Organizational Structure and Its Influence on Decision-Making: A Bibliometric Analysis

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Abstract

This research aimed, through a bibliometric analysis, to generate a Bibliographic Portfolio of articles submitted for aligning organizational matters and taking public administration. National and international literature was used in order to contribute and facilitate the investigation of future research on the related theme. For the analysis, the Proknow-C methodology was used, with a publication time limit of 20 years, from 1999 to 2019, using Scopus, Web of Science and Spell as databases. A research resulted in the construction of a portfolio containing 4 research articles that shown alignment with the topic. Two articles aimed to build models to optimize management decision making in the complex environment of applicable technologies and resources, while the other articles analyze the decision making process, one article related to structured ethical decision and the other to public participation in decision making in four different countries. The content of the Bibliographic Portfolio allows a direction for future research, allowing the development of theoretical bases on the articles that stood out in the research.

Keywords: Organizational structure; Decision; Decision-making process; Bibliometric; Proknow-C.

1. Introduction

The need for organizational transformation due to the great instability of the world, such as the pandemic caused by COVID 19, means that countries are in constant adaptation. Organizations in this environment have become unstable, face daily challenges and each direction to be followed need constant decisions and

restructuration to meet the different scenarios to which they are subject. However, the organizations must be able to measure their capacities in the face of future decisions, seeking to circumvent the barriers and seize the opportunities shown at their doors.

These rapid transformations of the scenarios in which they are inserted make them take immediate and consistent decisions (Nunes, Ribeiro & Oliveira, 2019). Guimarães and Évaro (2004) point out that there are several decision models, they recognize that the decision will always be a result of a sequential, structured and directed process to solve any problem or opportunity. The authors also emphasize that information is a primary resource for the decision-making process, and it is extremely important that the processes are structured. Thus, the more the structure of the organizational process is aligned with the organizational objectives, the more conducive to achieving the objectives the organization is.

In this context, the guiding question of this study arises: where to find sources of information and scientifically relevant data that address the organizational structure in the decision-making process in public organizations?

Thus, the general objective of this research is to identify sources of information and most relevant scientific data on organizational structure and its influences in the decision-making process. With this identification, we seek to indicate articles and authors who research on the theme, serving as a guide for other researchers on decision making, in order to fill the review gap on the theme's productions. The data and information were limited to those available on the following scientific resources: Scopus Platform, Web of Science (ISI) and Spell, in the period from 1999 to 2019.

As an intervention instrument, it was used the Knowledge Development Process-Constructivist method (ProKnow-C), developed by the Laboratory of the Multi-Criterion Decision Support Discipline (MCDA) at the Federal University of Santa Catarina (Ensslin, Ensslin, Lacerda & Tasca, 2010; Afonso, Souza, Ensslin & Ensslin, 2011; and, Ensslin, Ensslin, Pacheco, 2012).

This research is justified by the need to explore, in a structured way, the theme "organizational structure and its influences in the decision-making process", which according to Daft (2014), the asymmetry of information makes decision makers feel overwhelmed, since the information is not part of the organization's process. Another point to be raised is the difficulty of any researcher in finding a systematic search method for searching databases (Vilela, 2012). This article also seeks to debate the topic clearly, providing researchers in the area with a measure of productivity and guidance for decisions, as well as serving to explore the state of the art of research aimed at that topic.

This article consists of six more sections, in addition to this introduction section. The study is structured as folows: section 2, presents a brief conceptualization of organizational structure and decision making; section 3 deals with the methodological procedures adopted in the present research; section 4 presents the results achieved; section 5, presents the implications of this study; section 6, presents the final considerations; and finally, the references used for the construction of this research are presented.

2. Theoretical foundation

The theoretical basis intended to demonstrate, under the academic view, the concepts and definitions on the subject applied in this study. The idea raised in this section is of paramount importance, since the

selection of articles used in the research is related to the knowledge that the researcher has on the researched subject. In this sense, this section aims to provide the conceptual foundations on organizational structure and decision making.

2.1 Organizational structure

A basic conceptualization for organizational structure would be to consider it as a set of units or bodies interconnected by functional and hierarchical lines integrating all the resources of the organization, establishing the functions and activities, as well as, determining the communication channels (Oliveira & Silva, 2006). There are many definitions of organizations, for example: Prevé, Moritz and Pereira (2010) conceptualize organization as being an entity that provides goods and services, being constituted by a group of individuals organized to achieve a common goal.

Robbins (1990), on the other hand, defines the organization as "a consciously coordinated (led) social entity, with a relatively identifiable frontier, which works on a relatively continuous basis to achieve a common objective and/or objectives". For Cury (2000) an organization is a planned system of cooperative efforts in which each participant has a defined role to perform and duties and tasks to develop". The survival and growth of the organization is what most people aspire to. Objectives that require groups of two or more people, which establish between these cooperation relations (coordination), in formally coordinated actions and differentiated hierarchical functions.

Still with the purpose of understanding the organizational structure, Daft (2014) mentions the difficulty in conceptualizing the organization as it involves the definition of several characteristics. Thus, it is understood that organizations have distinct characteristics of difficult standardization of their specificities, in addition to encompassing several structures interconnecting the diverse resources that compose them.

Every organization must be prepared to offer a flow of horizontal and vertical information, following the needs to achieve its objectives, being entities built and directed towards the achievement of goals, designed as activities in systems and linked to the external environment (Daft, 2014). However, the organizational structure is affected by the complexity of the external environment, mainly influencing centralized decision-making, since decision-making is limited to the group of senior managers (Wagner & Hollenbeck, 2012).

Also according to the last authors above, because there are several types of structure, there is no single type to satisfy all organizations. However, there are some types of structures designed with the intention of adapting to the characteristics of the organizations.

