific production and the structural study of this production and the bibliometric analysis and the analysis of authors' citation, determining that the Ecuadorian country has the highest production in educational research and environmental sciences and the Peruvian country in Occupational and Environmental Health; however, both countries have that the highest production is concentrated in higher education institutions, such analysis interpreted from the Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index and Emerging Sources Citation Index of the Web of Science database.

4.3 Distribution of scientific production by country of origin

Figure 3 shows the distribution of scientific production according to the nationality of the authors.

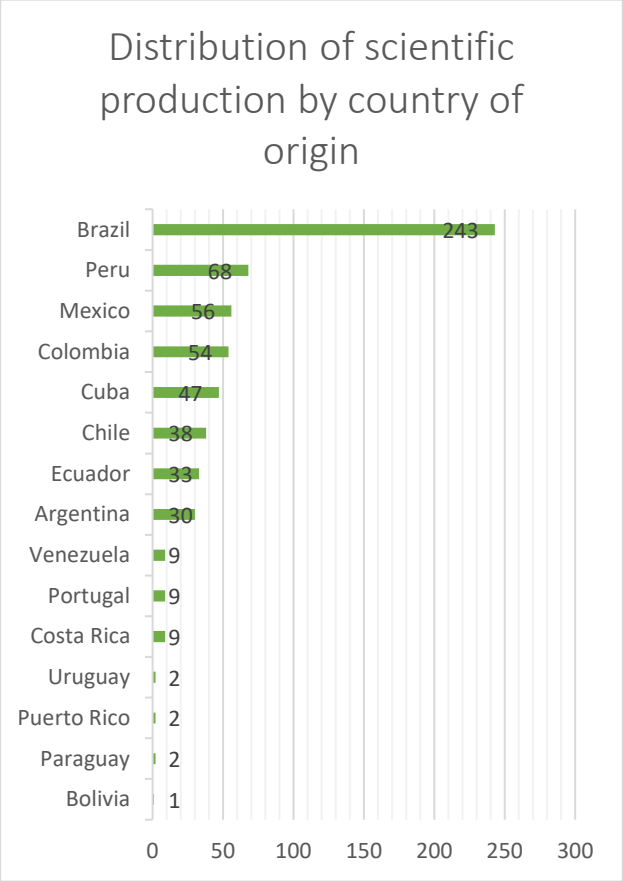

Figure 3. *Distribution of scientific production by country of origin.*

Source: Own elaboration (2022); based on data provided by Scopus.

Brazil was the Latin American country with the highest number of scientific publications referring to the study of Research Management and Scientific Production in private universities with a total of 243 publications in total. In second place, Peru registers in Scopus a total of 68 published research papers, among which is the article entitled "Production of scientific societies of medical students in Peru" (Alarcon-Ruiz, Taype-Rondan, & Fernandez-Chinguel, 2021). whose purpose was to describe the scientific production of the Scientific Societies of Medical Students in Peru during the period 2002-2018. Among the main findings made by such research, it was found that the Scientific Society of Medical Students of Peru registered 39 affiliated Scientific Societies of Medical Students, which published 856 scientific articles between 2002 and 2018, among these, 47.6% were original articles, 45.6% were indexed in Scopus database and 67.8% had a member of a Society as first author. The above demonstrates the importance of measuring the volume of scientific production in educational institutions since, through these records, it is possible to get an idea of the level of innovation presented by the innovation programs; for this reason, educational quality takes into account the records of scientific production of the institutions.

At this point, it is worth noting that the production of scientific publications, when classified by country of origin, presents a special characteristic and that is the collaboration between authors with different affiliations to both public and private institutions, and these institutions can be from the same country or from different nationalities, so that the production of an article co-authored by different authors from different countries of origin allows each of the countries to add up as a unit in the overall publications. This is best explained in Figure 4, which shows the flow of collaborative work from different countries.

