# Advance Customs Clearance: A Bibliometric Study of Scopus

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**Abstract**

*The aim of this study was to conduct a bibliometric analysis of the literature on advance customs clearance published in Scopus between 2006 and 2023. It was a bibliometric data study to measure scientific production through indicators. Keywords in English (advance, customs, clearance) were used to select 74 Scopus documents relevant to the study. According to the results, scientific production peaked in 2018, 2016 and 2012 (n=22; 29.7%). In addition, the United States accounted for 28.1% of all publications (n=32), 9 papers were published in Journal of International Economics and the most cited author was Manova, K. (481 citations; n=2 papers). The vast majority of these publications (92%) were research papers in the fields of economics, econometrics and finance (43%), social sciences (20%) and business, management and accounting (14%). It is concluded that the study conducted on advance customs clearance has a general upward trend, in terms of the breadth of topics covered, resources available and the number of authors who have made significant contributions to the area. This represents the basis for future research establishing a written argument and using the bibliometric study as a starting point.*

**Keywords:** *Advance Clearance, Customs, Scientific Production, Bibliometric*

## INTRODUCTION

It is well known that international trade is expanding at a staggering rate in today's globalized economy (Raffo & Arbey, 2021). In this context, the two most important factors are time and money; consequently, improving the responsiveness and efficiency of customs inspections is a goal shared by all nations striving to minimize import and export costs and time (Alvarez, 2020).

Currently, technological development and the presence of consumers with access to an ever-expanding range of products are two elements that help define the global economy (Yarad, 2021). This means that modern supply networks have a long way to go before achieving continuous development (Zamora & Gonzalez, 2019). Therefore, there is a constant demand in the market to lower costs and increase the quality of products and services; consequently, the logistics chain is increasingly important for a company to maintain its competitive advantage (Palacios & Rodriguez, 2021).

In addition, several countries (France, Denmark, Italy, Spain, Austria, among others) can complete export and import controls in less than an hour, according to a global indicator that measures border compliance (Alonso, 2021; Mogrovejo et al., 2021). However, in some cases, importing goods can take up to 72 hours, plus 48 hours to complete the necessary paperwork. Therefore, the import approval process usually takes 120 hours, or five days (Vergara, 2021; Segarra & Orellana, 2021).

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Therefore, this overview shows the development that a country must have to achieve trade competitiveness on an international scale (Almanza et al., 2020); thus, lead times require government policies that promote efficient logistics management throughout the import supply chain, which leads to minimizing costs by giving companies an advantage in the global market for importing and exporting goods (Bonilla et al., 2020; González, 2020). In that order of ideas, one of the main benefits of advance clearance is

the reduction of the time required for import logistics, which in turn translates into monetary savings (Tavares & Castañeda-Ayarza, 2022).

In addition, the study of advance customs clearance has expanded substantially in recent decades, as the use of virtual tools and state-of-the-art information technologies has made it possible to better track imported goods (Sung-Bou & Dongwook, 2020; Bulatova & Amirova, 2021). Consequently, bibliometrics, the study of quantifying literature in the form of texts and other publications, helps scholars to monitor the expansion of scholarly publications and to assess the importance of the works under consideration (Caló, 2022; Leyva et al., 2022).

Therefore, it is important that the databases that record scientific background have the capacity to accurately capture research materials and results (Sanz, 2022). Thus, bibliometric indicators are based on quantitative studies of the number of papers published in this or related fields (Sarasa, 2023).

It is therefore essential to organize the data on advance customs clearance according to a series of bibliometric criteria in order to better explain and analyze them. Taking into account factors such as year of publication, place of origin, subject, type of document, institution of origin and authorship. Therefore, the following study objective is proposed: to perform a bibliometric analysis of the literature on advance customs clearance published in Scopus between 2006 and 2023.

## METHODOLOGY

To assess the current state of research on advance customs clearance, bibliometric techniques were employed. Thus, bibliometrics played a crucial role in facilitating data collection for the research (Salinas and Garcia, 2022). The search was conducted between 2006 and 2023 using Scopus due to the relevance of the database and its ability to index scholarly publications from around the world.

