

Sustainable Development and Organizations: A Review for Latin America

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Abstract

A documentary review was developed on the production and publication of research papers related to the study of the variable Sustainable Development and Organizations 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 Scopus database during the period 2015-2020 in Latin American countries, achieving the identification of 814 publications in total. 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, with 510 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 Sustainable Development and Organizations was Environmental Sciences with 344 published documents, and the Type of Publication that was most used during the above-mentioned period was the Journal Article, which represents 60% of the total scientific production.

Keywords: Sustainable Development, Organizations, Latin America Countries, Bibliometric analysis.

1. Introduction

Currently, many companies worldwide have included in their organizational objectives, aspects that impact society through the Sustainable Development Goals (SDGs) adopted by the United Nations (UN) in 2015 (Gil, 2018) and that are expected to be guarantors in the solution of social, economic and environmental problems. This has been a trend that is even taken as one of the strategies in the positioning of organizations, which does not mean that many of these do not really seek the improvement of the environment where they operate through Social Responsibility policies, which was even institutionalized through the ISO 26000 standard (Argandoña & Isea, 2011) for those companies that have incorporated within their strategic objectives, to apply this type of measures to follow up on the guide designed with the purpose of implementing actions that help government agencies to comply with the SDGs proposed by the UN (Figure 1).



Figure 1. Sustainable Development Goals.

Sources: The Sustainable Development Goals applied to the strategic management of organizations (Macarachvili, 2019)

This allows the company whose Social Responsibility policies are aligned with the SDGs, to be seen as entities aware of the real and current situation of their environment, understanding the needs not only from a commercial point of view, because although it is true that their livelihood depends directly on the income generated by sales of goods and / or services, it is also helpful to have a positive concept by the community. This is achieved through Social Marketing, as the main responsible for the creation of strategies aimed at achieving a corporate image that reflects transparency to consumers and the market in general, which ends up being an important aspect to take into account when looking for added value as a competitive objective.

It is important to highlight the difference between Growth Objective and Development Objective, since the former refers to the economic aspect in organizations, which often moves away from the social and environmental sense, while talking about Sustainability involves aspects that seek an improvement in the quality of life based on strategies that are aligned with the three variables mentioned above. The study of the strategies that organizations implement to align their business objectives with those of the SDGs, are the subject of study and research by authors worldwide, therefore knowing the current state of the literature published on the subject motivates to conduct this documentary review in order to answer the question How has been the production and publication of research papers related to the study of the variable Sustainable Development and Organizations in Latin America during the period 2015-2020?

2. General objective

To analyze from a bibliometric and bibliographic perspective, the production of high impact research papers on the variable Sustainable Development and Organizations in Latin America during the period 2015-2020.

3. Methodology

Quantitative analysis of the information provided by Scopus is performed under a bibliometric approach on the scientific production related to Sustainable Development and Organizations. 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 using the tool provided by Scopus and the parameters listed in Table 1 are established.

3.1 Methodological design

Table 1 shows the methodological design proposed for this research.

| | PHASE | DESCRIPTION | CLASSIFICATION |
|---------|--|--|--|
| PHASE 1 | DATA COLLECTION | Data was collected using the Scopus web page search tool, through which a total of 814 publications were identified. | Papers published whose study variables are related to Sustainable Development and Organizations. Research papers published during the period 2015-2020. 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, figures and tables based on data provided by Scopus | Word Co-occurrence. Year of publication Country of origin of the publication. Area of knowledge. Type of publication |
| PHASE 3 | DRAFTING OF CONCLUSIONS AND FINAL DOCUMENT | After the analysis carried out in the previous phase, we proceed to the drafting of the conclusions and the preparation of the | |

natural conditions. Therefore, companies that, due to their social reason, carry out practices with material that could put at risk the environmental balance or whose final product may represent a polluting agent such as plastic, for example, currently invest much effort in research and economic resources to minimize the negative impact on the environment through innovation in their products and/or services.

4.2 Distribution of scientific production by year of publication.

Figure 3 shows the distribution of scientific production according to the year of publication, taking into account the period from 2015 to 2020.

