Current Trends in International Logistics Research

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Abstract— In this research, a bibliometric review was carried out on international logistics, performing a comparative analysis of production between 1956 and 2016, and then focusing on production from 2013 to 2016, in order to establish the current trends in logistics research international. Descriptive bibliometric indicators were used: volume of production, typology of documents, writing languages, number of citations, institutional affiliation of authors, sources, main journals, countries of origin of the authors. The most promising themes in the field were: (i) green and sustainable supply chains, (ii) (iii) application of big data, (iv) E-commerce, (v) incidence of aspects (Vii) redefinition of supply chain and logistics, (viii) collaborative logistics, (ix) case studies (China), (x) global manufacturing networks analysis, (xi) capacity building And (xii) user satisfaction.

Keywords: *international logistics, trends, bibliometric review*

I. INTRODUCTION

The interest in scientific communication, publications and their impact has been increasing in recent decades, not only for researchers, for whom there are specific metrics, but for the research and innovation systems of several countries. In this paper we propose an analysis of trends in academic production on international logistics.

Bibliometric studies are classified depending on the sources and analyzes that are performed. In the first case, they can be based on: bibliographies; Indexing services and abstracts (usually citation indexes are used): references or citations (citation analysis); And in directories or collective catalogs of journal titles [1]. In the second case, there are three subcategories: "descriptive bibliometry, which deals with purely quantitative aspects, such as geographic distribution, documentary, thematic and its productivity; (1)) and the monitoring and diagnosis ([3], [4]). In addition, the results of this study are presented below.

This paper aims to establish the current trends of research in international logistics, based on descriptive bibliometric analysis and diagnosis.

II. METHODOLOGY

A descriptive, explanatory and diagnostic bibliometric analysis was carried out to obtain quantitative information allowing a comparative analysis of the production. The evaluation of the research was first carried out in a scientific field from 1956 to 2016, carrying out monitoring and diagnostics in the Scopus database, using the following search criteria "international logistics" or "international logistics" or "Logistique internationale" or "Logistica internazionali", including in this way works in at least 5 languages (French, Portuguese, Spanish, English and Italian).

After an initial bibliometric review, a second comparative analysis was carried out, but with data from 2013 to 2016, the following route:

(ALL (logística) OR ALL (logistics) OR ALL (logistique) OR ALL (logistica) AND TITLE-ABS-KEY (intern*)) AND SUBJAREA (mult OR ceng OR chem OR comp OR eart OR ener OR engi OR envi OR mate OR math OR phys OR mult OR arts OR busi OR deci OR econ OR psyc OR soci) AND (EXCLUDE (PUBYEAR , 2017)) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012)) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "bk") OR LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE , "ip") OR LIMIT-TO (DOCTYPE , "cr")), limitando de esta manera los trabajos a aquellos publicados entre 2013 y 2016.

III. RESULTS

From the revision of 33,463 Scopus documents from 1956 to 2016 on the volume of academic production related to international logistics, it is observed that from 2001 onwards the number of investigations (documents) on this subject began to increase. Figure 1 shows that most of the production on international logistics corresponds to articles
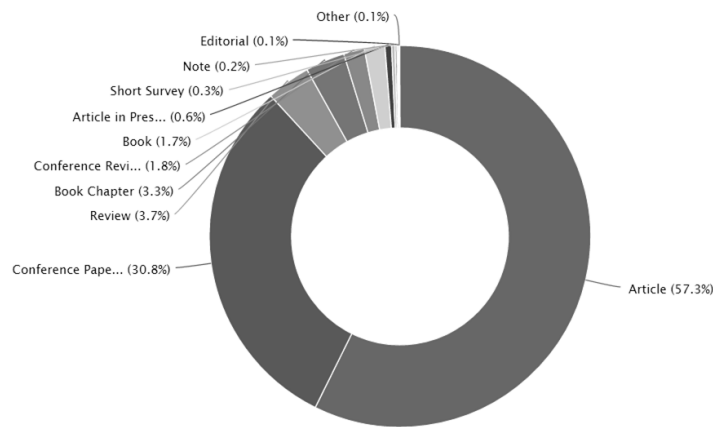

Figure 1. Types of documents (1956 - 2016)

In Figure 2 we can see the main journals where these articles are published, the largest number of published articles corresponded to Lecture Notes In Computer Science, followed by IFIP Advances In Information And Communication Technology and Advances In Intelligent Systems And Computing.