Therefore, the organizational structure is responsible for keeping the organization aligned with its objectives, according to Silva (2017). The term organizational structure refers to a set of units or organs used to integrate all the resources of an organization, such as: human, material, technological, among others. Daft (2014) states that the organizational structure can be grouped into three key components: the first, determines the formal relationships of subordination; the second, identifies a group of agents by area and as a whole; and, the third, develops and maintains a system of communication, coordination and integration of efforts between the areas. However, they must be limited according to the objectives and strategies established to achieve the objectives, defining the divisions, formalities, centralization, integration and amplitude of control (Oliveira & Silva, 2006).

Thus, the structure of an organization determines the processes, the division of activities and resources to reach the established goals, performing the interconnection between the different sectors and functions. As it is the object of connection with the organization's objective, the structure must adapt and meet the needs disposed in the activities of each scenario involving the complex internal and external environment, as well as ensuring a precise direction for the decision making of managers in organizational processes.

Therefore, the structure of an organization must follow the needs of each scenario of complex and changing environments in the course of its operations. The dynamic element that corrects the directions and adapts the structures according to the environment is presented below. It is about decision making, a function of competence of the organization's managers.

2.2 Decision Making

Every organization needs to manage resources in order to achieve its established strategic objectives. Making decisions is part of the daily routine to achieve the goals set. For this reason, the organizational decision-making process becomes an extremely important factor for an organization (Mações, 2017).

The decision-making process is the search for solutions to problems and opportunities that arise daily, ranging from decisions that are part of everyday life to decisions that involve short and long-term project planning. Decisions can also be short to long term, involving small and large organizations, with large investment of capital or not (Prevé, Moritz & Pereira, 2010). Thus, it is possible to see that the decision-making process can involve several factors, as well as several problems and solutions, making it an important element for every manager and every organization.

In public organizations this reality is no different, the public manager must carry out his activities based on rigid laws and routines with different decisions. In this context, Andrade (2007) makes it clear that the decisions made by managers can indicate peculiarities of different models of decision making, such as: rational model of decision making; limited rationality model; incremental model; procedural model; and, political model of decision making.

Still according to the author, the most worrying, however, is to note that there is no ideal among these models, as the limitations of one model can be complemented by another, depending on the scope of the manager's view. However, for Daft (2014), each decision has different degrees of complexity and categorization, in which the main aspect that the administrator must keep in mind is that each decision process is specific to a certain organizational situation, and its adaptation is considerable according to the change of the scenario.

Also according to Daft (2014), the decision-making process normally involves two stages: identification and solution of the existing problem. The identification of the problem relates to the collection of information about the conditions of the problem, seeking to know the state of the environment and its factors, in order to diagnose the irregularities and measure the level of performance to be involved. The solution of the problem involves all the alternatives elaborated and that can be considered to solve the existing problems, where one is selected to be implanted.

For Carneiro et al. (2017), the practice of the decision-making process should seek to answer four questions: 1) what are the feasible alternatives?; 2) what are the consequences of each one?; 3) what is the value of the consequences that we attribute, related to each of the previous alternatives?; and, 4) what criteria will

be used for the final choice? Thus, by analyzing the questions, it is possible to understand the importance of the organizational structure as a driver for decision making. If an organization's structure is aligned with its main purpose, decision making can be more effective.

3. Methodology

For a better presentation, the methodology was divided into two subsections: methodological procedures and intervention instrument.

3.1 Methodological Procedures

The study was carried out from an exploratory research of a descriptive nature with a quantitative approach through the Proknow-C method. The main objective of the research is to explore the subject matter of the study, as well as to clarify concepts and points of view. Typically, a descriptive research involves bibliographic and documentary studies, in addition to being considered an initial stage of most researches (Gil, 2010).

The quantitative research seeks the approval of hypotheses through the use of structured data, statistical procedures, in addition to the use of analyzes of many representative cases (Mattar, 2001). Regarding technical data collection procedures, it can be classified as bibliographic, based on secondary sources, such as scientific articles indexed in the Scorpus and Web of Science search platforms, both international bases, and Spell, a national base. As a delimitation of the sample, scientific articles in the Portuguese, English and Spanish languages from 1999 to 2019 were considered, and researched in the indexers of the subject area. The technique used was the bibliographic review instrument called the Knowledge-Constructivist Development Process (ProKnow-C), created by the Multi-Criterion Decision Support Laboratory (MCDA) at the Federal University of Santa Catarina (UFSC), which, in a structured and sequential manner, presents a process that produces knowledge about a given topic in the literature (Ensslin et al., 2010; Afonso et al., 2011; Ensslin et al., 2012).

3.2 Intervention Instrument

The intervention instrument operated in this article, as already noted, is the Proknow-C, which presents a structured and rigorous sequence, in order to decrease the randomness in the creation of knowledge, according to the limitations placed by the researcher, based on a constructivist view (Afonso, 2011). The aim of the article is to produce knowledge about a specific gap in the scientific literature. This instrument consists of sequentially structuring the procedures, consisting of four phases. However, this research is limited to the first and second stages of Proknow-C, that are a portfolio selection and a bibliometric analysis, as the procedures of the chosen method.

3.2.1 Selection of the bibliographic portfolio

The selection procedure of the bibliographic portfolio in the Proknow-C method, established by LabMCDA, consists of a succession of mechanisms, such as the search engine determination, following pre-defined steps, such as the selection of keywords, adherence test and filtering articles. Each step

containing suggestions for the selection of articles, in order to produce a bibliographic portfolio of publications with scientific relevance and alignment with the subject, according to the researcher's understandings and restrictions (Ensslin et al., 2010; Afonso et al., 2011; Ensslin et al., 2012).