The collection process was delimited using the Boolean search combination advance AND customs AND clearance. The total number of documents collected using this method was 197. However, the data were cleaned before being used to create a representative sample, which included 74 documents with scientific content. During data filtering, additional exclusion criteria were defined, which were as follows: (1) research conducted before 2006 and after 2023; (2) duplicate publications; and (3) research irrelevant to the current study.

As a result, the overall contribution of the 74 publications to the academic debate was measured using bibliometric metrics (Florez-Fernández & Aguilera-Eguía, 2020). Some of these metrics include production in terms of year of publication, authorship, original source or journal, provenance, type of document, field of study, and institutional affiliation. In addition, Excel was used to process and analyze the data using descriptive statistics and count data and VOSviewer V_1.6.19, to create both source density maps and keyword co-occurrence maps.

## RESULTS

This bibliometric study took into account publications from 2006 to 2023. Seventy-four papers were chosen to explore the topic of advance clearance in customs. Figure 1 shows the most recent worldwide publications on this topic indexed in Scopus. Where a fluctuation in annual publication rates is observed throughout the study period, with the highest production in 2018, 2016 and 2012, with 29.7% of all global publications represented by 22 academic papers.
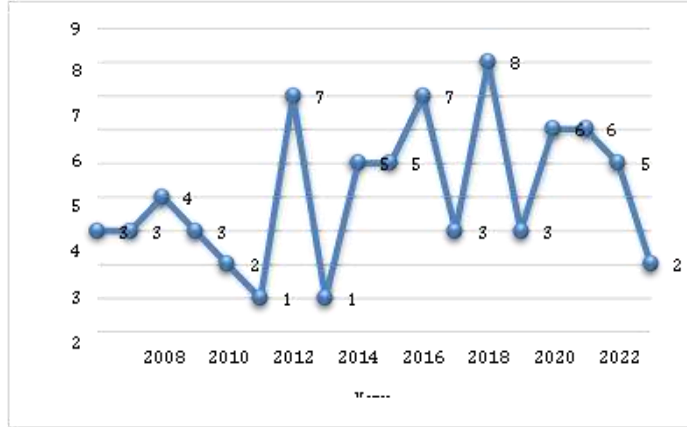
**Figure 1**. Documents published by year

Source: Scopus data (2023)

Table 2 shows where in the world these papers have been published. With so many nations represented (n=31), we can highlight those that have contributed the most to the body of literature in this area through registration. The United States (28.1%), United Kingdom (9.6%), Canada (6.1%) and Germany (6.1%) are the top four countries in terms of scientific output. In addition, 95% of the accepted papers were written in English, the remaining 4% in Spanish and 1% in Portuguese.

**Table 1. Publication of documents by country**

| N° | Country | Number of documents | % | N° | Country | Number of documents | % |
|----|---------|---------------------|---|----|---------|---------------------|---|
| 1 | United States | 32 | 28.1% | 17 | South Korea | 2 | 1.8% |
| 2 | United Kingdom | 11 | 9.6% | 18 | Spain | 2 | 1.8% |
| 3 | Canada | 7 | 6.1% | 19 | Thailand | 2 | 1.8% |
| 4 | Germany | 7 | 6.1% | 20 | Chile | 1 | 0.9% |
| 5 | China | 6 | 5.3% | 21 | Hungary | 1 | 0.9% |
| 6 | France | 6 | 5.3% | 22 | Indonesia | 1 | 0.9% |
| 7 | Japan | 5 | 4.4% | 23 | Kazakhstan | 1 | 0.9% |
| 8 | Switzerland | 4 | 3.5% | 24 | Kenya | 1 | 0.9% |
| 9 | Turkey | 4 | 3.5% | 25 | Netherlands | 1 | 0.9% |
| 10 | Australia | 2 | 1.8% | 26 | New Zealand | 1 | 0.9% |
| 11 | Brazil | 2 | 1.8% | 27 | Russian Federation | 1 | 0.9% |
| 12 | Colombia | 2 | 1.8% | 28 | Sweden | 1 | 0.9% |
| 13 | Hong Kong | 2 | 1.8% | 29 | Tunisia | 1 | 0.9% |
| 14 | India | 2 | 1.8% | 30 | Venezuela | 1 | 0.9% |
| 15 | Peru | 2 | 1.8% | 31 | Indefinite | 1 | 0.9% |
| 16 | South Africa | 2 | 1.8% | | **Total countries** | | **31** |

Source: Scopus data (2023)

In total, 43 academic journals and other sources provided data for this review. The information taken into account for this analysis is shown in Table 2. As can be seen, the journal with the most papers published was the Journal of International Economics (n=9), followed by World Economy (n=6). Applied Economics and World Bank Economic Review are also in third place, each with three articles. These publications are consistently ranked in the top quartiles of their fields in terms of impact factor.

