

Integrated Financial Administration System And Its Influence On Public Management

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Abstract

A documentary review was carried out on the production and publication of research papers concerning the study of Integrated financial administration system and public management variables. The bibliometric analysis proposed in this document was to know the main characteristics of the volume of publications registered in the Scopus database during 2017-2022, identifying 18 publications. The information provided by the said platform was organized using tables and figures, categorizing the information by Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics were described, a qualitative analysis was used to refer to the position of different authors for the proposed subject matter. Among the main findings of this research, it is found that Italy and the United States, with three publications, were the countries with the highest scientific production registered in the name of authors affiliated with institutions of those nations. The Knowledge Area that made the greatest contribution to the construction of bibliographic material related to the study of Big Data and Strategic Surveillance Systems was Computer Science, with 11 published documents, and the type of publication that was most used during the period mentioned above was the journal article, which represents 44% of the total scientific production.

Keywords: Big Data, Strategic Surveillance Systems, Competitive Intelligence.

1. Introduction

To remain competitive in today's environment and the high speed of change, companies must be at the forefront of perceiving the significant signs of change in our environment and monitor and observe the main variations within and outside our sector. The activities for the knowledge of the environment go less and less through economic analysis, which is the fundamental task of research, observation of the multiple changes in the environment and market research, and more and more through preventive surveillance systems.

Once introduced, the new capabilities of Big Data on the different marketing strategies, surveillance, and competitive intelligence describes an early warning system dedicated to exercising comprehensive tracking that collectively locates and organizes individual events that may be significant for the company. However, this evolution in the strategies and competitive intelligence systems has not been without problems; insufficient support in the system, lack of qualified personnel, failure to identify the objectives, and inadequately organized functions are some causes of failure in this system implemented. In any case, implementing such an approach will always be approached from the primary needs of the companies through a gradual and constant implementation and process.

It is precisely the Big Data that opens the possibilities to acquire any information, from data analysis, by the potentialities in the process and accurate decision-making in an effective manner. Therefore, to the extent that companies implement the various technological advances, they will be able to make the right decisions, study customers and their practices in detail, and from there, take commercial strategies, for this each company must implement the task of cultivating the culture of ICT, investigate, qualify and design market strategies according to their needs and intentions. For such reason, this article seeks to describe the main characteristics of the compendium of publications indexed in the Scopus database related to the variables Big Data and Strategic Surveillance Systems, as well. as the description of the position of certain affiliated authors during the period between the years 2017 and 2022.

2. General Objective

To analyze from a bibliometric and bibliographic perspective, the production of research papers on Big Data and Strategic Surveillance Systems variables registered in Scopus during the period 2017-2022.

3. Methodology

Quantitative analysis of the information provided by Scopus under a bibliometric approach on the scientific production related to the study of Trends in Architecture in Latin America is carried out. Also, from a qualitative perspective, examples of some research papers published in the area of the 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 Figure 1 are established.

3.1 Methodological design

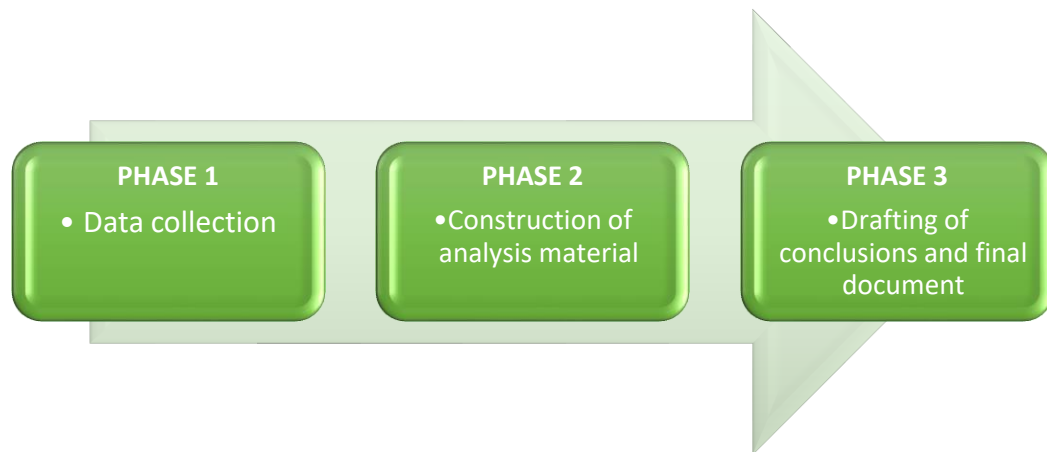


Figure 1. Methodological design

Source: Own elaboration

3.1.1 Phase 1: Data Collection

The data collection was carried out through the Scopus web page search tool, which identified a total of 18 publications. For this purpose, search filters were established consisting of:

TITLE-ABS-KEY (big AND data, AND strategic AND surveillance AND system) AND (LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017)))

- ✓ Published papers whose study variables are related to the study of Big Data and Strategic Surveillance Systems.
- ✓ Without distinction of country of origin.
- ✓ Without distinction of area of knowledge.
- ✓ Without distinction of type of publication.