The construction of the articles roll is divided into two sub-processes: 1) selecting the articles in the databases to compose the Overall Article Bank; and, 2) filtering article selections based on the defined theme. The result of this phase and the selection of a set of articles considered relevant by the researcher is called the Bibliographic Portfolio (Afonso et al., 2011; Ensslin et al., 2010; Vilela, 2012; Ensslin et al., 2012; Waiczyk, 2013; Luiz, Ensslin, Mussi & Dutra, 2016). To facilitate the visualization of the Proknow-C process, figure 1 presents the summary of all steps.
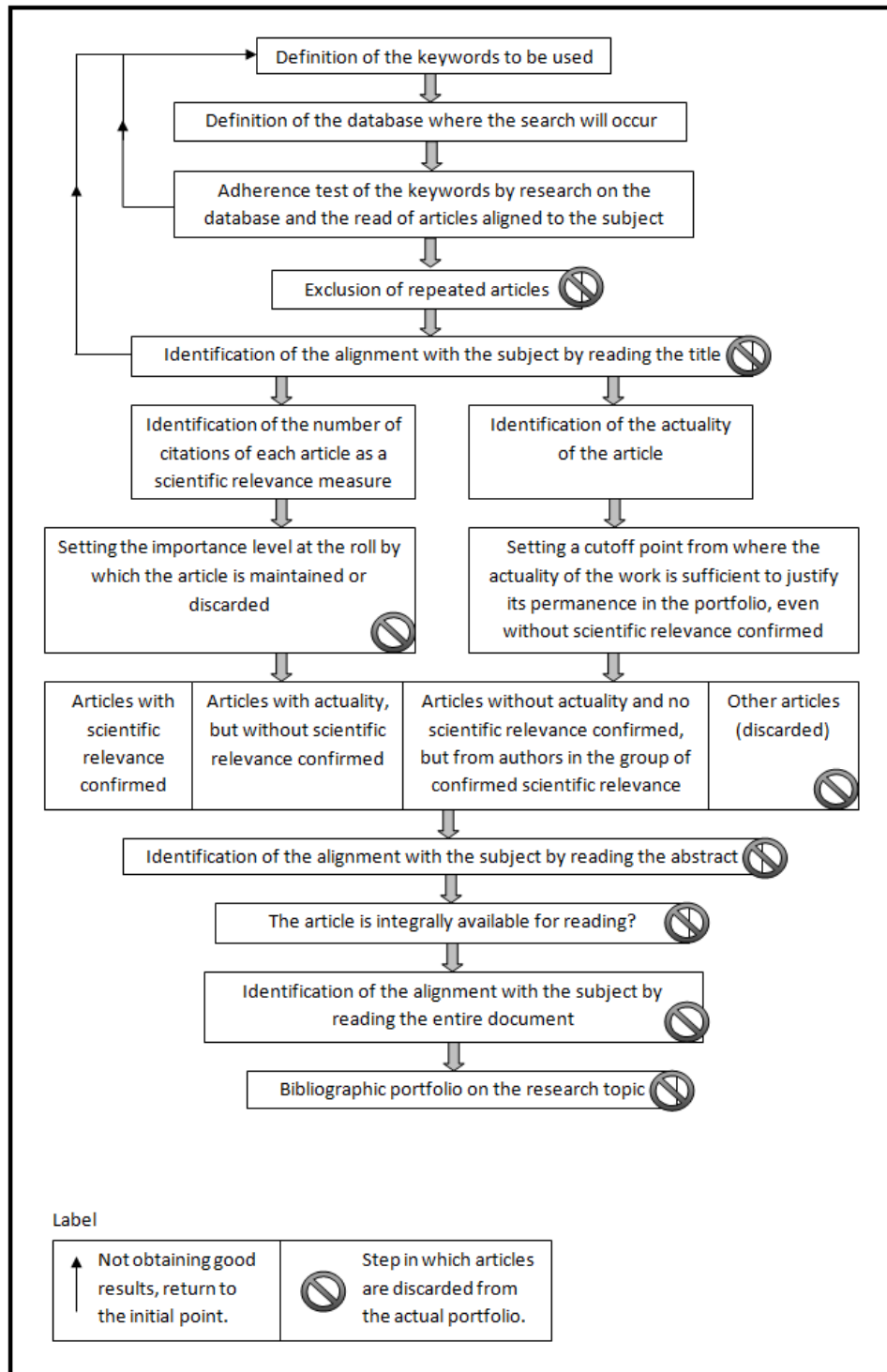
Figure 1. Summary of selection of the bibliographic portfolio.

Source: Afonso et al. (2011, p.6)

As seen in the diagram disposed in figure 1, there is a sequence of steps to be followed systematically to reach a Bibliographic Portfolio directed to the research topic.

4. Presentation of the results

The objective of this section is to present the results obtained, based on the processes defined in the previous section, specifically in figure 1, with details the procedures and decisions taken to achieve the objective of the study.

4.1 Result of Selection of the Bibliographic Portfolio

The procedures adopted for the selection of the portfolio are presented in this subsection, with the presentation subdivided into three stages: selection of keywords, selection of databases and selection of articles by filtering the results.

4.1.1 Selection of keywords

The objective of this step is to identify the keywords that can lead to better results for the research on the topic "Organizational structure and its Influences on Decision Making". Following the procedure defined in the methodology, the definition of keywords started. For this purpose, the keywords of 60 articles selected by relevance in the Google Scholar basis were used, 30 in Portuguese, for further research in the national base, and 30 in English, for the search in the international bases.

