
Public Sector Performance Assessment: A Literature Analysis.

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Abstract:

This paper aims to identify the international literature approaches regarding the subject of performance evaluation of the public sector. Within a qualitative approach, this research applies the Pro Know-C method to select a bibliographic portfolio (BP) with 39 research papers. The distinctive methodological structure allowed the performance of basic and advanced bibliometric analysis to identify some particularities of the research area like authors, most quoted papers and journals, besides the specific concerns of performance evaluation in the public sector. As contributions of the study, it was observed that the authors usually have a research path on the theme. In addition, the research reveals a trend in the literature to consider performance evaluation as a tool to foster organizational strategy, focusing both on metrics and organizational goals.

Keywords: Performance Assessment; Public Sector; Pro Know-C; Management; Governance; Assessment; Measurement.

Avaliação do Desempenho no Setor Público: Uma Análise da Literatura.

Resumo:

Este trabalho tem como objetivo identificar os artigos científicos mais relevantes e seus parâmetros sobre o tema O presente artigo tem por objetivo identificar o estado da literatura internacional sobre o tema da avaliação de desempenho no setor público. Dentro de uma abordagem qualitativa, esta pesquisa aplica o método Pro Know-C para selecionar um portfólio bibliográfico (BP) com 39 trabalhos de pesquisa. A estrutura metodológica diferenciada permitiu realizar análises bibliométricas básicas e avançadas para identificar algumas particularidades da área de pesquisa, como autores, artigos e periódicos mais citados, além das preocupações específicas da avaliação de desempenho no setor público. Como contribuições do estudo, observou-se que os autores costumam ter trajetória de pesquisa no tema. Além disto, a pesquisa revela uma tendência na literatura de considerar a avaliação de desempenho como ferramenta para promover a estratégia organizacional, concentrando-se tanto nas métricas, como no alcance de objetivos organizacionais.

Palavras-Chave: Avaliação de Desempenho; Setor Público; Pro Know-C; Gestão Pública; Governança; Mensuração do Desempenho.

Public Sector Performance Assessment: A Literature Analysis.

1. Introdução

The aim to improve performance evaluation is currently increasing, as testified by the contemporary plurality of existing search methods (Ensslin, et al., 2010). This area of business administration accounts for a vast literature that discusses the evaluation of organizational performance in the private sector (Kaplan, & Norton 1996; Neely, 1998; Bourne, et al., 2000). The public sector, however, has different characteristics because it fulfills a different role and often views economic gain as secondary.

Considering that governs have multi-dimensional functions, the goals of public sector performance evaluation should also be multi-dimensional (Zhonghua, & Ye, 2012; Brignalland, & Modell, 2000; Jääskeläinen, & Laihonen, 2014). For decades, in developed countries, the implementation of performance evaluation systems has been a fundamental part of government reforms (Greiling, 2006; Walker, & Boyne, 2006; Sotirakou, & Zeppou, 2006; Yang, & Hsieh, 2007). The treatment of public sector performance evaluation should be distinguished, especially in the use of nonfinancial indicators (Otley, 2002) and their essential role in describing public services, because it reveals problems through real measurements and identifies opportunities for improvement (Bonney, & Armijo, 2005).

There is previous research in the sense that organizational culture can impact motivation and performance in sensitive areas of public service (Gomes, & Silva; 2017). It is important to highlight the fact that performance assessment may foster the identification of elements that determine motivation and, consequently, performance in various sectors of public service provision.

Several methods and tools are available to performance assessment (Ensslin, et al., 2020; Longaray, et al., 2019; Lacerda, et al., 2014; Ensslin, et al., 2010; Bourne, et al., 2003; Rantanen et al., 2007); however, the use of a given tool depends on the scope of the performance evaluation in each organization: dissimilar purposes require different methods (Jääskeläinen, & Laihonen, 2014). This subject is significant for academe, since the modernization of public administration and the rising social demand for transparency and efficiency of public expenditure calls for reinforcing management mechanisms and performance appraisal, such as electronic government (Dias, et al., 2019).

The crucial motivation for performance assessment sometimes appears to be disregarded (West, & Blackmann, 2015). The effective use of performance appraisal tools to support governance practices and good public administration requires an adjustment of our understanding concerning manage information and knowledge (Montesinos, et al., 2013). The basic underlying assumption is that performance assessment in the public sector may be viewed from a unified perspective; though it has multifaceted characteristics. Specific situations faced by the public sector – such as pollution control (Li, et al., 2020) – require specific models.

