

ENTREPRENEURSHIP AND BUSINESS GROWTH SKILLS IN LATIN AMERICA

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Summary

A documentary review was carried out on the production and publication of research papers related to the study of the variable competencies of entrepreneurship and business growth in Latin America. The purpose of the bibliometric analysis proposed in this document is to know the main characteristics of the volume of publications registered in the Scopus database during the period 2016-2021 in Latin American countries, achieving the identification of 40 publications in total. The information provided by this platform was organized through graphs and figures categorizing the information by Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics have been described, the position of different authors towards the proposed theme is referenced through a qualitative analysis. Among the main findings made through this research, it is found that Brazil, with 10 publications, is the Latin American country with the highest production. The Area of Knowledge that made the greatest contribution to the construction of bibliographic material referring to the study of Statistics and business growth was Social Sciences with 13 published documents, and the Type of Publication that was most used during the period indicated above was the Journal Article that represents 75% of the total scientific production.

Keywords: statistics, business growth, entrepreneurship skills.

1. INTRODUCTION

Statistics is the science that through numbers and their analysis allows us to summarize data and obtain indications depending on variables supported by the collected data, converting it into probabilities. This science is an important factor in the growth of companies since this data supports decision-making that allows them to benefit from policies and implement innovations that allow them to increase their growth. Thanks to this data we can analyze the current situation of companies and determine the improvements that must be implemented having information that depends on variables that determine business action. Statistics, although they are used in the administrative decisions of companies, have a great impact on their operational functions since statistics can determine the points to improve a product or service, thus changing processes to ensure quality in production, which translates into greater competitiveness in the market giving way to economic growth. Thanks to statistics, we can determine the potential audience to which a product or service can be directed depending on the identified needs. Statistics allows us to analyze both quantitative and qualitative data that allow the organization to synthesize a large amount of data by reducing them by averaging analyzing the most frequent

variables identifying patterns of behavior. Statistics, in addition to helping business growth, allow us to analyze the economic development of companies by determining their management periods and the variables by which these results were influenced. Thanks to the above, it can be said that statistics are a fundamental part of decision-making in companies since, thanks to these data, innovations can be implemented that allow you to improve the service or product provided by the company, which translates into greater sales and therefore better business growth. Therefore, it is important to know in terms of bibliographic resources, the current state of research regarding statistics and economic growth in Latin American companies, so we propose a bibliometric analysis of the scientific production registered in the Scopus database during the period 2016-2021 that allows to answer the question ¿ How has been the production and publication of research papers related to the study of the variable statistics and business growth in Latin America during the period 2016-2021?

2. GENERAL OBJECTIVE

To analyze from a bibliometric and bibliographic perspective, the production of high-impact research works on the variable competencies of entrepreneurship and business growth in Latin American organizations during the period 2016-2021.

3. METHODOLOGY

Quantitative analysis of the information provided by Scopus is carried out under a bibliometric approach on scientific production related to Statistics and business growth. Likewise, it is analyzed from a qualitative perspective, examples of some research works published in the area of study indicated above, 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 parameters referenced in Table 1 are established.

3.1 METHODOLOGICAL DESIGN

	PHASE	DESCRIPTION	CLASSIFICATION
STEP 1	DATA COLLECTION	Data collection is carried out through the Search tool on the Scopus website, through which the identification of a total of 40 publications is achieved.	Published documents whose study variables are related to Statistics and business growth. Research papers published during the period 2016-2021. Limited to Latin American countries. Without distinction of area of knowledge. Regardless of type of publication.
STEP 2	CONSTRUCTION OF ANALYSIS MATERIAL	We proceed to the organization of the information identified	Co-occurrence of Words. Year of publication

		in the previous phase. The classification will be done by graphs, figures and tables from data provided by Scopus.	Country of origin of the publication. Area of knowledge. Type of Publication
STEP 3	DRAFTING OF CONCLUSIONS AND OUTCOME DOCUMENT	After the analysis carried out in the previous phase, we proceed to the drafting of the conclusions and preparation of the final document.	