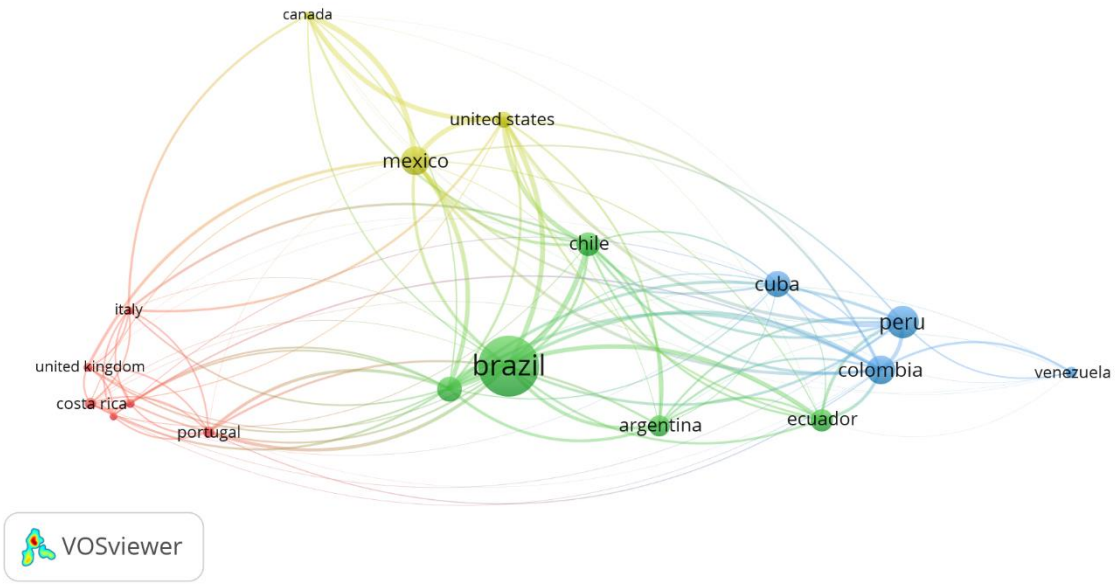

Figure 4. *Co-citations between countries.*

Source: Own elaboration (2022); based on data provided by Scopus.

Brazil and Peru are the Latin American countries with the highest number of international co-authorships; the latter has research projects in association with authors from Colombia, Cuba and Venezuela; on the other hand, Mexico presents research with the United States and Canada. One of its most important articles is entitled "Potentialities in scientific communication and elements of virtue in Mexican researchers" (Mendoza-Villalobos, Tarango, & Romo-González, 2021). whose objective was to identify the influence of academic virtue in the development of scientific potentiality in the scientific communication of Mexican researchers. To this end, the authors of this article took the Aristotelian elements of virtue as a reference to measure the capacity for scientific communication, taking into account three relevant aspects: (1) character (knowledge and reason); (2) will (intentionality); and (3) moral fact (actions taken). A questionnaire-type tool was applied to 183 researchers, the purpose of which was to relate the conditions of scientific activity with the elements mentioned above, reaching the conclusion that the greater the presence of elements of academic virtue of each researcher, the more he/she is able to communicate science in a broad and systematic way.

4.4 Distribution of scientific production by area of knowledge

Figure 5 shows how the production of scientific publications is distributed according to the area of knowledge through which the different research methodologies are executed.

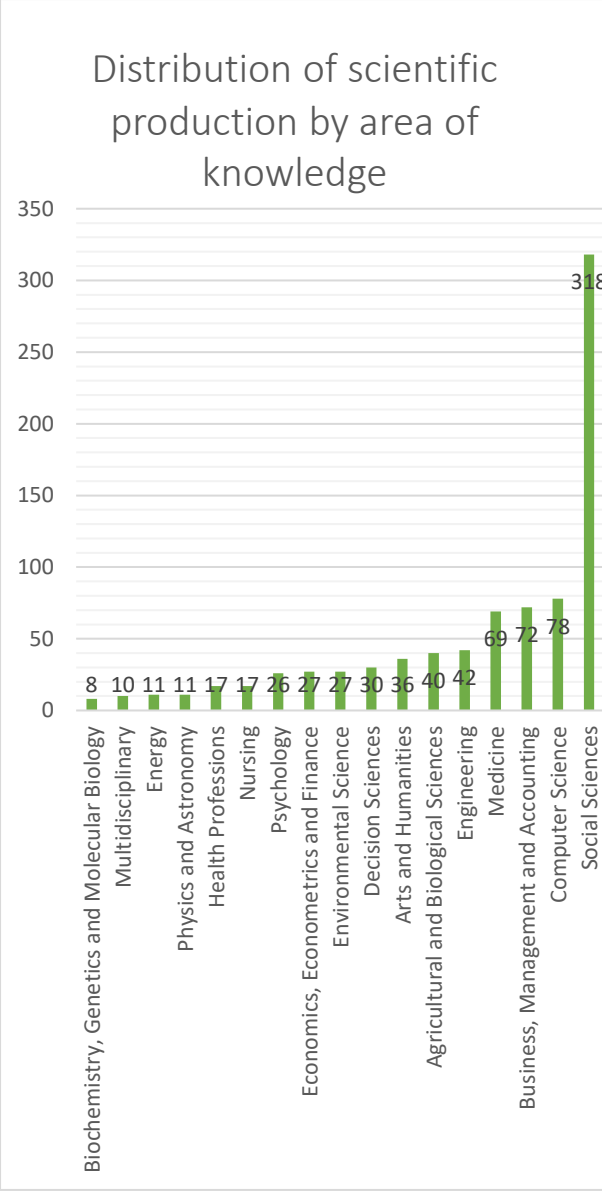

Figure 5. *Distribution of scientific production by area of knowledge.*

Source: Own elaboration (2022); based on data provided by Scopus.

In Figure 5, it is observed how different areas of knowledge made contributions in scientific production against the variable study of Research Management and scientific production in private universities in Latin America, however the area of Social Sciences has the largest record in Scopus Database, with a total of 318 publications, within which stands out "Trends in research in architecture between 2016-2020 in the scopus database and its relationship with the creation of research groups" (Reyes, Viñán-Ludeña, Vivanco-Villavicencio, & Moncayo-Serrano, 2021). whose objective was focused on the analysis of 1465 scientific papers obtained in bibliometrics and the profile of researchers of the Faculty of Architecture in the last 5 years. This study allowed to conclude that the creation of academic niches with research purposes are the fundamental basis for the dynamization in the scientific production of universities and the faculty under study. The importance of associability in research groups is paramount in the modes of scientific production and in any case for the creation of new alternatives for growth, innovation and growth in the impact of the economic and social context of the Latin American community and its impact.