The processes of knowledge acquisition, management, recovery, and protection are central aspects of modern society, which is based on knowledge and information (Benjamins, 2013; Gaines, 2013; Aussenac-Gilles, & Gandon, 2013). When appropriating issues already discussed by the scientific community, the researcher creates new knowledge. The scientific databases are important mechanisms for storing and searching for knowledge. Breaches in the nature and scope of an integrated model of strategic performance evaluation still exist (Atkinson, et al., 1997). It is important, therefore, to analyze a variety of evaluation perspectives, in order to explore best management practices. In this context, the following

research question arises: What are the characteristics of the international literature on public sector performance evaluation?

International academic literature has been discussing performance evaluation in the public sector for significant time. This paper aims to investigate what the international academic literature reveals about public sector performance evaluation, regarding the authors, research topics and journals. The goal is to create knowledge for researchers and to uncover opportunities for future research. For this purpose, the study applies the Pro Know-C method (Knowledge Development Process - Constructivist), developed by the MCDA Laboratory of the Federal University of Santa Catarina. It is more organized and straight forward, compared to other research methods and allows the researcher to interact with the data bases to expand their understanding of the topic being researched. It allows to detect and analyze the amount of scientific data relevant to the subject of Knowledge Management from the point of view of performance assessment. First, the paper brings an issue into focus by defining and detailing its characteristics. Second, the results are typically quantified and amenable to basic analysis. Then, it is performed an advanced analysis considering the evolution of performance evaluation systems and their characteristics.

This research is justified by its relevance, originality, and viability (Castro, 1977), in addition to the contribution it makes by guiding future research into public sector performance evaluation. It is unique not because of its theme, which has already been covered by academia, but because of its innovative scrutiny approach.

The following sections present the theoretical framework, methodology, and research instrument used; then the results are discussed, and final remarks are presented.

2. Theoretical Framework

This section introduces the theoretical framework, which is based on the international literature. In addition, it characterizes the articles relevant to public sector performance evaluation and uses them to populate the research's bibliographic portfolio.

2.1. Public Sector Performance Evaluation

Public sector performance evaluation has undergone several phases. The issue gained greater resonance from the studies on New Public Management (NPM), which suggest that private sector practices be incorporated into the public sphere, with a tangential point being the adoption of organizational performance evaluation systems (Hood, 1991; Brignall, & Modell, 2000; Sotirakou, & Zeppou, 2006; Nemec, et al., 2008; Carlucci, et al., 2014; Ohemeng, 2009; Hoque, & Adams, 2011; Newcomer, & Caudle, 2011; Arnaboldi et al., 2015). Although several authors claim that NPM is not new, it shares priorities with new models, such as e-governance (Dunleavy et al., 2006).

Since it intends effective management, performance evaluation has acquired strategic importance in political and administrative reform processes in the public sector (Brignall, & Modell, 2000; Moynihan, 2006; Greiling, 2006; Carlucci, et al., 2014). Governments have sought to improve their performance to accomplish result-oriented and cost-conscious public administration, due to meet the citizens demands on efficient, effective (Sotirakou, & Zeppou, 2006), and transparency (Nielsen, 2013).

Managing for results (MFR), which is an NPM corollary, pursues government efficiency and efficacy. Studies demonstrate that MFR's failure to achieve its goals is not entrenched in its theoretical fundamentals, nevertheless rather in implementational shortcomings (Moynihan, 2006; Carlucci, et al., 2014). Implementing an evaluation is challenging, regardless of the type

of public body analyzed (e.g., civil or military) (Rantanen, et al., 2007). A conflict exists between short-term quantitative targets and qualitative targets (Verbeeten, 2008). Despite recent advances, the institutional traditions and bureaucratic legacy contribute to the maintenance of hierarchical and legalistic structures, not with standing the international diffusion of the NPM doctrine (Favoreu, et al., 2015), which suggests a further discussion of indicators (Jääskeläinen, & Laihonen, 2014) and the need for systems to effectively manage public services (Arnaboldi, et al., 2015).

Public sector performance evaluation should be multidimensional (Ahn, 2001; Greatbanks, & Tapp, 2007; Northcott, & Ma'amora, 2012; Wisniewski, & Ólafsson, 2004; West, & Blackmann, 2015; Dey, et al., 2015) and consider the institutional pressures on stakeholders, because they explain the different ways to measure performance in public service organizations (Brignall, & Modell, 2000; Carlucci, et al., 2014). In the public sphere in particular, stakeholders contribute to the primary and secondary organizational objectives (Atkinson, et al., 1997).