Table 1. Methodological design.
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.

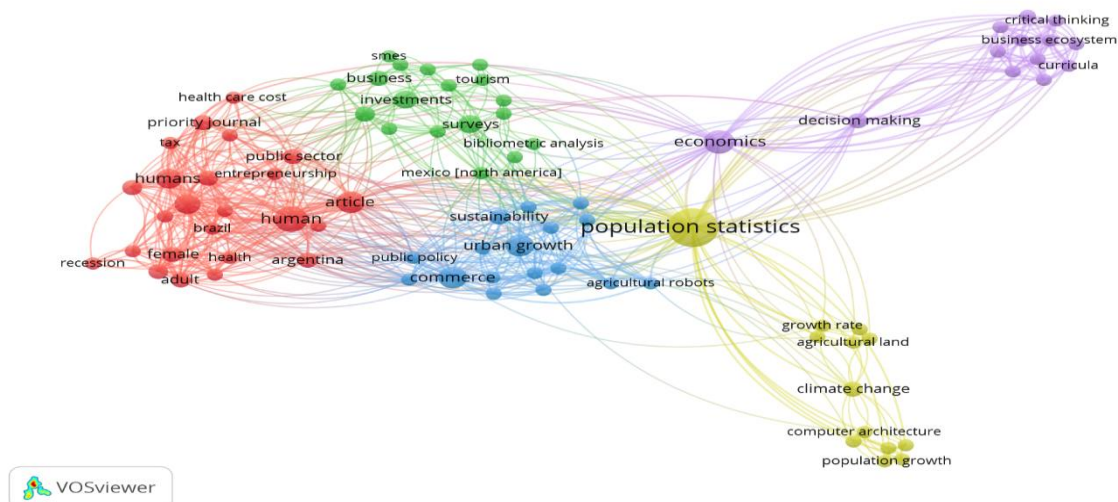


Figure 1. Co-occurrence of words
Source: Own elaboration (2022); based on data provided by Scopus.

As Figure 1 shows, the most commonly used keyword is population statistics, which refers to data collected in a specific community in order to evaluate certain variables. Secondly, we find range of growth, urban growth, businesses and public policies which are essential elements for the synthesis of the data collected by statistics that allow us to create inferences. In the business component we find keywords such as economies, decision making and critical thinking, keywords that shed light on research related to the role of statistics in business decision-making using the data obtained from it for the adaptation of policies and operational changes that allow you to strengthen the business economy, This is thanks to critical thinking since it is necessary to analyze variables and determine the most recurrent in order to choose the best option, which allows us to either solve problems or create new methods, services and products and determine the target audience.

4.2 DISTRIBUTION OF SCIENTIFIC PRODUCTION BY YEAR OF PUBLICATION.

Figure 2 shows how scientific production is distributed according to the year of publication, taking into account that the period between 2016 and 2021 is taken