The search for the mentioned articles was carried out from the combination of the two main terms in this research area, in the period from 2015 to 2020. Thus, the terms used were: "organizational structure" administration; "decision making" administration; and "organizational structure" "decision making" administration. At the end of the verification, 3 Portuguese terms were defined, those that appeared more times, adding another 3 terms to cover synonyms, resulting in 6 terms in Portuguese: decision making; decision-making process; public administration; public Management; public organization; and, public sector.

Then, two research axes were defined. The first, covering articles related to the organizational structure in the administration, and the second, containing productions alluding to decision making in the administration. Figure 2 shows the combination of keywords in their proper research axis.
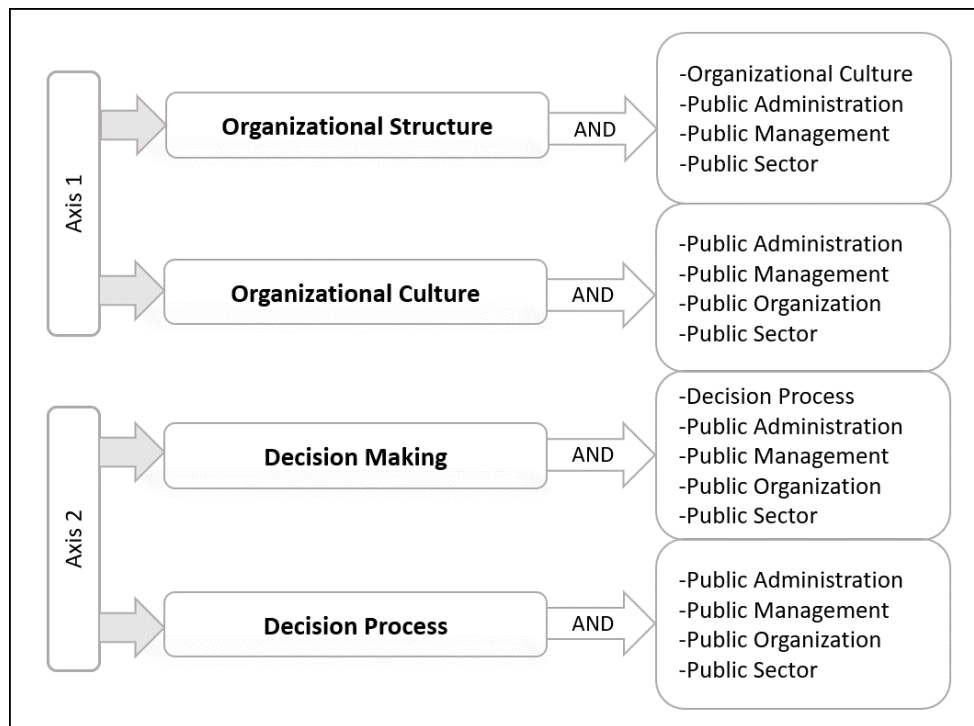
Figure 2. Combination of keywords for base searches.

The 6 terms for consultation in international databases were defined in the same way in English and in Portuguese, when analyzing the 30 articles in English, there was a variety of terms, making it difficult to standardize the keywords, therefore, it was decided to use similar terms among those consulted, resulting in identical terms as those in Portuguese.

4.1.2 Selection of databases

For the research, in a first phase, multidisciplinary bases were chosen that have an impact factor index for international journals-JCR and SJC, as well as for the national base. Thus, we chose to consult the Web of Science (ISI) and Scopus indexing databases for research in English, and Spell for research in Portuguese.

With the consultation bases determined, the search was carried out with the keywords defined in the previous step, together with the search adherence test on the chosen bases. The adherence test is one of the steps in the ProcKnow-C methodology, which aims to verify whether the defined keywords are adequate to find articles related to the theme in a specific base searched.

The method recommends reading two articles from the overall portfolio. With this, the author would be able to analyze the keywords used in the article and check their relationship with the chosen theme. If it results in new words or the search runs away from the topic, it is recommended to return to the first step of selecting the keywords (Vilela, 2012). As a search criterion, it was decided to consult the databases through the fields: title, abstracts and keywords for international databases, and abstract for the national database.

The initial research resulted in 13,576 articles found in the Scopus and Web of Science databases, and 409 articles in the Spell database. To achieve this result, 9 combinations of keywords in English and 9 combinations in Portuguese were performed, resulting in 18 combinations applied.

4.1.3 Filtering selection

This step aims at filtering the Total Bibliographic Portfolio, finding the articles of greatest relation to the topic and of scientific relevance. At the end of this stage, the selected articles will result in the Final Portfolio.

The first step used to filter the portfolio is the exclusion of repeated articles, using the software EndNote, in the "References" menu, and using the option "Find Duplicated", which found 4,328 repeated productions, resulting in 9,657 non-repeated productions. After the automatic removal of duplicate items, the remaining items were exported to Microsoft Excel 365, to verify the removal of all duplicated publications.

With the 9,657 articles selected and not repeated, the next step aimed at the adequacy of the articles with the theme. This step refers to reading the title of all articles. The analysis of this stage resulted in 132 articles not repeated and in line with the research subject.

The third stage established by the ProKnow-C process aims to identify the scientific relevance of the articles. For this, it was defined in the research the use of the query via Google Scholar, to verify the relevance of each article, in which the sum of all citations of the articles reached the total of 1,824 citations. For scientific relevance, two parameters were determined, one for articles in English and another for articles in Portuguese.

The citations of the articles in the Scopus and Web of Science databases were added and the average was calculated, based on the number of articles (1,619 citations / 106 productions). Resulting in 33 articles with at least 15 citations, constituting approximately 79% of the total citations. For the Spell database, the same calculations were performed, resulting in 8 articles with at least 8 citations (205 citations / 26 articles), equivalent to approximately 78% of the total citations. In addition, 41 productions of greater scientific relevance were reserved for reading abstracts. The remaining 91 productions were analyzed according to the criteria contained in the ProKnow-C process.