The complexity of the analysis dimensions raises questions about which indicators are appropriate and necessary (Walker, & Boyne, 2006). Sole (2009) observed that some internal and external factors are critical to the success of a performance evaluation process. Among the internal factors, he lists management leadership and commitment, sufficient resources, organizational culture oriented toward the performance evaluation, employee commitment, and maturity in terms of experience. It is important to understand that a measurement strategy is rarely completely satisfactory: each system has strengths and weaknesses, and not every model is useful for a given structure (Jääskeläinen, & Laihonen, 2014; Charbonneau, et al., 2015).

No unanimity exists on what constitutes the best practice for public sector performance evaluation (Arnaboldi, et al., 2015). Critics claim that public sector organizations suffer from excessive proliferation of performance indicators, but little is done to solve the problems of public sector performance evaluation (Modell, 2004). Scholars suggest that strategic planning should inform and direct any performance evaluation (Atkinson, et al., 1997). For Jääskeläinen and Laihonen (2014), the evaluation of public policies should be supported by the best aspects of each measurement approach; therefore, it is essential to understand which aspects should be noted by decision makers and which determined by the decisional context. Apparently, the public sector has no clear sense of a strategic or holistic vision that would allow it to focus on a single success factor at a time (Rantanen, et al., 2007).

Public organizations stalwartly resist change, which constitutes a cultural barrier to performance evaluation (Rantanen, et al., 2007). In general, given this situation, authoritarian human resources management in the public sector hinders the advancement of indicators (Nielsen, 2013). Given this sector's characteristics, the commitment of top management to implement performance evaluation systems is decisive to success in this process (Greatbanks, & Tapp, 2007; Cavalluzzo, & Ittner, 2004; Sole, 2009; Carlucci, et al., 2014).

As an alternative to implementing performance evaluation in the public sector, many scholars recommend the balanced scorecard model (BSC), which allows external demands to add variables for internal-management purposes (Kaplan, 2001; Ahn, 2001; Modell, 2004; Wisniewski, & Ólafsson, 2004; Hoque, & Adams, 2011). The BSC tool was developed initially for the private sector, seeking to overcome the shortcomings of the financial accounting model, which, in failing to consider the knowledge, motivation, and customers as success factors, does not signal changes in the economic value of organizations that make substantial investments in intangible assets (Kaplan, & Northon, 1996; Kaplan, 2001). Use of the BSC in the public sector enables measurement of the value created by public bodies for citizens. In Italy, for example,

53% of local governments use cost accounting and 26% claim to use the BSC as a support tool (Montesinos, et al., 2013).

