

# Business Satisfaction With The Services Provided By The Public Port Entities In Ecuador

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## Abstract

A documentary review was carried out on the production and publication of research works related to the study of the variable Satisfaction of the Companies with the Services provided by the Public Port Entities 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 112 publications in total. The information provided by the said platform was organized through 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, the position of different authors regarding the proposed topic was referenced by employing a qualitative analysis. Among the main findings of this research, it is found that Brazil, with 52 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 the Satisfaction of the Companies with the Services provided by the port Public Entities was Social Sciences with 48 published documents, and the Type of Publication most frequently used during the above-mentioned period was the Journal Article, which represents 64% of the total scientific production.

**Keywords:** port services, public entities, business satisfaction.

## 1. Introduction

Port services are all activities related to port logistics such as loading and unloading of goods, ocean engineering works, legalization of goods, and their subsequent transfer to another type of transport, among others; therefore, their correct operation is determined by the administrative and logistic port entities, which are mostly public, of course, and their correct management and surveillance are of

great importance to carry out all the necessary processes in the port activity effectively.

In the case of Ecuador, being a country that has access to the Pacific Ocean, it facilitates international trade through ports, having 7 ports and 4 of them currently active, it needs to guarantee the satisfaction of the companies that use these port services to encourage imports and exports in the country, guaranteeing good levels of international trade. This is only possible if the port activities

are carried out efficiently, even though this is not what the private companies experience in the use of these services, since shortcomings were identified in their execution, such as the poor planning of these services, which generates a lack of coordination in their execution and delays in the delivery of goods, which create losses for the companies, low security in port records, which could help to increase traffic and theft of goods, and finally, non-compliance with the policies established by these companies when providing port services, which creates uncertainty about the processes to be carried out, resulting in an impact on port productivity indicators (Avilés Maridueña & Quijije Pincay, 2016).

Therefore, it is necessary to implement improvement plans to raise the quality indicators in the provision of port services so that companies have a good image of the logistics used by the public entities of the ports, encouraging the economy through the marketing and exchange of products. Thanks to the above, the port services provided by public companies in Ecuador are still deficient, which translates into low levels of user satisfaction, evidencing the need to improve infrastructure, logistics, and security. Therefore, it is important to know in terms of bibliographic resources, the current state of the research related to the Satisfaction of the Companies with the Services provided by the port Public Entities, so a bibliometric analysis of the scientific production registered in the Scopus database during the period 2016-2021

is proposed to answer the question: How has been the production and publication of research papers related to the study of the variable Satisfaction of the Companies with the Services provided by the port Public Entities 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 papers on the variable Satisfaction of Companies with the Services provided by Public Port Entities in Latin America during the period 2016-2021.

## 3. Methodology

Quantitative analysis of the information provided by Scopus is carried out under a bibliometric approach to the scientific production regarding the Satisfaction of the Companies with the Services provided by the Port Public Entities. Likewise, it is analyzed from a qualitative perspective, examples of some research works published in the area of the study mentioned above, from a bibliographic approach to describe the position of different authors on the proposed topic.

The search is carried out through the tool provided by Scopus and the parameters referenced in Table 1 are established.

### 3.1 Methodological design

	PHASE	DESCRIPTION	CLASSIFICATION
PHASE 1	DATA COLLECTION	Data was collected using the Scopus web page search tool, through which a total of 112 publications were identified.	Published documents whose study variables are related to the Satisfaction of the Companies with the Services provided by the port Public Entities.

			<p>Research papers published during the period 2016-2021.          Limited to Latin American countries.          Without distinction of area of knowledge.          Without distinction of type of publication.</p>
<b>PHASE 2</b>	CONSTRUCTION OF ANALYSIS MATERIAL	<p>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.</p>	<p>Word Co-occurrence.          Year of publication          Country of origin of the publication.          Area of knowledge.          Type of publication</p>
<b>PHASE 3</b>	DRAFTING OF CONCLUSIONS AND FINAL DOCUMENT	<p>After the analysis carried out in the previous phase, we proceed to the drafting of the conclusions and the preparation of the final document.</p>	