Figure 3 shows the areas that investigate these issues, being the engineering that has greater participation. On the other hand, according to the data obtained in Scopus it can be seen that Sarkis, J. is the author with more articles published and more cited (Figure 4), followed by Vaidynathan, S., Kessler, R.C., Crawford, B. Soto, R., Scholz-Reiter, B., Choy, K.L., Gunasekaran, A., Smirnov, A., Cheng T.C.E.
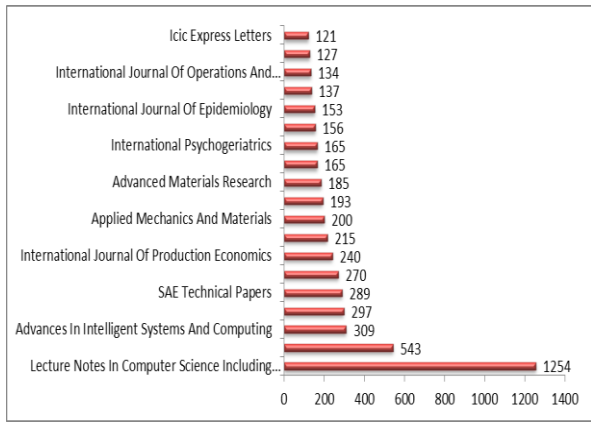
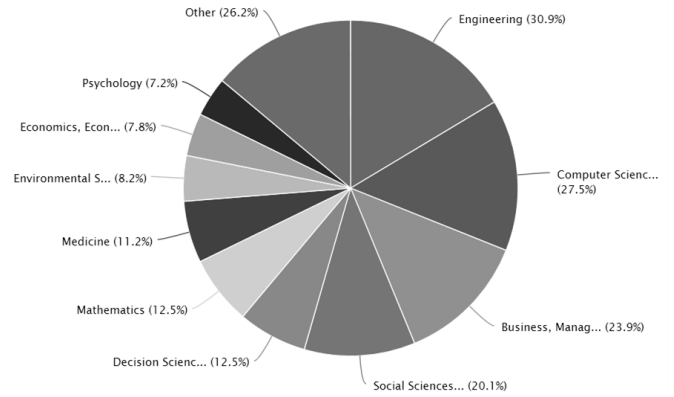Figure 3. Areas (1956 - 2016), source: own elaboration

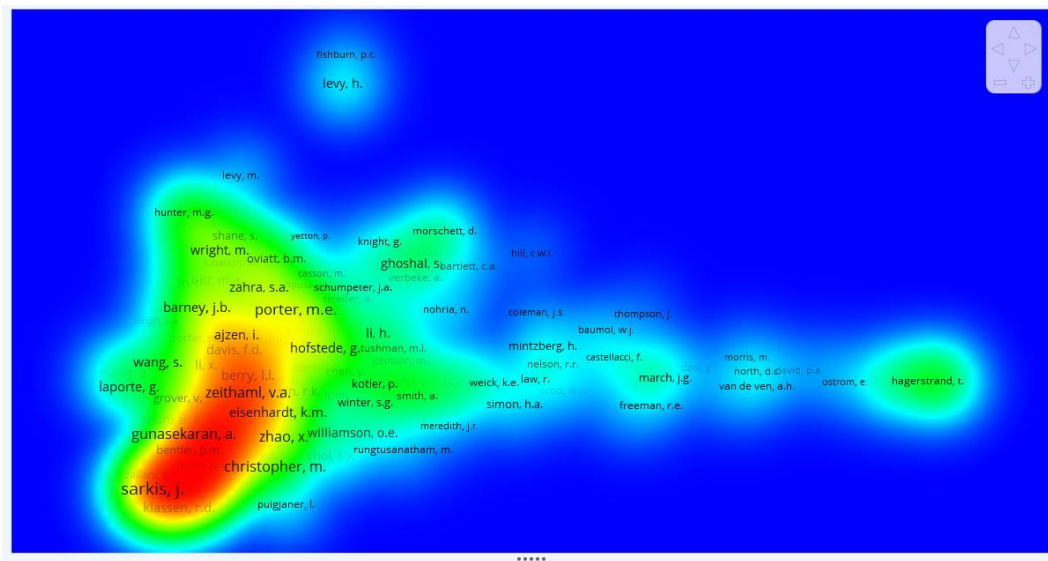Figure 2. Main journals (1956 - 2016), own elaboration.

Figure 4. Analysis of co-citations, own elaboration.

The most frequent institutional affiliations were Hong Kong Polytechnic University, Michigan State University, Beijing Jiaotong Daxue, National University of Singapore, Monash University, Wuham University of Technology, Delft University of Technology, Arizona State University, Pennsylvania State University and The University of British Columbia. And the countries with the largest number of documents were: the United States, China, the United Kingdom, Germany, Australia, Canada, Taiwan, Italy, Spain and France.

Along with the bibliometrics review in Scopus, an analysis of key words (Figure 4) and co-citations (Figure 5) was performed through the visual bibliometric analyzer Vosviewer. This allowed us to find that the most used keywords are: Supply Chains, research, logistics, design, industry, manufacture, competition, supply chain management, internet, electronic commerce, SME, innovation, China, development, sustainability.

Figure 5. Frequency of keywords (2013-2016), own elaboration.

In addition, according to a comparison of production between 2013 and 2016, it was established that the most debated and published topics in the international logistics area include topics related to: (i) green and sustainable supply chains [5], [6], [7]), (ii) knowledge management and transfer ([8]), (iii) Big data ([9]), (iv) E-commerce [(V) the impact of cultural aspects ([12]), (vi) nearshoring ([13]), (vii) redefinition of supply chain and logistics ([14]), (viii) 15]), (ix) case studies (China) ([16], [17]) (x) analysis of global manufacturing networks ([18]), (xi) (Xii) user satisfaction ([20]).

IV. CONCLUSION

The document presented shows the usefulness and relevance of bibliometric analysis to understand the way in which knowledge is produced and disseminated in specific areas, although it also recognizes the limitations of this type of approach. The academic production on international logistics has a growing dynamics and shows an evolution in the number of products published.

There are multiple elements in the themes identified as trends in production in international logistics, including: conjunction with other areas of knowledge; The use of case studies and international comparisons; The use of statistical techniques and quantitative analysis different from modeling.

For future work, it would be pertinent to replicate the analysis presented here for the ISI WoS case and to use the figures of subsequent bibliometric studies to discuss the center-periphery relations in academic production, gender analysis, application of indexes by journal, among others.

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