**Table 2. Publication of documents by source or journal**

| Source or Magazine | Number of documents | Source or Magazine | Number of documents | Source or Magazine | Number of documents |
|---|---|---|---|---|---|
| Journal of International Economics | 9 | African Development Review | 1 | Journal of African Economies | 1 |
| World Economy | 6 | American Economic Journal Applied Economics | 1 | Journal of Cleaner Production | 1 |
| Applied Economics | 3 | Asian Economic Papers | 1 | Journal of Development Economics | 1 |
| World Bank Economic Review | 3 | Bioinformatics | 1 | Journal of Digital Imaging | 1 |
| Canadian Journal of Economics | 2 | Business and Economic Horizons | 1 | Journal of Economic Policy Reform | 1 |
| Economic Modelling | 2 | China Economic Review | 1 | Journal of Public Health Oxford England | 1 |
| Journal of Asian Economics | 2 | Contemporary Politics | 1 | Memories | 1 |
| Journal of International Money and Finance | 2 | Economics and Politics | 1 | Molecular Biology of the Cell | 1 |
| Quarterly Journal of Economics | 2 | European Economic Review | 1 | Multimedia Tools and Applications | 1 |
| Review of International Economics | 2 | Foreign Trade Review | 1 | Neuroimage | 1 |
| Review of World Economics | 2 | Indian Journal of Pharmacology | 1 | Open Economies Review | 1 |
| Venezuelan Management Magazine | 2 | Inra Productions Animals | 1 | Indefinite | 6 |
| ACS Nano | 1 | International Journal of Services and Operations Management | 1 | **Total magazines** | **43** |

Source: Scopus data (2023)

A bibliographic analysis by groups was carried out based on the data from the sources chosen to create categories of the different types of literature. Figure 2 shows three distinct groups. Specifically, the most cited journals in this field was Journal of International Economics (71), followed by American Economic Journal: Applied Economics (55) and Applied Economics (33). The following evidence corroborates the findings of the bibliographic analysis, which showed that the most cited articles tend to appear in the same journals or original sources.
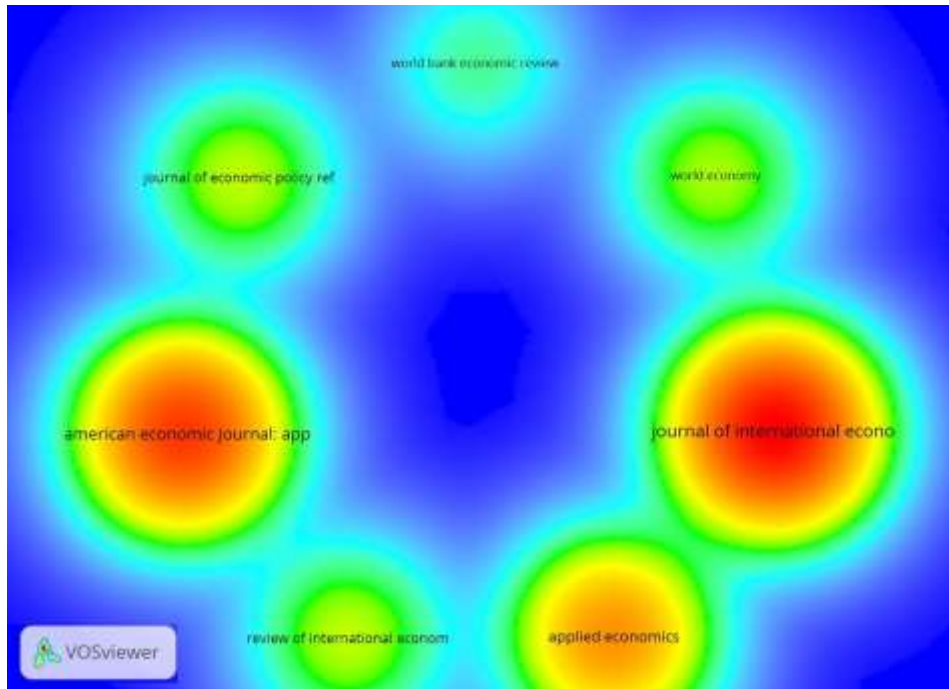
**Figure 2**. Map of source or journal clustering density