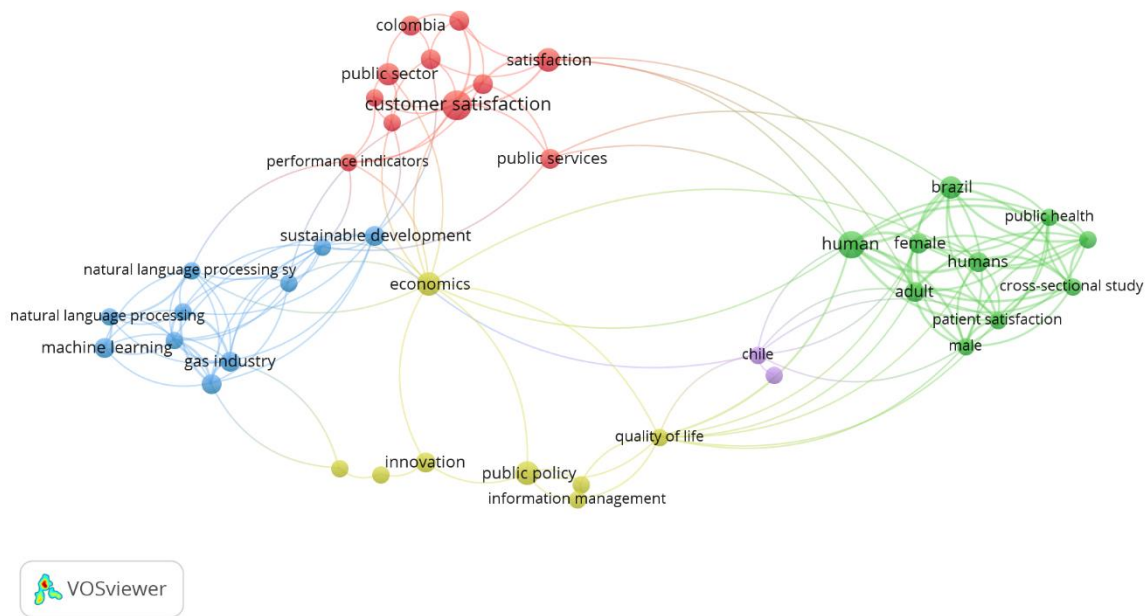
**Table 1.** Methodological design.

**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

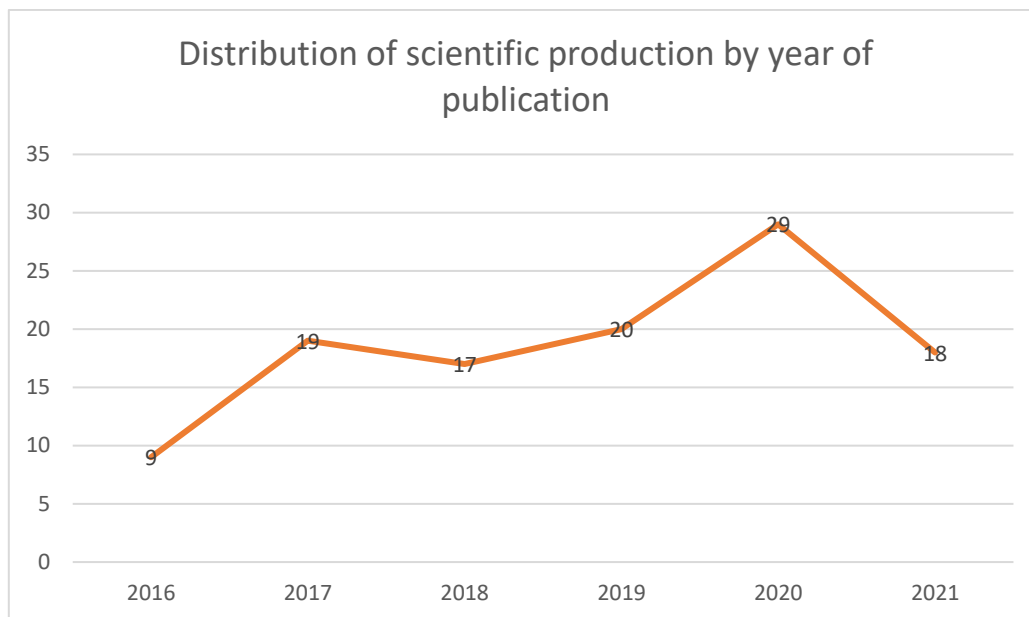
**Source:** Own elaboration (2022); based on data provided by Scopus.