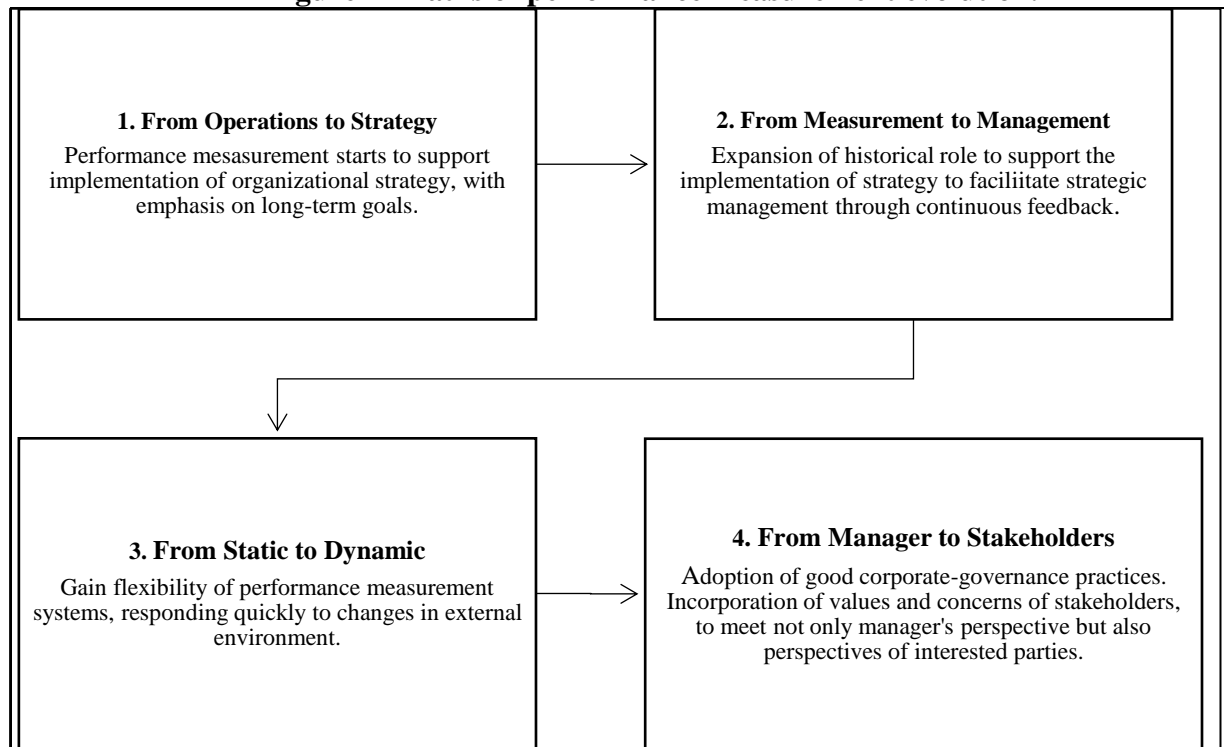
Another tool suggested by the literature to promote excellence in public service is total quality management, whereas performance management requires much more than working within a budget: it considers specific metrics in developing public services (Kanji, Moura, & Sá, 2007; Tomazevic, et al., 2015). The methods of data envelopment analysis and statistical regression in general are often used (Montesinos, & Sudden, 2009; Lin, & Tan, 2013; Otto, & Schlager-Weidinger, 2014; Park, 2014; Charbonneau, et al., 2015; Tomažević, et al., 2015). Regardless of the model adopted, it should be used as a tool designed for the specific needs of each organization in a specific time and context (West, & Blackman, 2015).

2.2. Guidelines for Research on Performance Evaluation

Performance measurement should not be confused with performance management; measurement is a necessary but not isolated condition of management (Sole, 2009). Srimai et al. (2011); Melnyk et al. (2013) and Ensslin et al. (2014) addressed the evolution of performance evaluation systems and their characteristics.

Srimai et al. (2011) reported that: (i) performance measurement systems have evolved to now consider the interests of stakeholders, through contributions and critical expectations for management, which is why they should be integrated into performance measurement systems; (ii) organizational management must balance short-term performance with long-term growth; and (iii) market changes reflect fundamental evolutionary transitions in organizational performance measurement (see Figure 1).

Figure 1 - Paths of performance measurement evolution.



Source: Adapted from Srimai et al. (2011).

Melnyk et al. (2013) proposed that decision support tools be classified into two main groups: performance measurement systems and performance management systems. Performance measurement systems are those that cover the processes for establishing metrics and the collection, analysis, and interpretation of performance data. Performance management systems, in contrast, include the process of evaluating the differences between actual results and those initially desired by managers. A performance management system facilitates identifying these gaps and understanding why they occurred, allowing corrective actions to be taken to minimize or eliminate them. Ideally, management and measurement of organizational performance should operate together (Melnyk, et al., 2013).

3. Methodological Procedures

This section covers the methodological framework and the Pro Know-C instrument used to map and analyze the scholarly publications relevant to the research topic.

3.1. Methodological Framework

This study uses a qualitative approach to bibliographical exploratory research (Creswell, 2010). Data were collected from both primary and secondary sources. Primary data involve choices made by researchers and delimitate the search criteria to be used in this study; secondary data allow identification and analysis of the bibliographic portfolio's (BP) characteristics.

3.2. Instrument of Analysis: Knowledge Development Process - Constructivist

The Knowledge Development Process—Constructivist (Pro Know-C) served as this study's analysis tool. ProKnow-C is a structured process to map and analyze scholarly literature (Ensslin, et al., 2012; Silva, et al., 2013; Ensslin, et al., 2017; Pires, et al., 2019; Ensslin, et al., 2020a; Ensslin, et al., 2020b; Longaray, et al., 2019; Ensslin, et al., 2014; Lacerda, et al., 2014; Lacerda, et al., 2012). Pro Know-C comprises a four-step systematic strategy for searching scientific databases and delivers a set of articles (i.e., the BP), which is a fragment of the relevant scholarly literature on the given research topic. The BP consists of a set of peer-reviewed articles, complete with keywords, title, abstract, and full text aligned within the delimitations imposed by the literature search.