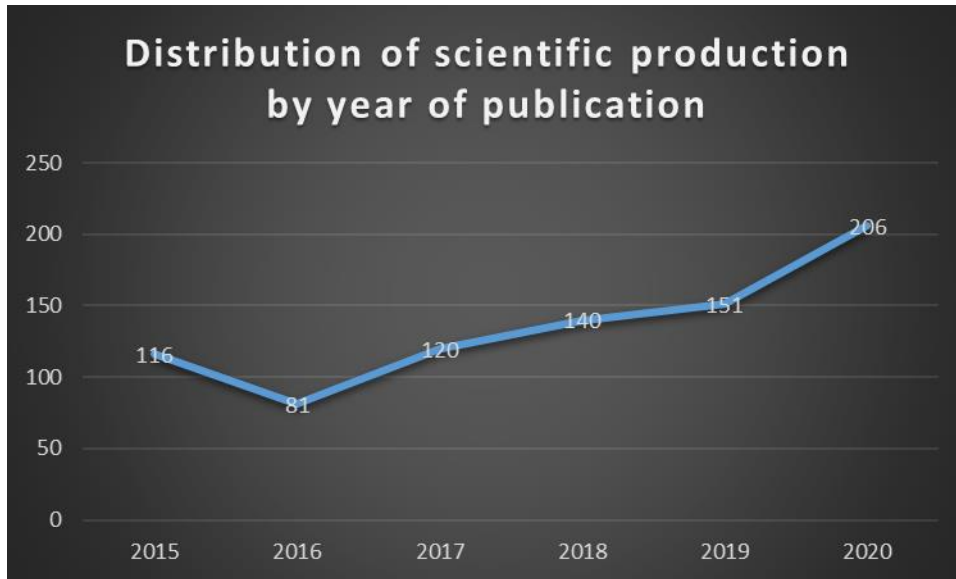


Figure 3. Distribution of scientific production by year of publication.

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

The year 2020 was the year in which the largest number of publications were registered in Scopus, with a total of 206 documents within which is the article entitled "Can we have it all? Sustainability trade-offs and cross-insurance mechanisms in supply chains" (Fracarolli et al., 2020) whose purpose is to analyze the interaction between the different scopes in the supply chain and focus on those in which certain processes can be adjusted in which sustainability averages can be implemented. In this way, a model is proposed in which the sense of sustainability is strengthened in one dimension of the supply chain, in order to appease the negative impact generated by the other aspects in which it is not possible to apply this aspect.

The period analyzed in this document indicates in 2015 when a total of 116 publications were registered. The following year, the production and registration in Scopus decreased to 81 publications, however, from then on the number was always higher than the previous one. In 2019, the second largest number of publications in high impact journals indexed in Scopus database was registered, a total of 151 research papers meet the search requirements established in Phase 1 of the Methodological Design. Within that number of publications is the article "Product design for sustainability: an example of collaboration between the public, private and vulnerable community" (Muñoz, 2019) which presents an important project that seeks to integrate the interests of the public and private sectors, combining strategies based on the need expressed directly by the sector that is vulnerable to different aspects that imply for the community, problems that affect either the social,

economic or environmental sphere. This is based on one of the proposals designed since the acceptance in the international community of the SDGs presented by the UN.

4.3 Distribution of scientific production by country of origin.

Figure 4 shows the distribution of scientific production according to the nationality of the authors.