As shown in Figure 1, the most frequently used keywords in research related to the variables under study are customer satisfaction, economy, and public policies, which refer to the measures implemented by the public entities in charge of the control and exercise of port activities to improve the satisfaction of the companies that use this means of transport for the commercialization of goods, making all port procedures efficient and encouraging economic dynamics through the international exchange using imports and exports. There are also keywords such as information management, performance indicators, and public sector, which refer to the need to keep strict control of the processes to develop improvement plans to make the service provision more effective, so that the management of information is very important to determine shortcomings in the exercise of

their work, which translates into a correct analysis of the functions allowing public entities to have control of the performance indicators allowing the loyalty of customers, thus a higher level of satisfaction. Finally, there are keywords such as sustainable development and innovation, which shed light on the processes adopted by all companies seeking to make their processes more environmentally friendly, so the port sector is no exception, seeking in recent years measures to ensure reducing the impact of this exercise on the environment.

#### **4.2 Distribution of scientific production by year of publication.**

Figure 2 shows how the scientific production is distributed according to the year of publication, taking into account the period from 2016 to 2021.



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

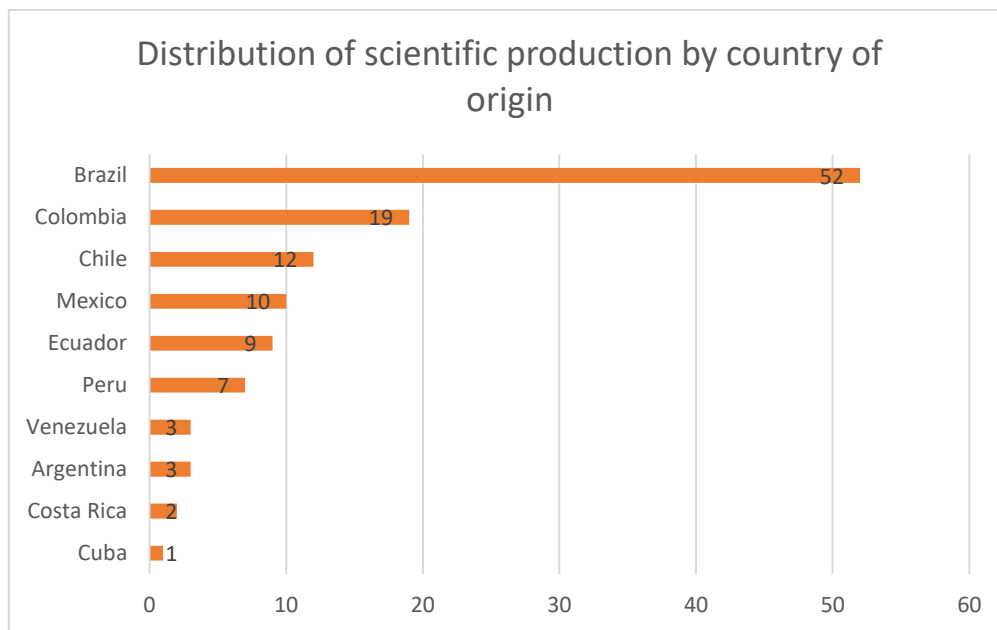
2020 is the year with the highest number of published papers related to the variables under study presenting 29 publications, within which is the title “Mdr surflexdock: A semi-automatic web server for discrete coupling of receptor ensembles” (de Almeida Filho & Fernandez, 2020). This paper presents Mdr surflexdock which is a system that allows the improvement of coupling experiments by calculating a discrete ensemble of the grouping of molecular simulation trajectories to simulate the flexibility of the receptor allows the creation of improvement systems in favor of making patterns with little structural information or only optimized for specific binding.