Thus, the articles with less than two years of publication had their abstracts read, however, due to the short time of publication, the opportunity to be well cited, as well as to go through the process of verification of authors were impaired. The ProKnow-C method suggests the authors' evaluation step. Therefore, the authors' correlation with their respective productions was carried out, in order to verify the scientific relevance of their articles. In this step, if the articles of the selected authors have no scientific relevance, the article would be discarded. Of the remaining 91 articles, 36 of them had less than two years of publication, being separated for reading the abstracts.

From the 55 oldest productions, after an analysis of the authors, only one author of the portfolio presented confirmed recognition. Adding the referred work to the articles for reading abstracts, it resulted in the sum of 78 articles. They were separated for further analysis, as defined in the methodology.

Thus, the 78 separated articles had their abstracts read, observing the alignment with the theme, which resulted in only 16 productions aligned with the researched topic. So, 8 articles of recognized importance and 8 articles with less than two years of publication, from authors with recognized importance in the field of research, remained, totaling 16 articles to compose the overall portfolio.

Then, those articles were read by the full text available, and it was found that all of the works were of free access in the databases. After reading the texts, 12 productions were excluded because they were not

aligned with the researched theme. In the end, the portfolio resulted in 4 articles with scientific recognition and aligned with the research theme, as shown in Table 1:

Table 1. Result of the Overall Portfolio.

Author	Title	Year	Publisher
Leonardo de Oliveira Leite; Denis Alcides Rezende	Municipal management model based on the strategic use of information technology resources for government management: formatting the model and evaluation in a municipality	2010	Revista de Administração Pública (RAP)
Azizan Marzuki	Challenges in the public participation and the decision marking process	2015	Sociologija i Prostor
Valerio Gatta; Edoardo Marcucci; Michela Le Pira	Smart urban freight planning process: integrating desk, living lab and modelling approaches in decision-making	2017	European Transport Research Review
Mısra Ciğeroğlu Öztepe; Onur Kulaç	Ethical decision-making in Turkish public administration and policy	2019	Public Administration Issues

4.2 Bibliographic Analysis

This section is part of the phase defined in the ProKnow-C methodology for the quantification of the articles that make up the bibliographic portfolio. The main objective is to present information about the portfolio created through a quantitative analysis of its characteristics (Afonso et al., 2012; Ensslin et al., 2010), delving into the scientific specifications of the journals and authors corresponding to each article in the bibliographic portfolio.

4.2.1 Articles in the Bibliographic Portfolio

The articles defined in the first phase of the methodology were analyzed, in a total of four. The first parameter analyzed was the relationship of relevance of the journals, in which the SCImago Journal Rank (SJR) was used to measure the scientific influence of each journal academically, since each article was published in different journals, making analysis difficult only by quantity publications. Table 2 shows the results of all journals.

Table 2. Periodicals of the articles in the Bibliographic Portfolio.

Publisher	Country	SJR	H-Index
European Transport Research Review	Germany	0,704	22
Public Administration Issues	Russia	0,268	5
Sociologija i Prostor	Croatia	0,157	7
Revista de Administração Pública	Brazil	0,282	15

The H-index relates to the number of citations per publication of each journal based on the selected quantity, where it is not always related to the value of the SJR, as can be seen in table 2. The Journal "Public Administration Issues" has an SJR of 0.268 with H-index of 5, while the journal "Sociologija i Prostor", represents SJR of 0.157 and the H-index of 7, demonstrating that they are analyzes with different directions and are not always equivalent. Table 3 shows the journals and their respective areas.

Table 3. Journals and their areas.

Journal	Editor	Category	Area
European Transport Research Review	*Springer Verlag*	Enginnering	Automotive engineering; mechanical Engineering
Sociologija i Prostor	*Institute for Social Research in Zagreb*	Education	Geography, Planning and Development; Sociology and Political Science; Urban Studies
Public Administration Issues	*National Research University Higher School of Economics*	Social Sciences	Public Administration
Revista de Administração Pública	Fundação Getúlio Vargas	Social Sciences	Public Administration

It is worth noting that the direction of this research is related to the use of the organizational structure as an object for decision making in Public Administration, in addition, it is related to the areas of social sciences and urban planning, as well as to the other areas of knowledge that use these means for the performance of its activities, being sustainable, therefore, the areas of the journals and the publications selected for the bibliographic portfolio.

When looking at the categories of the articles, two of them belong to social sciences in the area of public administration, and the journal's names already demonstrates the scope. The other articles belong to different categories. The "European Transport Research Review" serves as a magazine in the field of automotive engineering and mechanical engineering, its articles cover procedures, models and tools to integrate the complex environment of urban freight transport. "Prostor", is the oldest journal on sociology in Croatia, addressing issues in the area of geography, planning and development, sociology and political science and urban states, directing its work towards approaches that use the basis of sociological thinking with the theme treated by the journal referred to.

In sequence, table 4 presents the list of authors of the Bibliographic Portfolio (BP) productions and their respective areas of activity, the organization in which they work and the country where the organization operates. Despite each author present a particular area of research, these authors have in common: urban direction; related to Transport; Urban planning; Public Administration and Municipal Management; as well as discrete choice models; and, Political Science and Information Technology, demonstrating that there is not always a relationship between the research area and the journal area. It is also observed that some authors work in different organizations, being possible to involve the vision of different realities, making the production to be applied in other scenarios.