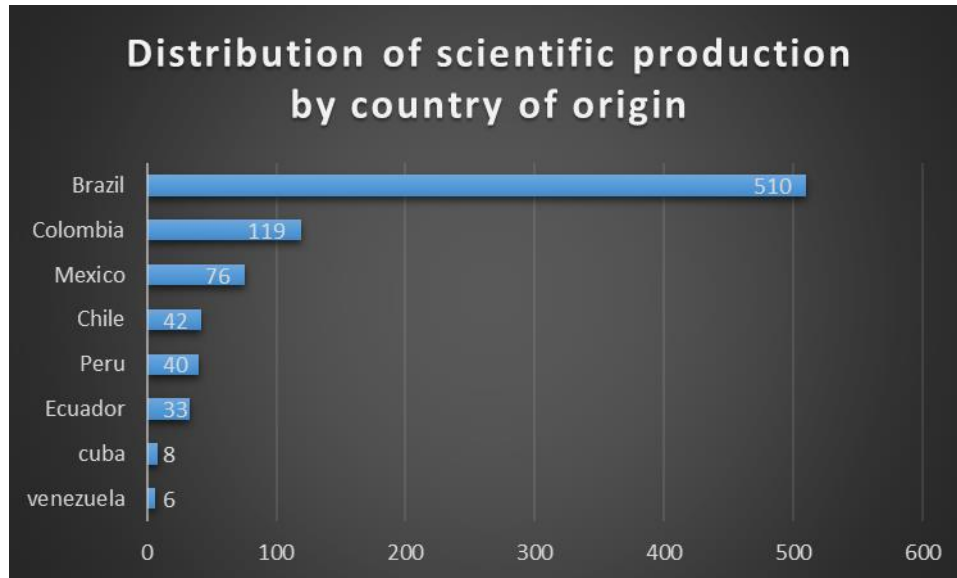


Figure 4. Distribution of scientific production by country of origin.

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

Brazil is the Latin American country with the highest number of documents registered in Scopus during the period 2015-2020 with a total of 510, followed by Colombian authors who reported to that database a total of 119 publications within which is the article entitled "Carbon emissions reduction and financial effects of a cap-and-tax system in an operational supply chain in the cement sector" (Cadavid-Giraldo et al., 2020) whose objective is to evaluate the effectiveness of carbon taxation methods to encourage sustainable cement production processes. The cement sector is one of the sectors that causes the most negative environmental implications, and the tax rate assigned seems to be insufficient to help mitigate the effects on the environment. However, this article attempts to propose a sustainable model in the supply chain, which allows achieving a healthy financial level for the organization, but at the same time executing innovative plans that are aligned with the Sustainable Development Goals.

At this point, it should be noted 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 5, which shows the flow of collaborative work from different countries.

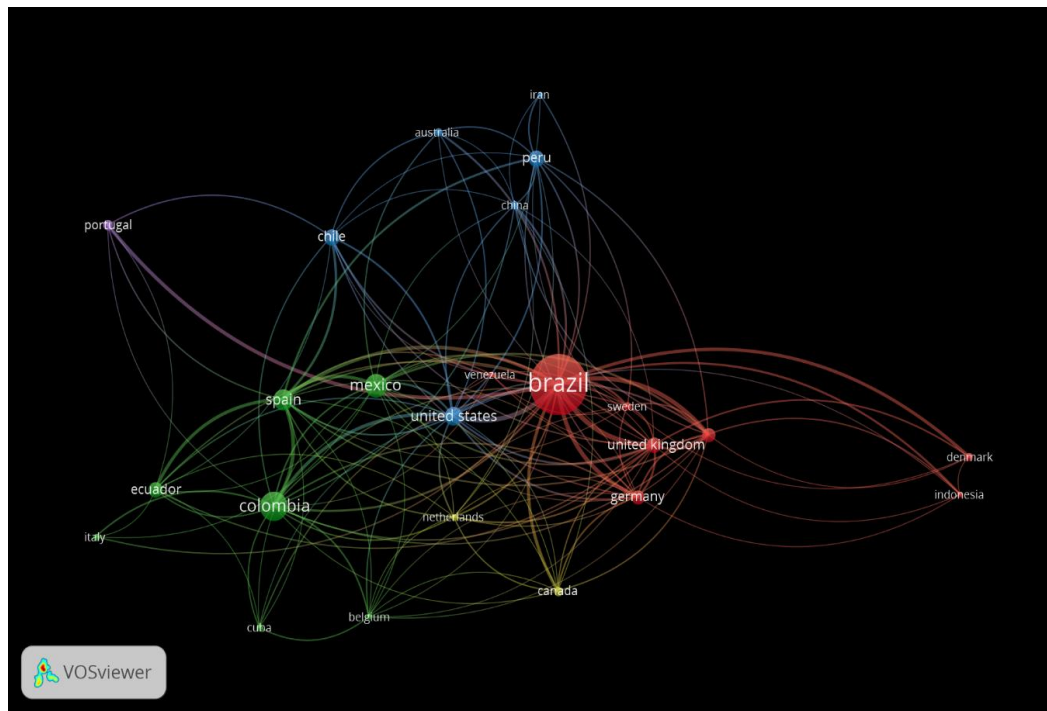


Figure 5. Co-citations between countries.