In second place is 2019 with 20 publications registered in Scopus within which one can find the title “Approach to an integral valuation of the ecosystemic services of the mangrove in a marine protected area. Colombian Pacific region” (Rojas et al., 2019). In this document, the importance of Colombian mangroves in

the protection of fauna and flora but also in the elaboration of subsistence products for the nearby community is evidenced, so this paper seeks to understand the socio-ecological interaction and the relationship between functional ecosystems and the interaction of the market and the ability to support human welfare being necessary that port services take into account this kind of protected territories so that in their logistics they are not affected by port infrastructure affecting the quality and supply of eco-systemic services. Therefore, to achieve satisfaction with port services, it is also necessary to take into account the ecological impact caused by the port infrastructure.

### **4.3 Distribution of scientific production by country of origin.**

Figure 3 shows the distribution of scientific production according to the nationality of the authors.



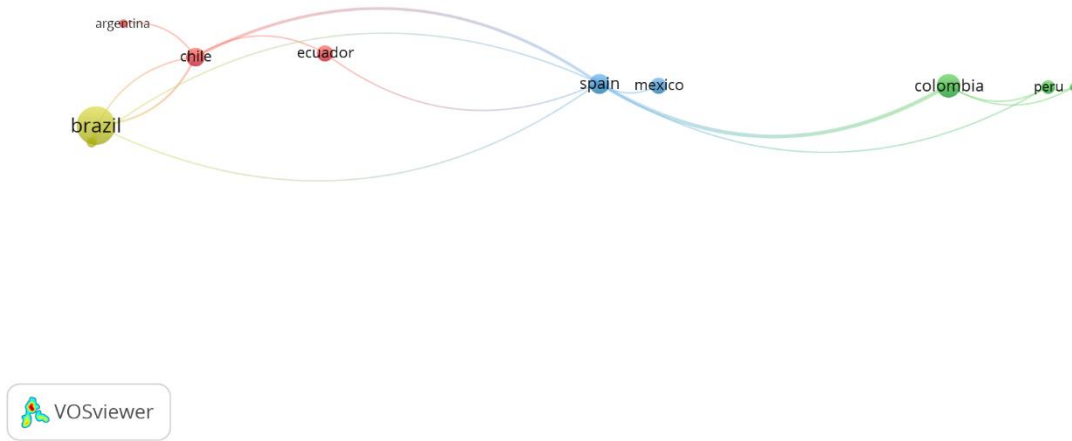
**Figure 3.** Distribution of scientific production by country of origin.

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

Brazil is the Latin American country with the highest number of publications presented related to the variables under study during the period 2016-2021 presenting 52 documents, within which we can find “Integrated and ecosystemic approaches to close the gap between environmental management and port management” (García-Onett et al., 2018). This document has as its main objective to establish bridges between the Environmental Management Systems and Tools of the economic sectors and the models of Integrated Management in Ecosystems all this knowing that this exploitation of the ecosystem is at a critical point, so implementing integrated and ecosystem-based management models, taking into account the great complexity of the marine socio-ecological systems is of great

importance to ensure the conservation of the environment and in turn, optimize port logistics.

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 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 4, which shows the flow of collaborative work from different countries.



**Figure 4.** Co-citations between countries.

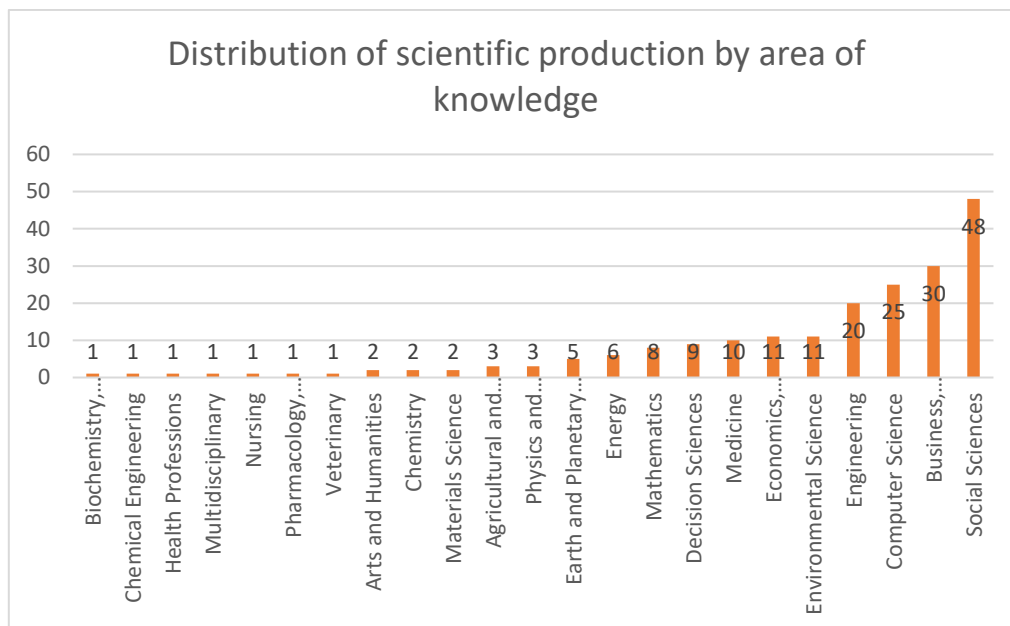
**Source:** Own elaboration (2022); based on data provided by Scopus.