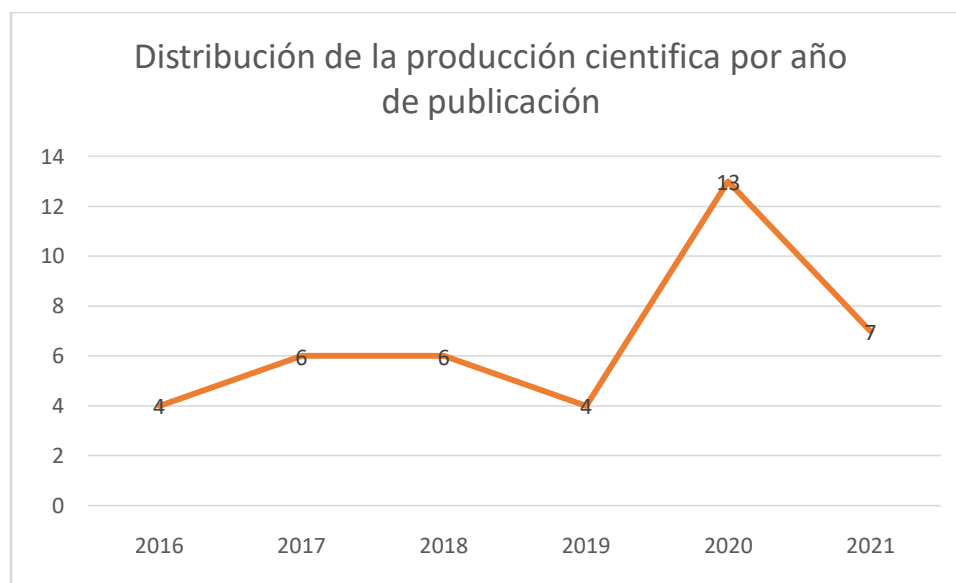


Figure 2. Distribution of scientific production by year of publication.
Source: Own elaboration (2022); based on data provided by Scopus.

2020 is the year with the highest number of publications related to the variables under study presenting a total of 13 documents, within which we can find "develop an application to collect and centralize the information obtained from the evaluation of innovation competencies in massive courses based on project 5" this document. It raises the importance of preparing future engineers in competencies that give them the ability to lead and make innovations successfully, so they started a project to analyze the methodologies and development of these skills, which depend on three fundamental factors which are critical thinking, teamwork and communication. For this study, the need to develop an application to collect and centralize the information obtained in the next evaluations was identified, taking into account that evolution and innovation are fundamental for the economic growth of a country.

In second place is 2021 with seven documents related to the study of statistics and business growth, within those documents we can identify "business function and concentration of small and medium enterprises in the province of gold-Ecuador: result"(Urdaneta, Borgucci, González, & Luciani, 2021) This study used statistical data collected by the National Institute of Statistics and

Censuses of the Central Bank of Ecuador between 2006-2017 in order to determine economic growth of SMEs. It was found that SMEs are more recurrent in the service sector with 53% and 28%; so through this statistical analysis it is determined that this region of Ecuador must expand its economic base by attracting capital, the development of the agro-industrial sector and have a port. All this in order to guide the business function in industrial issues without affecting the economy already consolidated in the province of gold.

4.3 DISTRIBUTION OF SCIENTIFIC PRODUCTION BY COUNTRY OF ORIGIN.

Figure 3 shows how scientific production is distributed according to the nationality of the authors.

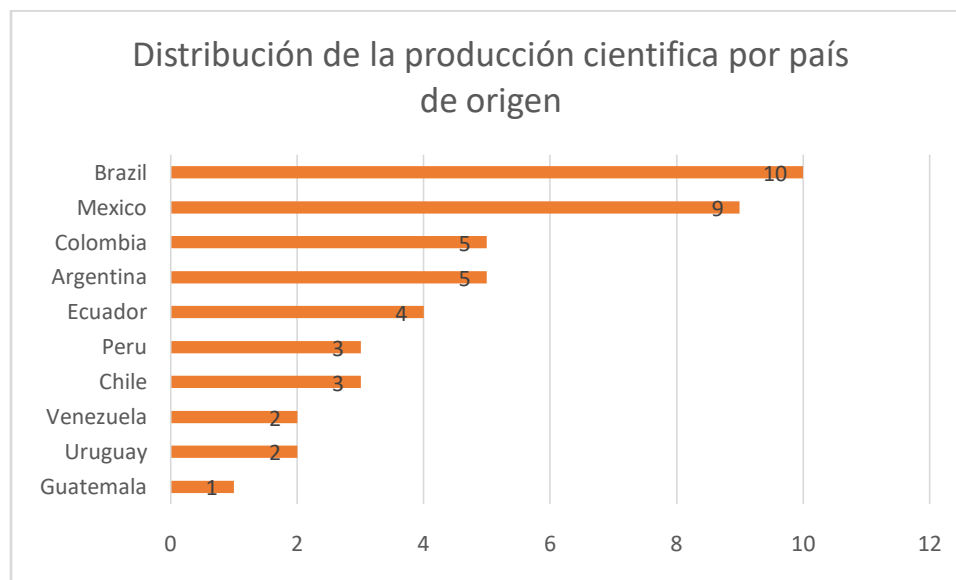


Figure 3. Distribution of scientific production by country of origin.