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

Brazil is not only the country with the highest production in Scopus during the period 2015-2020, but also the country with the highest participation of international authors, such as authors from Switzerland, the United States, Germany, Venezuela, among others. Similarly, Colombia has participated in projects in co-authorship with researchers from Spain, Ecuador, Cuba, Belgium and Mexico. The latter country is in third place with a total of 76 research papers published, among which is the article entitled "Determination of the energy consumption trend of a wine company as a key element for sustainable innovative development" (Lopez-Leyva et al., 2020) which presents a study related to the energy consumption of a wine pilot plant that seeks to optimize energy consumption by developing innovative alternatives to reduce such consumption, which would bring both financial and environmental benefits in the production chain. An efficient model that helps to significantly reduce energy consumption without altering product quality or production times is shown.

4.4 Distribution of scientific production by area of knowledge

Figure 6 shows how the production of scientific publications is distributed according to the area of knowledge through which the different research methodologies are executed.

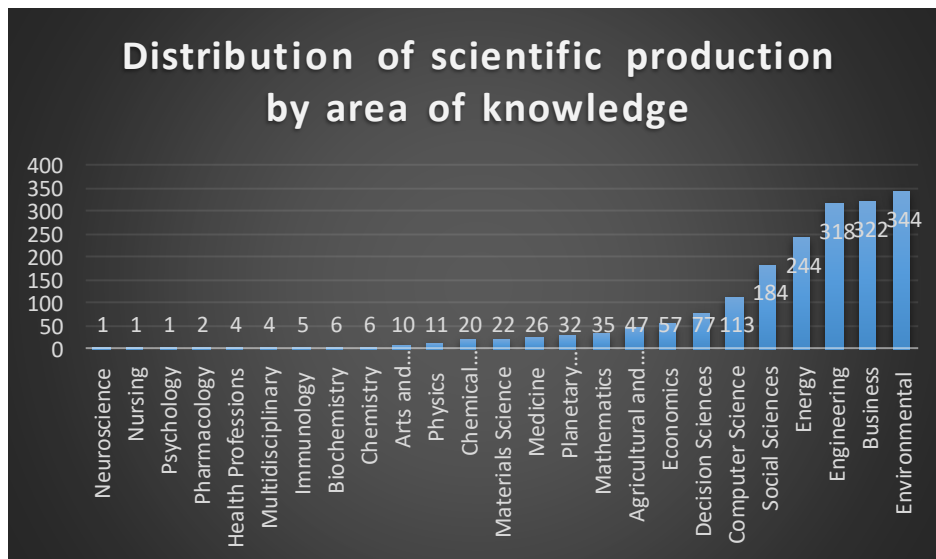


Figure 6. Distribution of scientific production by area of knowledge

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

Environmental Sciences is the area of knowledge that made the greatest number of contributions to the production and publication of scientific works in high impact journals indexed in the Scopus database, through the theories related to this discipline, which support the study of Sustainable Development in Latin American organizations. A total of 344 publications were based on this theoretical framework. Among these documents is the article entitled "The construction of new business models in a small company through contextual ambidexterity: the case of a sustainable company" (Minatogawa et al., 2020) which presents the reader with a model of business ambidexterity, consisting of managing a small company based on principles of classical management, but with a focus on sustainability in its processes, which allows articulating strategies aimed at achieving both financial and corporate social responsibility objectives.

Business is the area of knowledge that ranks second in terms of production volume, presenting a total of 322 publications within the period 2015-2020, within which is the article "Analysis of competitiveness factors for sustainable productivity of SMEs in Trujillo (Peru)" (Luis Alberto et al., 2020) whose objective was to analyze the competitive situation of Small and Medium Enterprises (SMEs) in the city of Trujillo, evaluating the key factors for productivity that will have an association with sustainable competitiveness. Understanding the above, as a fundamental factor in the search for positioning through competitiveness, aligning these strategies with the SDGs, which as mentioned above, is a determining item when evaluating the perception of customers, since the corporate image defines the characteristics that consumers associate with a brand. However, one of the main findings is that competitiveness levels in Latin America are still in a stage of slow growth, since the socioeconomic aspects of these nations have been a constant threat, especially when it comes to investment in technology and innovation. This undoubtedly makes it difficult for the processes in the different areas of the organizations to present greater progress or a differential factor that helps to increase competitiveness levels, in relation to countries with a more solid and stable economy.

4.5 Type of publication

Figure 7 shows how the bibliographic production is distributed according to the type of publication chosen by the authors.