Table 4. Authors and their actuation areas

Authors	Research Field	Institution	Country
Valerio Gatta	Discrete choice models; Transportation; Freight; Econometrics; Marketing	*University of Roma Tre*	Rome, Italy
Edoardo Marcucci	Transport Economics; Transport Policy; Transport Modeling; City logistics; Discrete choice models	*University of Roma Tre; Molde University College*	Rome Italy; Molde, Norway
Michela Le Pira	Transport planning; Public participation; Multicriteria analysis; Agent-based modeling; Discrete choice models	*University of Catania*	Catania, Sicily
Azizan Marzuki	Urban planning; Impact assessment and tourism planning	*Universiti Sains Malaysia*	Northern Malaysia
Mısra Ciğeroğlu Öztepe	Political Science and Public Administration	*Pamukkale University*	Denizli, Turkey
Onur Kulaç	Political Science and Public Administration	*Pamukkale University*	Denizli, Turkey
Leonardo de Oliveira Leite	Distance education; Playful education; Educational technology; Virtual learning environments; Educational Informatics	Faculdade Senac Minas	Belo Horizonte, Minas Gerais, Brazil
Denis Alcides Rezende	Strategic Digital City; Smart City; Municipal strategies and information; Information Technology; Municipal Management	Pontifícia Universidade Católica do Paraná	Curitiba, Paraná, Brazil

Still with respect to the authors, the number of citations from Google Scholar was listed, with only two profiles not found, namely: the profiles of the author Mısra Ciğeroğlu Öztepe and Leonardo de Oliveira Leite. Both are not included in table 5.

Table 5. Authors and their relevance.

Author	Google Scholar Citations	Year with more citations
Valerio Gatta	1.300	2019 (341 citations)
Edoardo Marcucci	2.830	2019 (469 citations)
Michela Le Pira	559	2019 (211 citations)
Azizan Marzuki	1.072	2017 (210 citations)
Onur Kulaç	49	2019 (19 citations)
Denis Alcides Rezende	4.041	2019(325 citations)

The author with the highest number of citations, according to the Google Scholar query, was Denis Alcides Rezende, who works at the Pontifical Catholic University of Paraná, located in the city of Curitiba, Paraná-Brazil. The author's article, co-authored by Leonardo de Oliveira Leite, "Municipal management model based on the strategic use of information technology resources for government management: formatting

the model and evaluation in a municipality" was the only article in Portuguese to be selected for the PB. In the paper, the authors seek to develop a model for the public manager that integrates management theories, aligns with resources of systems and information technology, to provide timely and personalized information for decision making, according to the performance of the municipal government, management of relationships with citizens and control of administration processes.

Table 6 shows all the articles that compose the BP and its relevance according to the research carried out on Google Scholar. Therefore, an article from the selection of the last two years is observed with only one citation. It is justified as it is a production of the most recent publication: from the year 2019. The article with the least number of citations belongs to the journal Public Administration Issues, which deals with structured ethical decision making in Public Administration.

Table 6. Scientific recognition of the selected articles

Title	Year	Citations
Municipal management model based on the strategic use of information technology resources for government management: formatting the model and evaluation in a municipality	2010	22
Challenges in the public participation and the decision-making process	2015	39
Smart urban freight planning process: integrating desk, living lab and modeling approaches in decision-making	2017	39
Ethical decision-making in Turkish public administration and policy	2019	1

The two most relevant articles, both with 39 citations, represent approximately 78% of the total citations in the Bibliographic Portfolio (PB). Both articles were published in the last 5 years and in the English language, with a noticeable difference in citation for the article published in Portuguese in 2010, which has 22 citations, even with almost 10 years of publication. Is observed a greater demand for articles in foreign languages related to the topic addressed. Despite the articles being published in journals from different countries (Table 2), the English language remains the most prominent language in journals with the greatest recognition.

The last stage of bibliometric analysis, according to the Proknow-C methodology, is the identification of keywords, which were composed of 15 different words for the four articles in the Bibliographic Portfolio, which are presented in figure 8. Among the words presented in the articles of the PB "decision-making process" and terms related to public administration such as "Public participation", "Public Administration and Policy" and "Municipal Public Management" stand out for being related to the framework of the keywords of the initial research of the PB.

Although the articles do not have the same words, it is understood that each article has a specific direction, with the common objective being the relationship with the structure, model and study of decision making covering Public Administration. As shown in table 7:

Table 7. Keywords of the articles in the BP

Title	Keywords
Smart urban freight planning process: integrating desk, living lab and modelling approaches in decision-making	Citylogistics
	Urban freighttransport
	Innovative solutions
	Behavioural models
Challenges in the public participation and the decision-making process	Public participation
	Decision-making process
	Approaches
	Case studies
Ethical decision-making in Turkish public administration and policy	Decision-making
	Public Administration and Policy
	Ethics
	Turkey
Municipal management model based on the strategic use of information technology resources for government management: formatting the model and evaluation in a municipality	Strategic information systems
	Municipal public management
	Group decision support system