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

Brazil is the Latin American country with the highest number of publications related to statistics and business growth presenting 10 documents registered in scopus within which is "a strategy for the growth, recovery and reactivation of tourism: promotion of Portugal as a post-COVID-19 destination. " This document analyzes the impact of COVID-19 on the economies of Portugal regarding tourism using statistics taken since 2010 in order to determine economic growth and thus develop a marketing strategy that allows tourists to this country. With inferential statistics significance tests were performed on the survey data, which resulted in valuable information about the marketing strategy by the local tourism board during this period of crisis.

At this point it should be noted that the production of scientific publications when classified by country of origin, presents a special characteristic and is the collaboration between authors with different affiliation to both public and private institutions, and these institutions can be from the same country or of different nationalities so that the production of an article with co-authorship of different authors from different countries of origin allows each of the countries to add as a unit in general publications. This is best explained in Figure 4 where the collaborative workflow of different countries is observed.

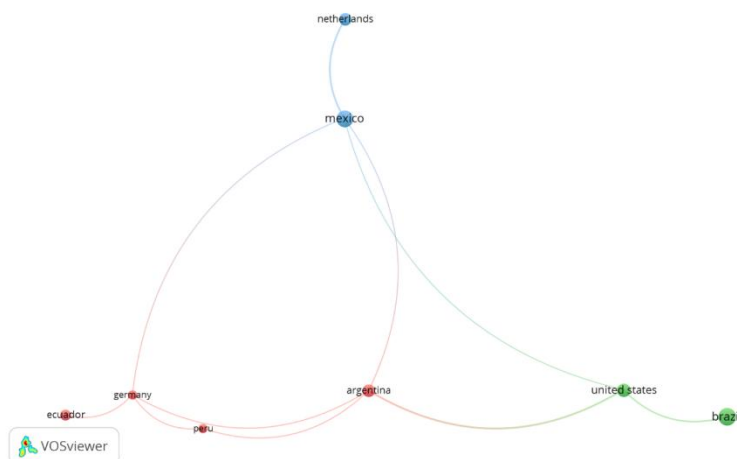


Figure 4. Co-citations between countries.

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

As mentioned above, Brazil is the Latin American country with the greatest contribution in research regarding the variables of the study, having collaboration with authors affiliated with institutions in the United States and Argentina, mainly demonstrating that not only the American countries have an interest in the current scientific production of statistics and Latin American economic growth. In second place, there is Mexico with nine documents registered in scopus, co-authored with the Netherlands, Germany, Ecuador within those documents we find "Leonardo da Vinci's Vitruvian man as a model of innovative entrepreneurship at the intersection of business, art and technology." This paper raises the importance of entrepreneurship for economic growth, a situation that is widely recognized and supported by statistics from international organizations. This article analyzes the instructional methods to the dominant art industry through an analysis and an outcome that contribute to the understanding of the basic components to successfully enter the elitist contemporary art industry, all this based on statistics taken in 2013 and 2015. It concludes by determining this document as an early indication of methods that can be theoretically explained in other industries by other entrepreneurs.

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.

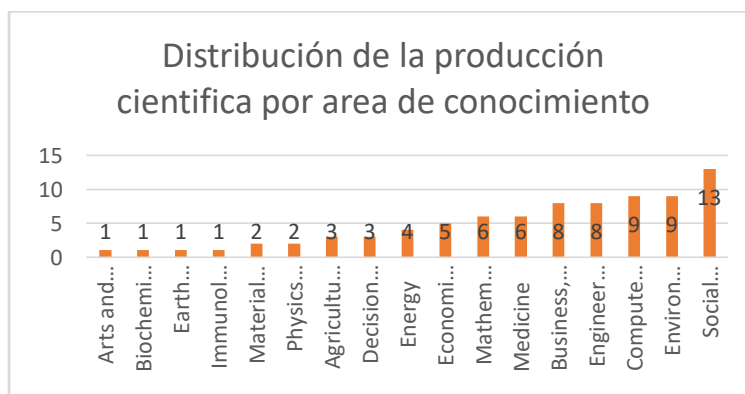


Figure 5. Distribution of scientific production by area of knowledge.