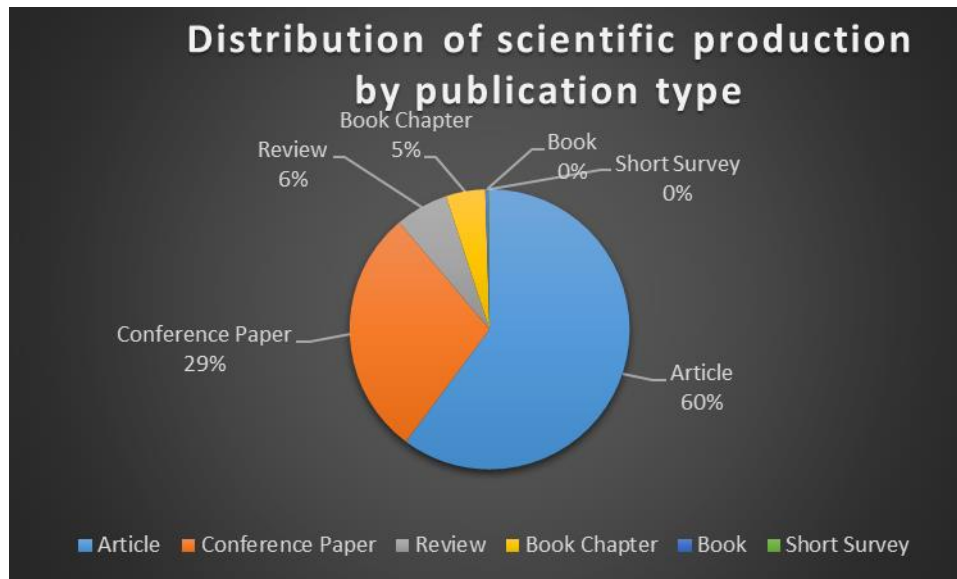


Figure 7. Distribution of scientific production by publication type

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

Journal Articles occupy the first place in the distribution of Production with 60% of the total, followed by Conference Articles with 29% and Reviews with 6%. Among the latter is the one entitled "Sustainable business models: literature review" (Comin et al., 2020) whose purpose was to conduct a documentary review of the published literature on the different business models that can support their operation in sustainable policies that generate a positive impact on any of the three aspects to be taken into account, such as social, economic and environmental. Undoubtedly, one of the most efficient tools to know the state of the current bibliography regarding the different topics of interest, in this case, Sustainable Business Models, are the bibliographic, systematic and/or bibliometric reviews, which allow to confront the position of the different expert authors in the topics, as well as to analyze from a quantitative perspective, the volume of publications of scientific documents, which is also an important data to know the trend in terms of research. These data become essential raw material for authors who are interested in this topic, because from there they can establish new theories aligned to innovation in the field of Sustainable Development Goals in Organizations.

Conclusions

Thanks to the bibliometric analysis applied to the variables under study in this paper, it can be concluded that Brazil is the Latin American country with the highest number of research papers published in journals indexed in Scopus database during the period 2015-2020 with a total of 510 documents, which allows inferring that the development of research in that country concerning the analysis of Sustainable Development and its relationship with Organizations, is much more advanced in comparison with countries of the same community, since the difference in the volume of production shows it. For example, Colombia is the country with the second largest number of documents registered in Scopus with a total of 119 units, which really means a big difference between Brazilian authors and those of the other Latin American countries.

It is noteworthy that the two areas of knowledge with the greatest influence in the scientific production of the variables mentioned above are Environmental Sciences and Business, with 344 and 322 documents respectively. The above allows inferring that organizations focus more frequently on sustainability policies that have an impact on the environment, especially those companies that in

some way or another affect the environment either by the exercise of their functions or by the final product itself, as in the case of those companies that use plastic packaging or containers that in many occasions are not adequately treated once they have fulfilled their objective, contaminating the ecosystem of the environment where they have influence.

This means that leaders who are currently trained under the awareness of achieving environmental balance, promote planet-friendly alternatives for the operation of the companies where they work professionally, and of course these strategies are aligned with the SDGs proposed by the UN and accepted by the international community. The above explains the importance of knowing the current state of the literature written on Sustainable Development from a business perspective, and how this can even be a useful tool for the organization in search of positioning through competitiveness thanks to the increase of the corporate image based on the perception of consumers at a general level, so this study concludes by highlighting the importance of knowing the different points of view of experts in the area as well as the historical evolution of the volume of production.

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