3.1.2 Phase 2: Construction of analysis material

The information identified in the previous phase is organized. The classification will be made through graphs, figures and tables based on data provided by Scopus.

- ✓ Year of publication
- ✓ Country of origin of the publication.
- ✓ Knowledge area.
- ✓ Type of Publication

3.1.3 Phase 3: Drafting of conclusions and final document

After the analysis carried out in the previous phase, conclusions and recommendations are drawn up.

4. Results

4.1 Co-occurrence of words

Figure 2 shows the co-occurrence of keywords found in the publications identified in the Scopus database.

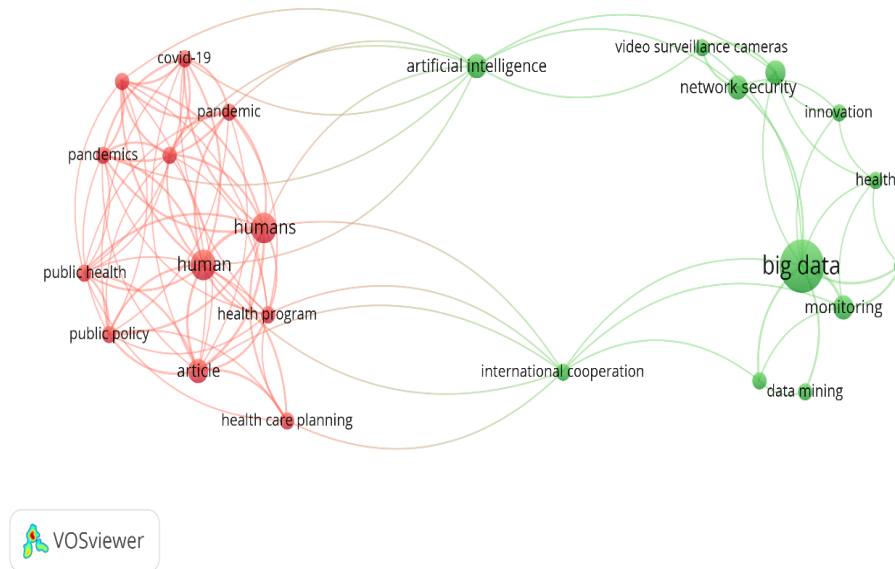


Figure 2. Co-occurrence of words

Source: Own elaboration (2023); based on data exported from Scopus.

Within the study of the research thrown by the Scopus platform, referring to the variables Big Data and Strategic Surveillance Systems, the object of this scientific debit is counted exposing the new capacities of Big Data in the surveillance systems with strategies and competitive intelligence, the introduction of new technologies and the wide emergence of interdisciplinary activities presents a great challenge for the companies outside the usual domain of their traditional competences. Globalization in the markets places the frontier of the same and its knowledge for the companies out of the reach of the traditional tools in charge of information management. For this reason, by interpreting Figure 2, it is possible to determine the keywords of the publications reported in Scopus, Artificial Intelligence, International Cooperative, Big Data, and Network Security. In response to the constant objective need to provide training techniques and analysis of the competitive and technological environment to achieve its objectives. This is the field of technology watch from the management of which comes the generation of important competitive advantages.

The management of strategies in the business framework must determine the properties of action based on an analysis. In this

process, the different options will be explained based on a strategic analysis as well as an analysis of the environment. The inclusion of these elements is a key factor in determining the potential generated to enable the monitoring of different environments and an ability to the company's current situation and its environment are the subject of a detailed and sustained analysis. However, reality shows that companies regularly use technological techniques less often than desirable and are less interested in using them in depth to obtain competitive advantages in the sector. Although this has changed in recent years, business strategies have been developed without considering the key aspect of technology and strategy.

4.2 Distribution of scientific production by year of publication.

Figure 3 shows the distribution of scientific production according to the year of publication.