The first step is the selection of the raw articles, which it is necessary to define the keywords for each axis and their possible combinations. These are then combined to form the search command, which is applied to the chosen database(s), themselves chosen based on their representativeness and alignment to the given research topic.

Step two involves a keyword adhesion test, in which the researcher provides an exhaustive selection of keywords (within reason) for each axis. Based only on the titles of the articles thus selected from the database(s), two or three articles related to the research topic are selected and their keywords are noted. As appropriate, additional keywords are then incorporated into the search command (Dutra, et al., 2015), and the process is repeated.

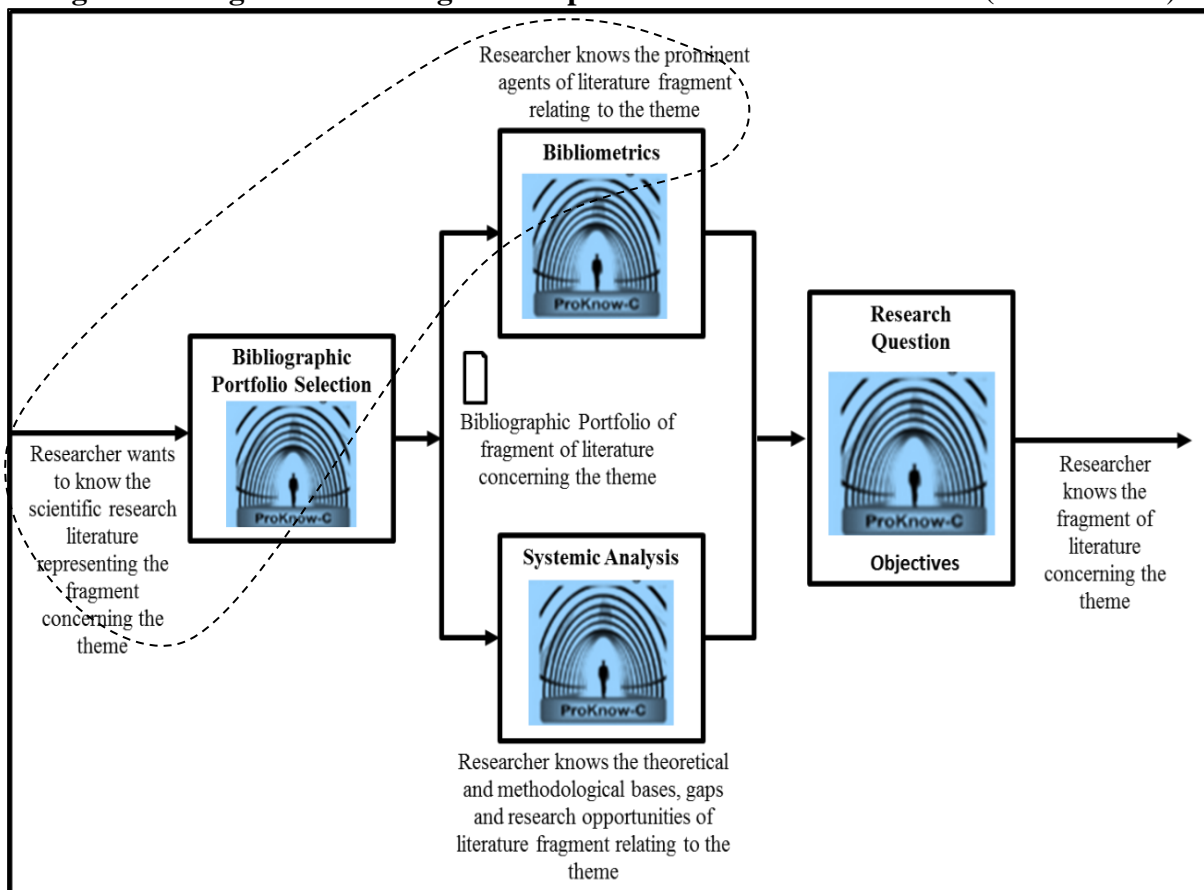
The first filter eliminates redundant articles (i.e., those published in different databases and that thus appear more than once in the BP). The papers then are selected based on how well their titles align with the research topic. The third filter analyzes the peer recognition of articles, which is determined based on the number of quotations each receives in Google Scholar (Dutra, et al., 2015). At this point, repositories K and P are created: the first contains articles cited by peers (i.e., with proven research value), and the second contains items potentially recognized by peers (i.e., their recognition will be determined later).