Source: Results in VOSviewer (2023)

The 74 papers presented below are the result of collaboration among researchers from 115 different universities. Figure 3 shows that, throughout the period evaluated, the National Bureau of Economic Research was the institution that published the second most articles on the topic of advance customs clearance, after The World Bank, USA (n=8). In addition, Vanderbilt University and the International Monetary Fund collaborated with the publication of three scientific papers, respectively.
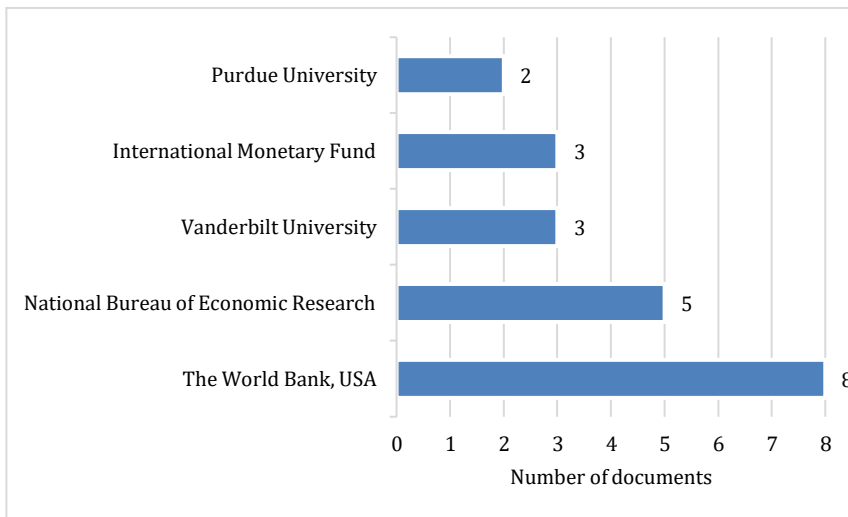


**Figure 3**. Documents published by institution

Source: Scopus data (2023)

The selected academic papers are the result of collaboration between 127 researchers from 115 different institutions. As shown in Table 3, Manova, K. has received the highest number of citations (481) for the number of publications he has had (n=2). Urata, S. is in second place with two publications and 35 citations, while Hu, C., with 2 publications and 29 citations, is in third place.

**Table 3. Published papers by author**

| By author | Quantity | Total citations | By author | Quantity | Total citations |
|---|---|---|---|---|---|
| Bown, C.P. | 2 | 12 | Saggi, K. | 2 | 28 |
| Fernandes, A.M. | 2 | 18 | Tovar, P. | 2 | 7 |
| Geourjon, A.M. | 2 | 10 | Urata, S. | 2 | 35 |
| Hayakawa, K. | 2 | 9 | Yildiz, H.M. | 2 | 28 |
| Hu, C. | 2 | 29 | Abrego, L. | 1 | 4 |
| Laksanapanyakul,N. | 2 | 9 | Adão, R. | 1 | 1 |
| Manova, K. | 2 | 481 | Ahlquist, J.S. | 1 | 12 |
| Missios, P. | 2 | 28 | Akar, S. | 1 | 3 |

Source: Scopus data (2023)