Similarly, areas of knowledge such as Computer Science, Business, Management and Accounting, Medicine and Engineering are of vital importance for research work in the variable study of Research Management and scientific production in private universities in Latin America.

4.5 Type of publication

Figure 6 shows how the bibliographic production is distributed according to the type of publication chosen by the authors.

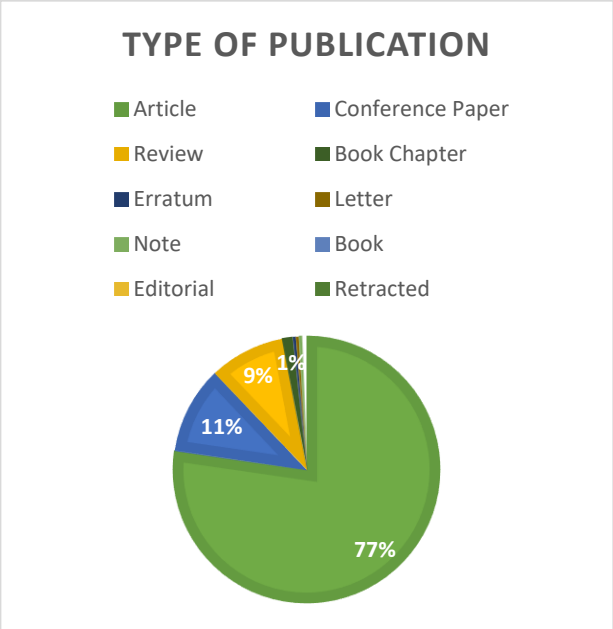

Figure 6. *Type of publication*

Source: Own elaboration (2022); based on data provided by Scopus.

Reviewed Figure 6, it is found that the Journal Article is the type of publication that has the highest registration in Scopus Database, represented by 77% with a total of 422 documents, the Conference Articles have an important participation with a total of 58 documents, representing 11% of the total, used in the Data Collection of phase I of the Methodological Design of this research, within which is the Conference Article entitled "Comparative analysis of the indicators of Latin American countries with more scientific articles published in the SIR Iber 2020" (Crissien, Cardozo, & Stanesc, 2020). This study emphasized the ranking of the SIR Iber 2020, as a tool for analyzing the dimensions of research and innovation activities of Higher Education Institutions in Latin America, Spain and Portugal, under the premise of three determining factors such as innovation, research and social impact. Work that allowed recognizing the significant growth in the scientific production of Latin American countries in Higher Education Institutions such as Brazil, Mexico, Chile, Argentina and Colombia with the publication of 60,000 articles in the period between 2014-2018. Such publication, allows inferring the relevance from the educational perspective and the different academic niches attached to the different faculties and aiming no more than an education of excellence and quality, which ultimately benefits the institutions and society itself with the training of professionals capable of going further in the development of their professional profiles. On the other hand, the production has great contribution from the different areas of knowledge through the Reviews with 50 published documents and Book Chapters with 7 publications.

5. Conclusions

Thanks to the bibliometric analysis proposed for the development of this research, it is possible to determine that, among the countries analyzed, which belong to the Latin American community, Brazil was the one that registered the highest number of publications according to Scopus during the period 2016-2021 achieving a total of 243 documents, followed by Peru with a total of 68 publications during the same period of study. This allows inferring that Peruvian institutions are interested in knowing the level of publications of university professors since it has been an aspect to improve in general terms according to verdicts of peer evaluators as an opportunity for improvement.

In the same way, research from Peruvian educational institutions that show a positive change in the different publication methodologies, such as the one registered by the Scientific Societies of Medical Students, are presented, thus encouraging scientific production as one of the most important aspects within knowledge management. Therefore, one of the reasons why professionals today have become more concerned about generating a research culture is to offer their organizations an added value in terms of the generation of innovative products and services.

In this sense, within higher education institutions, it is important to have a good level of scientific publications, as this sheds light on the quality through which professionals are being trained in different areas of knowledge, hence the importance of knowing the impact of research disseminated through scientific journals indexed in platforms such as Scopus, WOS, among others.

For private universities in Lima, these data usually represent one of the most important values when establishing strategies within the Educational Management, since they have even created incentives to motivate teachers to generate scientific products and most importantly, to disseminate them through nationally and internationally recognized scientific media. Therefore, it is of great importance to know the current state of the literature published on research management and scientific production in private universities in Lima, since from this review, it is possible to know the current situation of the institutions in terms of their publications and level of innovation both at the organizational level and in academic training. These data are of great relevance in establishing theories and

generating new knowledge regarding the different qualities of Peruvian researchers, as well as the strategies designed by the educational management to promote the generation of scientific products.

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