In step three, the abstracts of articles from the K repository are read to verify that they align with the research topic; if so, they are assigned to repository A. Turning to repository P, the abstracts of articles published less than two years prior are then read to determine if they align with the research topic; if so, they are also assigned to repository A. The remaining articles are assigned to repository B. This stage of Pro Know-C involves identifying the characteristics of research in the knowledge area of interest, which is accomplished by filtering the articles in the BP based on the theoretical affiliation of researchers. This reveals any existing gaps in the literature, which is used to formulate research questions and guide future research.

The fourth step is to read the articles in their entirety to determine more precisely whether they align with the research topic. The articles retained in this step are assigned to repository C (i.e., the initial BP). Finally, the representativeness of this initial BP is tested by checking whether the research cited by the initial BP articles also align with the research topic. This is done by searching the text of the cited articles (those not fully available free of charge are excluded). The resulting database forms the BP of primary articles (Dutra, et al., 2015; Lacerda, et al., 2014; Lacerda, et al., 2012; Ensslin, et al., 2020a; Longaray, et al., 2019; Ensslin, et al., 2014).

The Pro Know-C method is summarized in Figure 2.

Figure 2 - Stages of Knowledge Development Process—Constructivist (Pro Know-C)



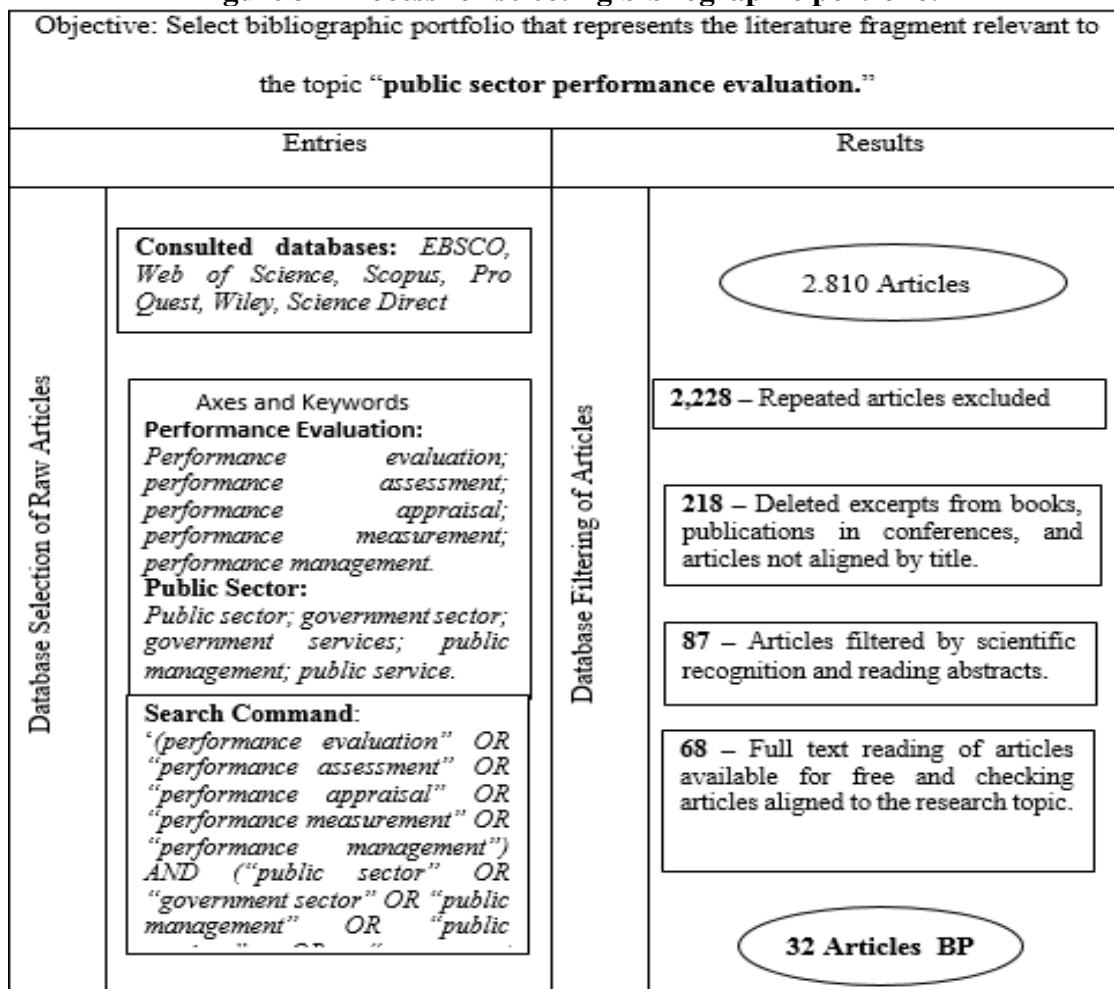
Source: Knowledge Development Process—Constructivist (Pro Know-C) (adapted from Ensslin, et al., 2014).