Academic papers on advance customs clearance published between 2006 and 2023 are organized by topic and type of publication in Figure 4. In a survey of 18 fields of study, economics, econometrics and finance are the areas that have contributed most to scientific knowledge (43%), followed by social scientists (20%) and economists, managers and accountants (14%). Likewise, analysis of the production by type of document reveals that scientific articles constitute almost the totality of the production (92%), ahead of book chapters (7%) and books (1%).
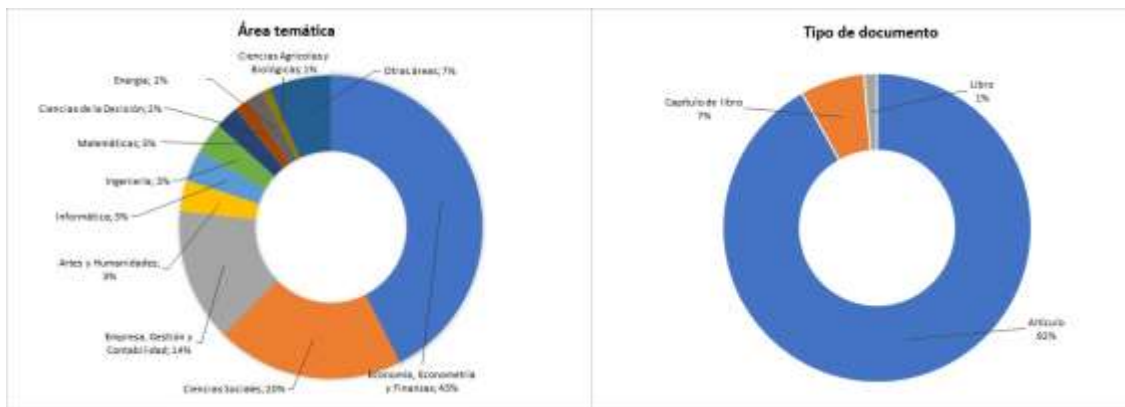


**Figure 4.** Publication of documents by thematic area and type

Source: Scopus data (2023)

Figure 5 shows the results of a filter applied to the terms that appeared (more than three times) in the titles, keyword lists and abstracts of the papers considered. VOSviewer's use of colors to denote the strength of relationships between terms makes it easy to visualize which groups of keywords correspond to which colors.

● Purple cluster. "import" (n=61 occurrences), groups the following words: advance clearance, tax regime, customs, agricultural trade, import customs.

● Yellow cluster. "export" (n=42 occurrences), groups the following words: trade agreement, empirical analysis, environmental impact, free trade.

● Red cluster. "International trade" (n=32 occurrences), groups the following words: trade costs, tariff structure, risk management, customs, trade flow, border costs.

● Blue cluster. "manufacturing" (n=29 occurrences), groups the following words: firm ownership, pricing, modeling, economic analysis, exporter diversification, economic diversification, imported inputs, firm-level data, industrial firm.

● Green cluster. "imports" (n=17 occurrences), groups the following words: exports, regional integration, customs union, tariffs, labor demand, skilled labor, exchange of goods, employment, trade relations.

● Orange cluster. "European union" (n=12 occurrences), groups the following words: panel data, estimation method.

The grouping shows that the most commonly used terms have deep roots in the domain studied.
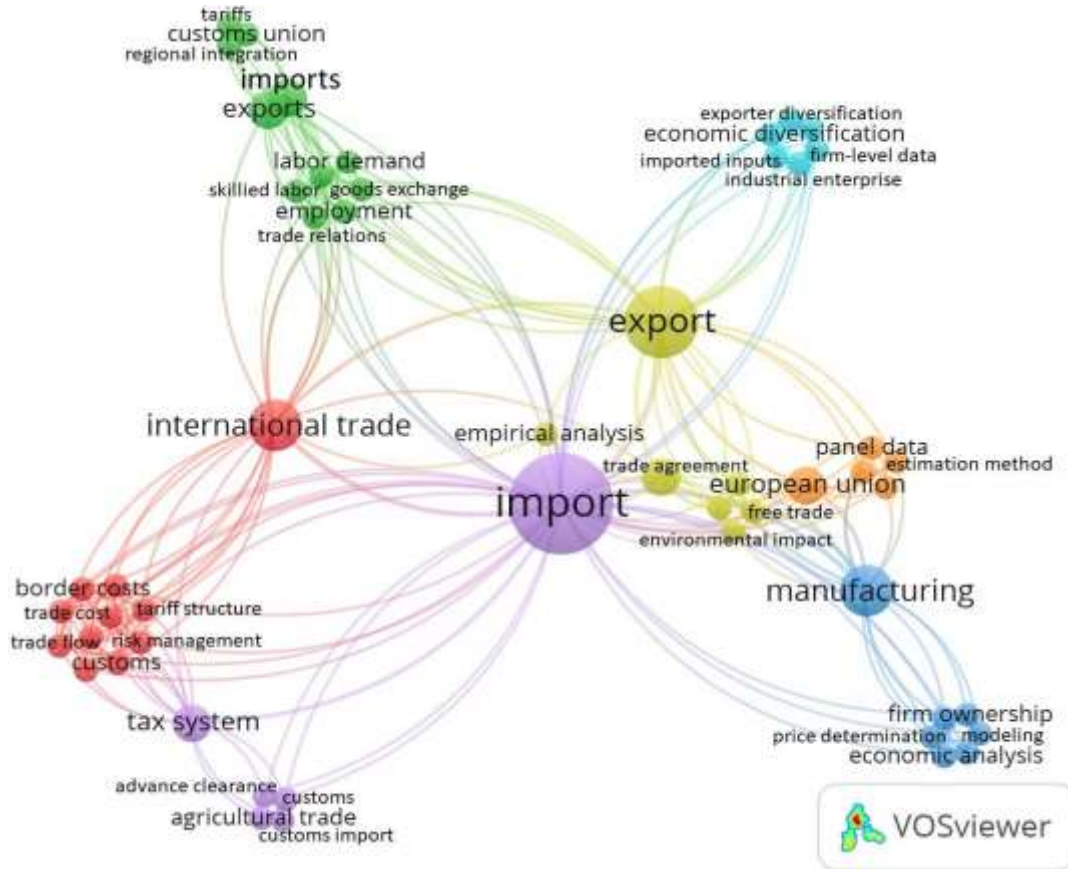