Figure 4 shows Brazil as the country with the greatest contribution to research related to the Satisfaction of Companies with Port Services Provided by Public Entities, with documents in collaboration with Argentina, Chile, and Ecuador, carrying out comparative studies to determine how port logistics performs in these countries and to analyze progress and shortcomings. In second place is Colombia with 19 documents, among which are documents prepared in co-authorship with countries such as Spain, Mexico, and Peru, which shows the interest of the countries to learn about the levels of satisfaction in port logistics. Among these documents is the title “Evolution of the port system: The emergence of second-tier hubs” (Monios et al., 2019). This document has as its main objective to establish the dynamics of the new hierarchical process between hubs and feeder ports, from illustrative cases in Asia, South America, and

Europe. Taking into account spatial factors talking about the size to allow navigation within the minimum range, economic factors with the increase of direct services and a greater number of large vessels that need to distribute the goods in smaller ships, as an opportunity to promote economic growth. This concludes with the need to create specific port hierarchies for clusters, enhanced in the presence of aggressive management strategies and supportive policies.

#### 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 are the areas of knowledge with the greatest number of contributions through the theories that are framed in it, in the search for new knowledge on the Satisfaction of the Companies with the Services provided by the port Public Entities, presenting 48 documents within which is the paper entitled “Geospatial and sectorial change of the assembly for export in Mexico. Structure, geospatial and strategy. 1990 to 2014” (Bátiz López et al., 2017). This document begins by defining how the automotive industry has behaved in Mexico being the exporter of parts but not of assembly, even so, this boom of this industry has represented an increase in employment and foreign exchange income at a critical time due to the slowdown of re-exports of electronic products and have increased their participation in the GDP, causing a change at national level all these thanks to the efforts of the government. All this despite being very favorable for the country's economy, there are long-standing structural problems that affect the provision of port services by public entities since they do not have the infrastructure or logistics necessary to ensure a good service, so they propose the union with the service sector

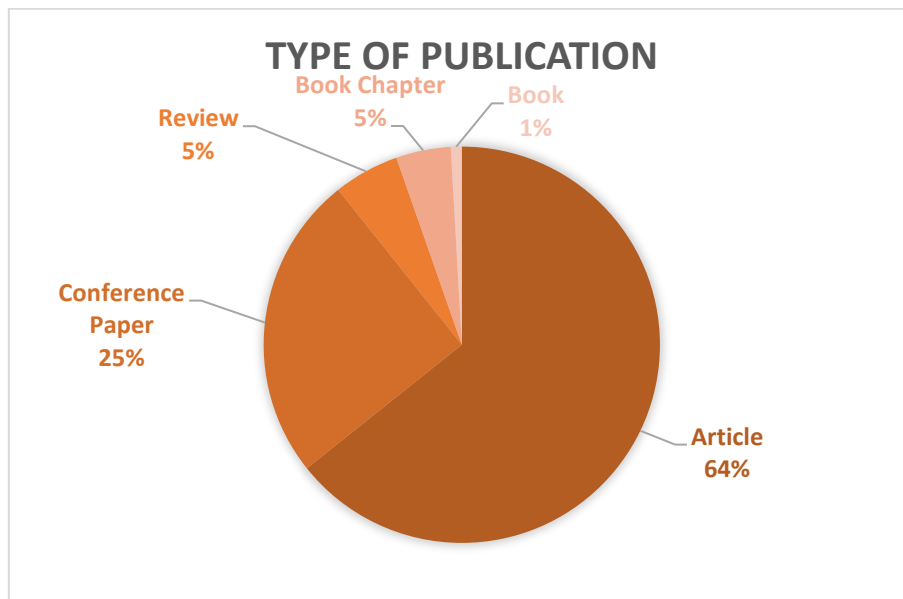
to make possible the assembly of automotive products in Mexico.