In the present research, the first two steps of Pro Know-C were conducted: obtain a BP and the bibliometrics.

Data Collection. Figure 2 summarizes the data collection stage of Pro Know-C, which in the present case gives a selection of articles that represent the literature fragment on public sector performance evaluation. Figure 3 document the results found in each step of Pro Know-C.

Figure 3, bellow, presents the entire search process to select research papers that form the BP. Of all 2.810 research papers found at the beginning of the search, Scopus supplied the most (1,062 articles, or 37.8%), and Science Direct supplied the fewest (28 articles, or 0.001%). After screening for redundancy, verifying alignment of the titles and scholarly recognition (based on the number of quotations), checking the alignment of the abstracts, and finally undertaking a full reading (Dutra, et al., 2015), 32 articles remain to form the BP, which represents the literature fragment to be studied. Note that the results have been limited to articles published in the last ten years (2006 to 2016); older publications were not considered. Furthermore, the databases were searched from March 21-28, 2016.

Figure 3 - Process for selecting bibliographic portfolio.



Source: Results presented in Knowledge Development Process—Constructivist (ProKnow-C) (adapted from Valmorbid, & Ensslin, 2016).

The first step of the search involved the databases EBSCO, Scopus, Web of Science, Science Direct Wiley Interscience, Blackwell, and Proquest (ASIA), and produced 2,810 results. Deleting 582 duplicate articles by using Endnote left 2,228 articles. The title of each of

these research papers was read, and those not affiliated to the research topic were excluded. This left 218 articles.

The next step was to analyze the peer recognition of these articles, which was done based on the number of quotations each garnered in Google Scholar. The articles were ordered in a spreadsheet according to number of quotations and the top 92% were selected, establishing a cutoff point of ten quotations. This step moved 131 articles into repository P, leaving 87 to form repository K, were then read to determine if the articles were aligned, eliminating 38 articles. The remaining 49 articles formed repository A, representing 84 individual authors.

Repository P contained 131 articles less than two years old. Of these, 72 were permanently deleted because they were old, did not garner sufficient quotations in Google Scholar, or were not written by one of the 84 authors from repository A. The abstracts of the remaining 59 articles were read, leading to 35 more articles being permanently deleted. This process left 24 articles with potential scientific recognition that aligned with the given research topic: these formed repository B.

Repositories A and B were then fused to produce repository C, with 73 articles, of which five were not available in full. This left 68 articles, which were read in full. Of these, 32 were considered to align with the researched topic and, thus, assigned to the primary BP. In the final step of creating the primary BP (test of representativity), seven additional articles were selected from the references cited in the primary-BP articles, resulting in a final BP with 39 articles. In analyzing the references, articles older than 10 years were accepted because the primary-BP articles cited older texts of great importance to the field.

Data Analysis Procedure. The examination and interpretation of the data are based, through bibliometric analysis, on information extracted from the 39 articles in the BP and their references, as recommended by ProKnow-C.

In this research, the basic characteristics analyzed involve: (i) the authors' intellectual trajectory in this area of knowledge; (ii) the scientific journals that disseminate the research on the subject; and (iii) the most relevant and cited articles. Additionally, to analyze the BP's nature and the profile its articles, this research uses the theme evolution stages proposed by Srimai et al., (2011) as advanced characteristics, and the performance evaluation system proposed by Melnyk et al. (2013), which was already presented as part of this article's theoretical framework.

4. Results Presentation and Discussion

The results of the bibliometric analysis are presented in the form of basic characteristics, with emphasis on the authors, articles, and prominent journals and advanced features, as per Srimai et al. (2011) and Melnyk et al. (2013).

4.1. Bibliometric Analysis: Basic Characteristics

Foremost, authors of papers in the BP must be identified. The following five authors contribute more than one article to the BP: Modell, Sole, Montesinos, Brusca, and Tomazevic. Thus, these authors have a research trajectory in the area of public sector performance evaluation.