4.2.2 References from the Bibliographic Portfolio

Starting from the data mentioned in section 4.2.1, 196 references mentioned in the 4 articles belonging to the BP were analyzed. Then, the next step of the ProKnow-C methodology was carried out. In this stage, first, the journals of each article were analyzed, where the 10 most prominent journals were selected, being the "Public Administration Review" with 4 referenced articles among the articles of the BP, the most prominent among the other journals, as shown in figure 3 , as follows:
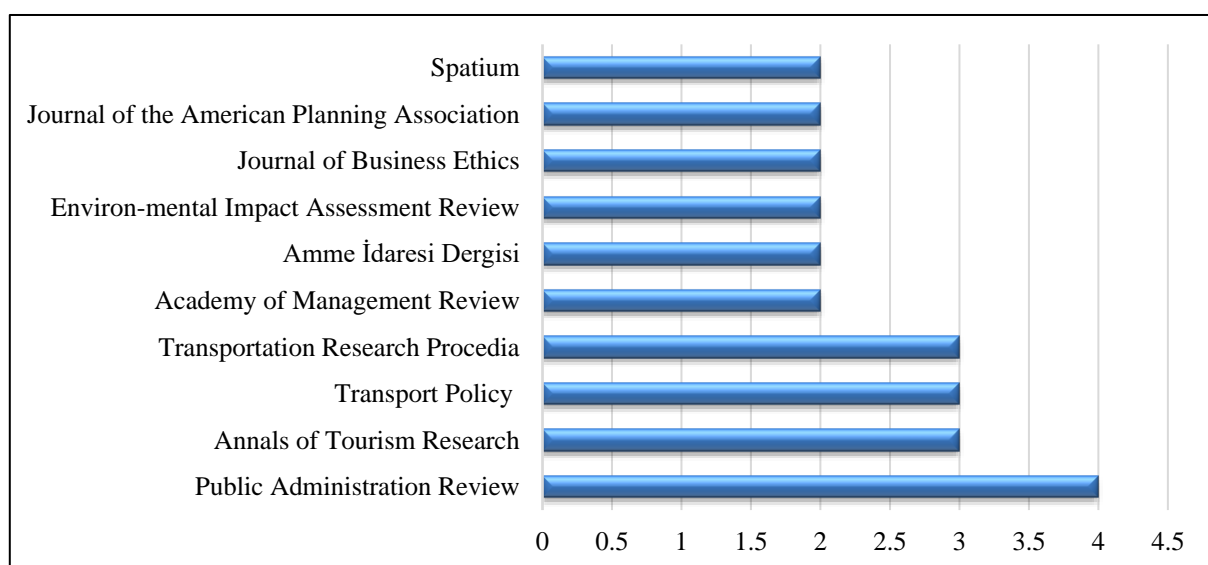

Figure 3. Main journals of most prominent references.

Based on the figure 3, and just as table 2, it was created with the SCImago Journal Rank (SJR) and the H-index to measure the academic or scientific influence of the journals of articles belonging to the Bibliographic Portfolio, the journals in the figure 3 were related with their respective impacts in table 8.

Table 8. Main journals of higher references.

Journal	SJR	H-Index
Public Administration Review	2.867	130
Annals of Tourism Research	2.228	158
Transport Policy	1.657	88
Transportation Research Procedia	0.476	25
Academy of Management Review	7.482	260
Amme İdaresi Dergisi	0.113	4
Environmental Impact Assessment Review	1.234	87
Journal of Business Ethics	1.972	168
Journal of the American Planning Association	1.554	90
Spatium	0.201	7

The "Academy of Management Review", despite having only two articles mentioned among the references of the BP, stands out among the other journals with SJR of 7,482 and H-index 260, showing its high scientific influence, evidencing the use of relevant articles in the construction of the research.

Then, the citations of each reference were analyzed according to Google Scholar. The 10 highest citations were selected again. Analyzing the list of references, it was found that 80% of the references were published before the 2000s, the oldest in 1959 by Lindblom, C. E. and the second most cited with 14,748 citations. The most recent references are from 2011 and 2010, with 6,373 and 11,976, respectively, in which the 2010 publication is the third most cited, as it is seen in table 9.

Table 9. Articles with higher scientific recognition.

Article	Citations
Lipsky, M. (1980). Street-Level Bureaucracy: Dilemmas of the Individual in Public Services. New York: Russell Sage Foundation.	17.640
Lindblom, C. E. (1959). Th e Science of Muddling Th rough. Public Administration Review, vol. 19, no 2, pp. 79–88.	14.748
Osterwalder, A., Pigneur, Y. (2010). Business model generation: a handbook for visionaries, game changers, and challengers. Published by John Wiley & Sons, Inc., Hoboken. New Jersey	11.976
Cohen, M. D., March, J. G. & Olsen, J. P. (1972). A Garbage Can Model of Organizational.	11.443
Kohlberg, L. (1969). Stage and Sequence: Th e Cognitive-developmental Approach to Socialization. In: Goslin, D. A. (eds). Handbook of Socialization Theory and Research. Chicago: Rand McNally, pp. 347–480.	9.788

Deterding S, Dixon D, Khaled R, Nacke L (2011) From game design elements to gamefulness: defining gamification. In proceedings of the 15th international academic MindTrek conference: envisioning future media environments, pp. 9-15.	6.373
Jones, T. M. (1991). Ethical Decision Making by Individuals in Organizations: An Issue-Contingent Model. Academy of Management Review, vol. 16, no 2, pp. 366–395.	4.722
Howlett, M. & Ramesh, M. (1995). Policy Cycles and Policy Subsystems. Canada: Oxford University Press.	4.678
Trevino, L. K. (1986). Ethical Decision Making in Organizations: A Person-Situation Interactionist Model. Academy of Management Review, vol. 11, no 3, pp. 601–607.	4.157
Ferrell, O. C. & Gresham, L. G. (1985). A Contingency Framework for Understanding Ethical Decision Making in Marketing. Journal of Marketing, vol. 49, no 3, pp. 87–96.	3.231