In second place is business, where 30 documents were written following the guidelines of the topics related to this area, within these documents is the one entitled “Quality Transport Infrastructure and Logistics Performance in Exports” (Sénquiz-Díaz, 2021). This study has as its main objective to measure the effects of common modes of transport and cargo and logistics performance on exports of goods, highlighting the importance of transport infrastructure and logistics resources and how this helps to achieve a greater number of exports benefiting developing economies. Even so, several failures in these factors were evidenced, taking into account that the level of logistics services is a detrimental factor that affects the export of goods in developing economies due to the lack of infrastructure on the part of state companies, so it is necessary to design and implement integration strategies with the private sector to improve the performance of logistics providers to facilitate exports.

#### 4.5 Type of publication



Figure 6 shows how the bibliographic 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, 64% of the total number of documents identified through Phase 1 of the Methodological Design, correspond to Journal Articles, among which is the one entitled “Application of the eco-systemic basis in the environmental management of ports” (Andrade et al., 2018). This document presents an integrated and multidisciplinary management proposal for the different sectors and port services using information support that allows establishing the ecosystem basis allowing the identification of macro activities present in the port and characterization of the environmental aspects generated by the macro activities of the port to address the economic, environmental and social impacts that allow foreseeing the generation of solid waste; interactions that generate structural changes in marine ecosystems and allow interaction with the local port community.

In second place are the conference proceedings representing 25% of the total number of documents within which is the title “Mexico’s logistics performance index as a sustainable indicator” (Thierry-Aguilera et al.,

2020). This document aims to detail the development of Mexico’s logistics infrastructure to date, describing the different types of logistics assets to determine the quality of service and how far they are on the road to sustainable development, so the indicators were analyzed during the years 2007 - 2014, where it was shown that although there were improvements regarding sustainable development plans and the quality of service provided, they are not enough, so a comprehensive logistics development plan was proposed to optimize the country’s competitiveness.

## 5. Conclusions

Thanks to the bibliometric analysis proposed in the present 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 from 2016 to 2021 with a total of 112 documents. The scientific production related to the study of the Satisfaction of the Companies with the Services provided by the port Public Entities has presented an important growth during the

above-mentioned period, going from 9 publications in 2016 to 18 units in 2021, that is to say, the creation of bibliographic records was doubled in 5 years, which indicates the importance of Quality port services in the levels of satisfaction of the companies in their commercial activities.

Business satisfaction is the result of all the processes carried out in the middle of an economic activity helping customer loyalty; on the other hand, port services are all those actions related to the logistics of loading and unloading of goods among others, these activities are usually performed by public entities that are also responsible for all legal processes of goods that are imported or exported, unfortunately, these services are not provided with quality having deficiencies in security, logistics and time. In Ecuador, certain problems make companies not satisfied with these processes such as lack of planning, delays that violate the time stipulated for each process or procedure, and poor security that can lead to theft or a higher rate of illegal goods. It is, therefore, necessary to devise improvement plans, also aimed at sustainable development, that seek to optimize port operations, helping to provide a quality service that encourages companies to import and export, improving their competitiveness and thus helping the country's economy. All of the above allows this article to conclude, highlighting the importance of knowing the theory or bibliographic resources that seek to awaken the interest in port organizations to implement improvement plans that seek to offer quality services to companies. 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, to give the reader a broad view of the current situation of the literature on the Satisfaction of the Companies with the Services provided by the port Public Entities.

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