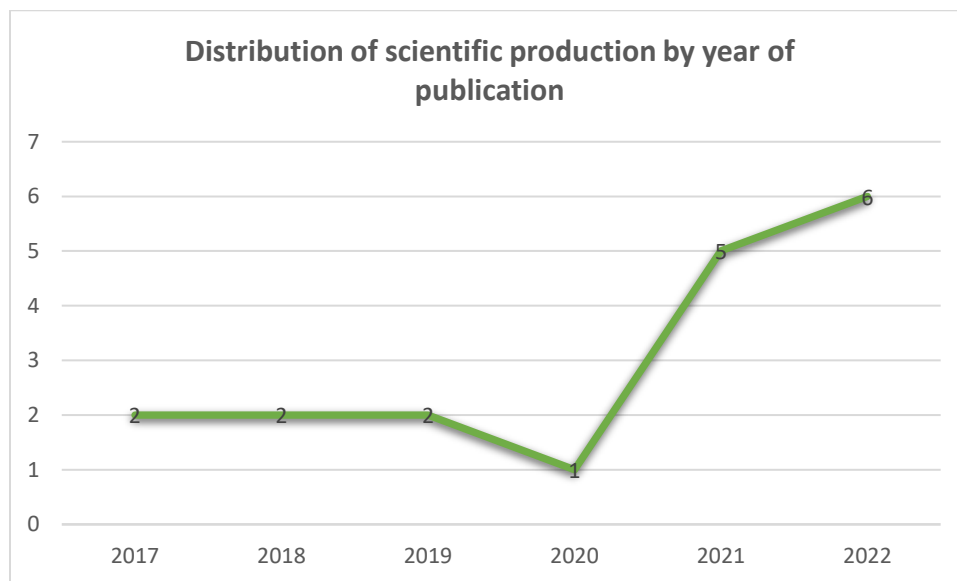


Figure 3. Distribution of scientific production by year of publication.

Source: Own elaboration (2023); based on data exported from Scopus.

Figure 3 shows the scientific production around the variables Big Data and Strategic Surveillance Systems in the period between 2017 and 2022, where the increase in production volume in 2021 is evident, with a total of 6 publications related to the keywords, among which the article entitled “Facing the national recovery and resilience plan: Data sources, indicators and participatory strategies in the health and social field” stands out (Franchini, Molinaro, Caiolfa, Salvatori, & Pieroni,

2021). whose scope of study focused on innovation and Italy's national data recovery plan, whose objective is based on the monitoring of processes, impacts and results obtained through a system of new indicators that are practical to collect. Secondary data sources, their availability and information potential should be evaluated, and primary sources should be implemented to complement traditional disease surveillance. This paper highlights the most relevant aspects to overcome the mismatch between complex community needs and current health/social supply and how these aspects could be addressed. As a result, a structured multi-phase process is proposed to establish the design and functionalities of a cooperative information system based on the integration between primary and secondary data to inform policy on chronic low back pain (CLBP), a widely recognized determinant of disability and significant economic burden.

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.

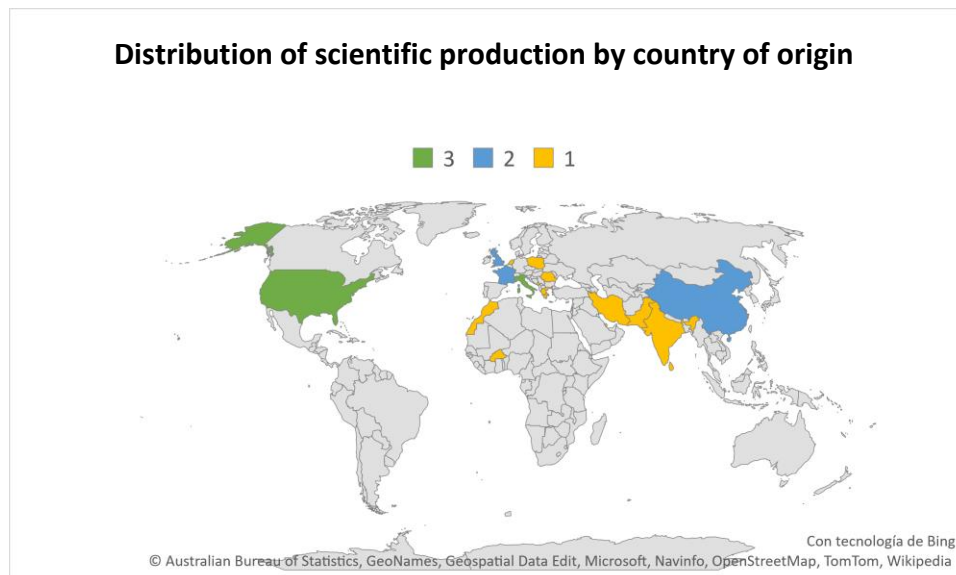


Figure 4. Distribution of scientific production by country of origin.