Finally, the list of authors of the article references, noting that, unlike the authors of the 4 productions of the Bibliographic Portfolio, which presented different authors for each production, the most prominent authors were Valerio Gatta and Edoardo Marcucci with 11 articles cited among the references, which is shown in figure 4.
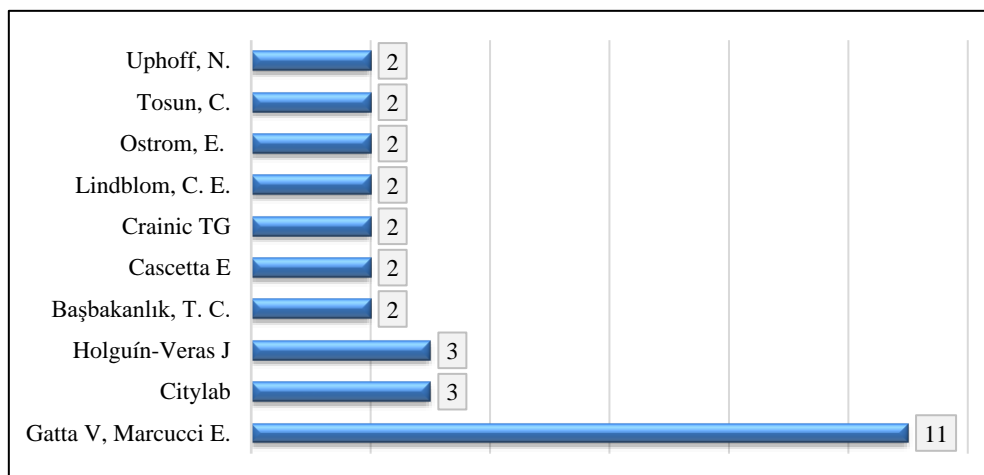

Figure 4. Authors scientific importance by the references.

Still on the authors Valerio Gatta and Edoardo Marcucci is noteworthy in relation to PB, since the authors also produced the article "Intelligent urban freight planning process: integrating desk, living lab and modeling approaches in decision making" belonging to the PB of this research. A verification was carried out to verify which articles cited these authors. It was found that only the authors' articles cited them.

5. Implications of this study

As implications of this work, suggestions are presented for future investigations on the subject. To this end, we highlight new conceptions of studies and application of models based on the execution of personalized organizational management, where the understanding of the activities performed by all individuals, which influence internal and external actions, play a representative role in the development of the structural model.

The conceptions presented in the articles argue, in their analysis of the individual characteristics of each organization and / or nucleus studied, one of the noteworthy aspects being the search for understanding the dynamic scenarios to direct decisions in a personalized and congruent way to the objectives set.

Another perspective to be explored is related to the number of works pertaining to the studied theme, with a low percentage of studies that seek to align the organizational structure with the performance of the decisions taken by the organization. In this way, the continuation and inclusion of this topic becomes relevant in view of the management practice, as well as in the know-how of teaching and applied studies.

In addition to these issues mentioned, several investigations are possible using studies of organizational structures for decision-making, as applied in the article "Ethical decision-making in Turkish public administration and policy" that seeks to unite the analysis of the ethical system with the decisions made by public officials , thus relating two aspects present in any scenario studied: structure and ethics.

Another point to be highlighted is the search for structuring the actions of individuals, developing strategies, models and processes to direct actions based on the alignment of personalized information. This is observed in common in the four articles, in which the authors seek to analyze the scenario in order to investigate current actions and define future actions.

6. Conclusion and final considerations

Organizations are increasingly facing the versatility of scenarios, going through daily transformations that directly interfere in the entire process of internal and external development. Facing barriers and seizing opportunities has become a key step in measuring the capacity of managers in the face of the current scenarios.

In face of this reality, knowing how to face the transformations of the scenarios requires that the entire organizational process is aligned with the company's objectives. In this way, the Organizational Structure acts as a determining factor for company communication, becoming an important resource for managers' decision making.

This research sought to meet the central objective, identifying the most relevant articles that address the theme "Organizational Structure and its influences on decision making". The ProKnow-C instrument was used to build a set of relevant scientific articles for future research. As a delimitation of data collection, we chose to search the Scopus, Web of Science (ISI) and Spell databases from 1999 to 2019, using only freely accessible articles.

This survey provided a selection of 4 academically relevant articles, each belonging to a different year: 2010, 2015, 2017 and 2019, adding 101 citations, in which are emphasized: "Smart urban freight planning process: integrating desk, living lab and modeling approaches in decision-making" and "Challenges in the public participation and the decision making process" each with 39 citations.

The article "Smart urban freight planning process: integrating desk, living lab and modeling approaches in decision-making" presents a framework (modeling approach) bringing together knowledge acquisition and co-creation of behavioral, technical, operational, organizational and financial policies for use by heterogeneous actors. The article "Challenges in the public participation and the decision making process"

was based on four case studies of public participation from four different countries to analyze public participation and restrictions in the decision-making process.

Still with the focus directed towards the individual, the research "Ethical decision-making in Turkish public administration and policy", tries to analyze the ethical system of Turkey, on which the process of ethical decision making of public officials is supported in a structured way. The article "Municipal management model based on the strategic use of information technology resources for government management: formatting the model and evaluation in a municipality", as well as previous research applied in Turkey, relates to the public manager, in which is elaborated a model to unite management theories, aligning system resources and information technology, enabling personalized information for decision making.

Among the barriers of this bibliometric analysis, we can point out the limitation of the focus, of the last twenty years focusing specifically on the organizational structure as influential in decisions. Another point to be cited is the view of the researcher, who despite going through careful steps, presents a single view of delimiting the articles. Regarding the choice of the database, although the Scopus, Web of Science and Spell databases are considered to be multidisciplinary bases, there were limitations on the central themes of the articles, highlighting articles directed at the health area, making it difficult for this research performance.

After analyzing the results and weighing up the limitations, it is recommended to continue this research by performing the other phases of the Proknow-C method, in addition to using other databases to complement the portfolio of articles on the topic addressed or the use of journals. directed to the theme for greater precision of the results. As a suggestion for future research, is proposed the development of a framework that can be used in different organizations, whether public or private, based on the improvement of the organizational structure, presenting the positive and negative points of the structured application, in which it aims to take quick decision making, personalized information and the construction of heterogeneous scenarios for managers.

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