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

Social Sciences is the area of knowledge with the greatest number of contributions through the theories that are framed in it, in the search for new knowledge about statistics and business growth presenting 13 documents in total, within which we can find "evaluation of the predictive power of the models provided ordered for multiple phases of the economic cycle in the United States and Japan." (Proaño & Tarasov, 2018) This paper determines growth and accelerations for the United States and Japan through dynamic ordered probability forecasting with statistics applying the dating algorithm. In this study we compare the prognostic abilities of three determining regimens. It is concluded what is the operational characteristics of the receiver and the related summary statistics are applied as measures of forecast devaluation of probability of economic growth in both the United States and Japan.

In second place are the environmental sciences presenting nine documents in total, followed by computer science, which as well as environmental presents nine documents, within which we can identify "5 g For remote areas: challenges, opportunities and business models for Brazil"(Cavalcante, Marquezini, Mendes, & Moreno, 2021) This document analyzes the digital divide that exists in rural institutions, since according to several studies and statistics of public institutions, urban areas have an Internet penetration of around 65%, while the rural figure is only 34%. Therefore, opportunities are sought to reach this population and plans are presented in order to implement the sustainable connection that allows increasing growth in rural enterprises.

4.5 TYPE OF PUBLICATION

Figure 6 shows how the bibliography 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.

As shown in Figure 6, within the different types of publications, 79% of the total documents identified through Phase 1 of the Methodological Design, correspond to Journal Articles, among which is the one entitled "Flexibilization and feminization of the workforce in the agrarian phase of citrus in Uruguay"(Gulla, Krapovickas, Lezica, González, & Pareja, 2020) This paper analyzes, using data from official statistics, the increase in the female labor force in the agricultural phase of citrus growing, with emphasis on the processes of day laborers. In addition, labor

intermediation and its implications on the growth of companies are analyzed by comparing the data we have on the growth of these organizations in recent years.

In second place are the conference proceedings which represent 22% of the total documents identified in this study, within these documents we can identify "Impact through digital marketing tools in social networks and web analytics in higher education institutions"(Gómez Sierra, 2019) This document analyzes the employability of the different forms of marketing for educational institutions so Facebook Statistics, Twitter Statistics and Instagram Statistics were used to conduct a study of the behavior of social networks, know in which aspects it is very weak and be able to aggressively attack the target market in order to determine business growth.


5. CONCLUSIONS

Thanks to the bibliometric analysis proposed in this research, it can be determined that Brazil is the Latin American country with the highest number of bibliographic records in the Scopus database during the period between 2016 and 2021 with a total of 13 documents. The scientific production related to the study of statistics and business growth, has presented an important growth during the aforementioned period, going from 4 publications in 2016 to 7 units in 2021, presenting the largest number of publications in 2020, that is, it was possible to double the creation of bibliographic records in a period of 5 years, which indicates the importance that statistics has for the fulfillment of business objectives since thanks to its data collection it is possible to determine the operational administrative changes necessary for business economic growth.

Statistics is the science that is based on numbers to analyze variables and on them resent inferences and even determine patterns of behavior in different populations. This science is very important in business growth because thanks to them the decision-making process is more efficient since it can be supported with data relevant to the study of a new system or problem solving. Business growth is also defined as the ability of a company to generate revenue, so statistics gives you the necessary tools for data collection allowing you to identify needs and problems in order to offer new products and services. , or adding or how to generate additional value to existing ones in order to improve business competitiveness. All of the above allows this article to conclude, highlighting the importance of knowing the theory or bibliographic resources that seek to awaken interest in organizations to implement statistical methods that allow them to increase their economic growth. That is why the need for studies such as the one presented in this document is highlighted, which make a tour of those texts that address the aforementioned topic, in order to give the reader a broad vision of the current situation of the bibliography on statistics and business growth.

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