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

The United States was the country with the highest number of publications registered in Scopus referring to the study of Big Data and Strategic Surveillance Systems variables during the period 2017-2021 with a total of 3 publications, followed by China with 2 registrations and France with 1. However, the article “Disruptive innovations to help

protect against future threats” stands out (Wong & Sambaluk, 2017), whose objective proposes that by adding disruptive innovations, the type of innovation that tends to be cheaper and less technologically complex, to its R&D portfolio mix, the U.S. military will not only strengthen its offset strategy but also better protect against future threats by reducing the likelihood of strategic surprise. In this paper, the study includes a review of Christensen and Bower’s disruptive technologies framework to illuminate successful innovations in military history and provide insights into how the U.S. can foster disruptive innovation.

4.4 Distribution of scientific production by area of knowledge

Figure 5 shows the distribution of the production of scientific publications according to the area of knowledge through which the different research methodologies are implemented.

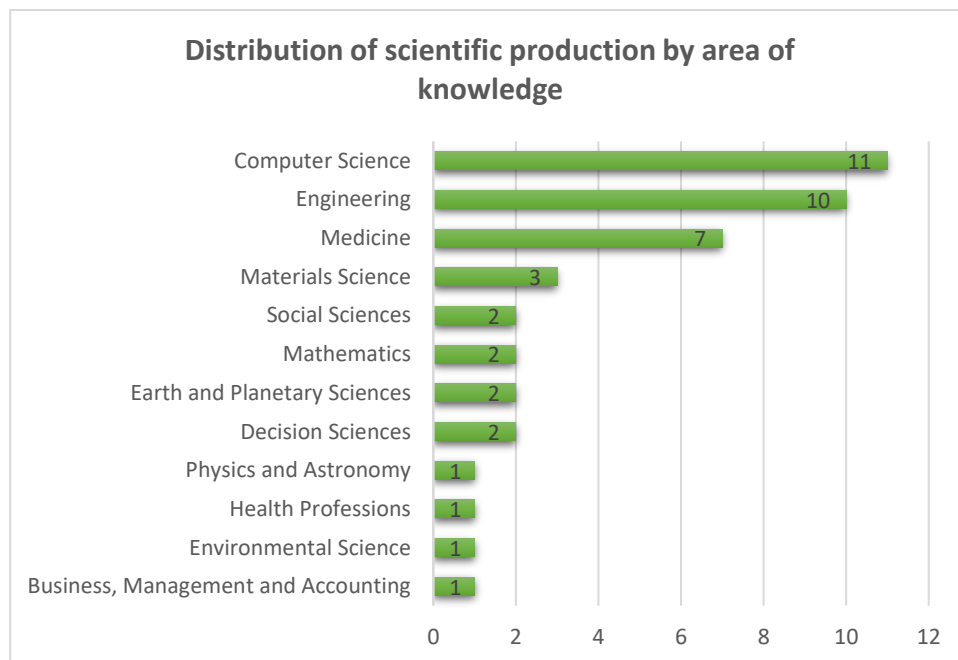


Figure 5. Distribution of scientific production by area of knowledge.
Source: Own elaboration (2023); based on data provided by Scopus.

Computer Science was the knowledge area with the highest number of publications registered in Scopus, with 11 papers that based their methodologies on the new capabilities of Big Data for strategic surveillance and competitive intelligence systems. In the second place,

Engineering with 10 papers. The above can be explained by taking advantage of the new technologies that Big Data offers us in information management and monitoring. This impact is reflected in the area of Communication Sciences article entitled “Big data opportunities: monitoring and management of the system status,” which explains the monitoring and management of the system status (Tsui et al., 2019), which explains that system state monitoring and management (SHMM) refers to the framework of continuous monitoring, analysis and interpretation of data relevant to system maintenance, management and strategic planning. This framework is essential to ensure that an entire system is stable and under control. A fundamental problem in SHMM is the optimal use of correlated active and passive data in tasks including prediction and forecasting, monitoring and surveillance, fault detection and diagnosis, engineering management, and supply chain management. This paper provides a new perspective on SHMM in a big data environment, discussing its relationship with other disciplines, and presenting several applications to complex systems.