Figure 5. Map of keyword co-occurrence

## DISCUSSION

The study period, covering 2006 to 2023, yielded results showing that the years 2018, 2016 and 2012 had the highest number of published papers related to advance customs clearance. According to Noire (2020) states that research on advance customs clearance allows the assignment of import declaration numbers prior to the introduction of means of transport into a country. Consequently, Almeida et al. (2023) emphasize the importance of assigning import declaration numbers in advance to allow sufficient time to complete procedures and pay duties before the goods arrive at their origin, where customs procedures are exercised and free availability is established, withdrawing quickly from the land or air cargo terminal, or port terminal.

In addition, Sukoco et al. (2020) argue that it is more economical from a financial point of view to use guarantees to delay the payment of import duties for a longer period of time, with a number of days in the month following the day on which the discharge was completed. Similarly, Castillo et al. (2023) mention that it is important to note that there will be no penalties to pay if it is necessary to correct any information or data in the import

declaration, as long as the declaration is corrected immediately after completion of unloading, if there is no protective measure on the imported product.

On the other hand, Xia and Liu (2021) present another point of view, saying that having more time to optimize the management of the required logistics services and acquiring the rapid availability of goods upon arrival in the country is achieved by registering the import declaration prior to the arrival of the goods.

In general, advance clearance has advantages, such as those listed below: financialcost savings on secured declarations due to the deferral of tax payment until the 20th of the month following the date of unloading of imported products, as well as exemption from late penalties related to the modification of declaration information and the opportunity to control the removal of cargo from the port among other benefits, which minimizes processing or paperwork times (Sarajuddin, 2023; Amanca & Nieves, 2023).

## CONCLUSION

In line with the proposed objective of the research, the study on early clearance in customs has increased during the years 2006-2023, according to the bibliometric analysis of all publications indexed in Scopus; the highest growth was recorded in 2018, 2016, and 2012 (29.7%; n=22). Moreover, about 95% of the papers published on this topic are written in English, and the United States accounts for 28.1% (n=32) of the global output of the 31 countries evaluated. Consequently, Journal of International Economics was the most cited publication (n=71), while Manova, K. was the most cited author (n=481).

Moreover, the vast majority of these papers (92%) were research articles in fields such as economics, econometrics and finance (43%), social sciences (20%) and business, management and accounting (14%). According to the keyword analysis conducted by VOSviewer, the term "import" appears 61 times. However, the terms "export", "international trade" and "manufacturing" stand out as particularly important topics.

On the other hand, the selection of the 74 papers in the study demonstrates the importance of advance customs clearance, showing that goods can be declared before they are transported into the national territory. Finally, it is concluded that the literature on advance customs clearance has a general upward trend, both in terms of the resources available and the variety of subjects and authors who have contributed to this field. Thus, we seek to establish a written argument and use this bibliometric study as a foundation for future lines of research.

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