4.5 Type of publication

Figure 6 shows the distribution of the bibliographic findings according to the type of publication made by each of the authors found in Scopus.

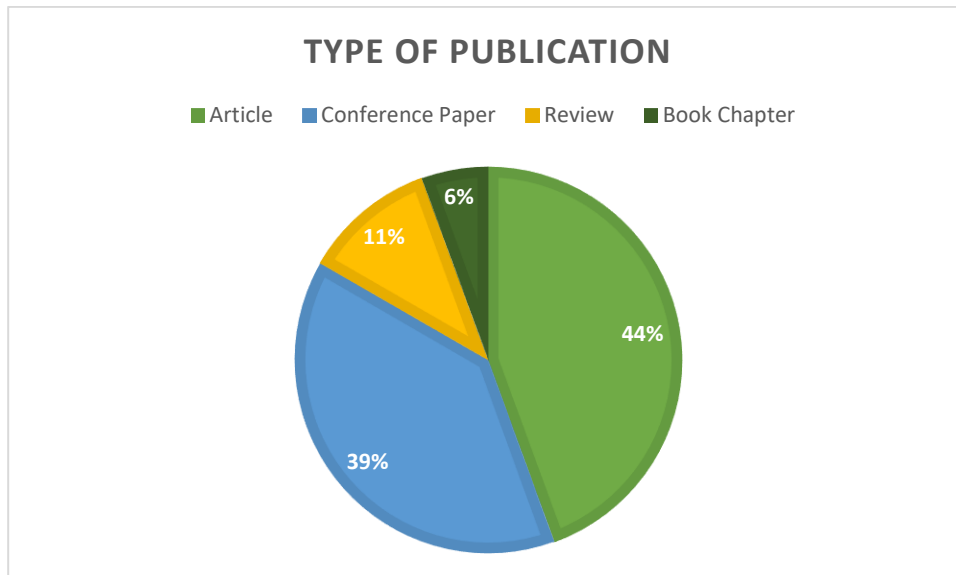


Figure 6. Type of publication

Source: Own elaboration (2023); based on data provided by Scopus.

The articles were the most frequently used type of publication; 44% of the total scientific production corresponds to this document type. In the second place, Session Papers with 39% and Journals with 11%. The article entitled “Construction and application of an oceanic big data platform based on UAV system” stand out in this last category (Yan et al., 2018), whose objective requires strengthening the capacity to build the omnidirectional stereoscopic oceanic monitoring system. The UAV system can be used as an important complementary method compared with satellites, ships and helicopters, which could provide a good guarantee for reconnaissance, surveillance, intelligence gathering, target positioning and emergency response missions with its high reliability, high efficiency and low cost and low risk. The construction and application of an ocean big data platform based on UAV system is a hierarchical architecture including an application layer, service layer, access layer and top-down resource layer. The integrated application, including environmental forecasting, disaster warning and situation analysis, shows the high intelligence of the platform, which describes the real intelligent ocean system. Above all, the construction and application of the ocean big data platform based on the UAV system can provide a variety of data access methods, intelligent services, and applications. It will bring new chapters to intelligent monitoring, dynamic prediction, systematic analysis, emergency response and other marine applications with its all-direction service capability, all-weather access and all-commercial coverage.

5. Conclusions

Through the bibliometric analysis carried out in this study, it was possible to establish that the United States was the country with the largest number of published records regarding Big Data and Strategic Surveillance Systems variables, with a total of 3 publications in the Scopus database during the period 2017-2021. Similarly, it was established that the application of theories framed in the area of Communication Sciences was the most frequently used in the measurement of the impact generated by the new Big Data capabilities for strategic surveillance and competitive intelligence systems, the objective of which is to provide complementary information for decision making in anticipation of market trends, technological trends and predictions on technological issues and the business environment to overcome the gaps and minimize the weaknesses identified from the information provided. In this way, the study seeks to provide information for risk mitigation in global market decision-making. In this

process, new technologies and competitive intelligence consolidate a larger scope, which encompasses the organizational process to prevent, perceive, filter and analyze in an organized manner over various periods, which offers a panoramic, qualitative and quantitative vision in the technology sector. Based on previously established indicators. This generates dynamic reports that facilitate the evolution and organization of information to improve business competitiveness and its ability to fertilize new research programs and development projects.

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