Sven Modell (Ph.D. in Business Administration, University of Lund, Sweden 1998), who contributes two research papers to the BP and its references, authored one of the most-cited articles. He is currently a professor at the Manchester Business School and previously taught accounting at Stockholm University School of Business, Sweden in 2006.

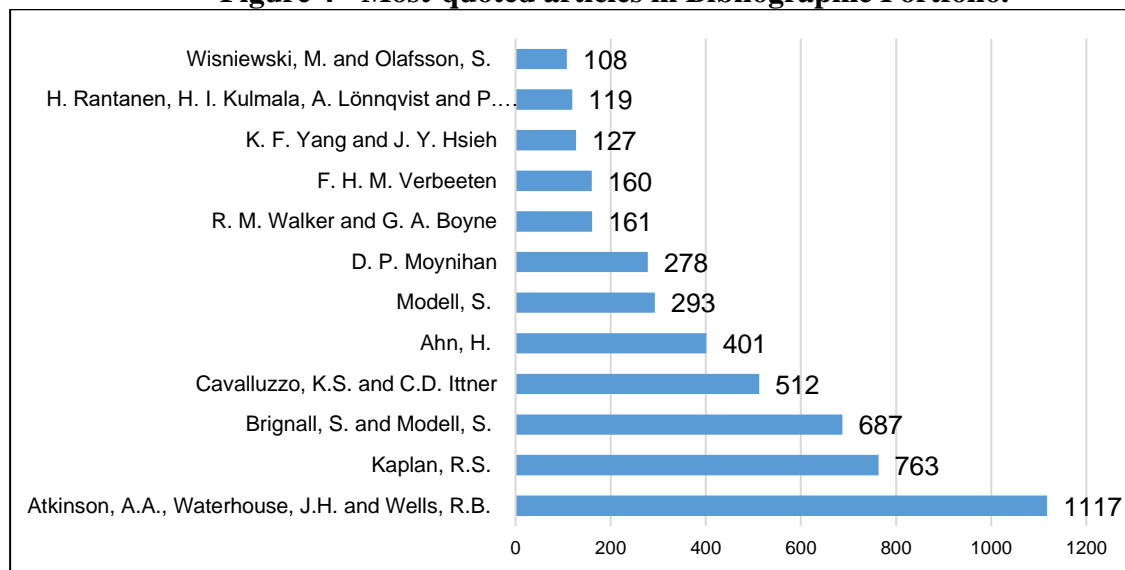
The same analysis was then applied to the references cited by the BP research papers that were considered aligned to this study. Altogether, 133 authors were considered, 21 of which

contribute more than one paper to the BP or its references. Figure 5 summarizes this information. In analyzing the references of the papers, it was found that some of the BP's authors were quoted by other authors.

Kaifeng Yang, a professor at Askew School, contributes one research paper to the BP and has three papers quoted in the BP references, indicating that he has a trajectory in public sector performance evaluation. Yang graduated in Sciences of Administration from the Huazhong University of Science and Technology in China. He has a master's degree and Ph.D. in Business Administration from the Remin University of China, in addition to a Ph.D. in Public Administration from Rutgers University, U.S. His research and interests include public and strategic management, organizational theory and behavior, performance measurement, and e-government. He is a member of the Chinese National Academy of Public Administration and is editor in chief of the journal *Public Performance and Management Review*. Finally, he serves as a senior research associate at the National Center for Public Productivity at Rutgers University -Newark and is affiliated with the De Voe Moore Center at Florida State University.

We also used Google Scholar to analyze the papers quoted in the BP (survey conducted from March 21-28, 2016). The results are summarized in Figure 4.

Figure 4 - Most-quoted articles in Bibliographic Portfolio.



Source: Prepared by authors (2016).

The article in the BP with the most quotations is “A stakeholder approach to strategic performance measurement” (Atkinson, Waterhouse, & Wells, 1997), published in *Sloan Management Review* (1,117 quotations or 58.8 quotations per year on average). The second-most-cited article is “Strategic performance measurement and management in non-profit organizations” (Kaplan, 2001), published in *Nonprofit Management and Leadership* (763 quotations or 50.9 quotations per year on average). The third-most-cited article in the BP is “An Institutional Perspective on Performance Measurement and Management in the ‘New Public Sector’” (Brignall, & Modell, 2000), published in *Management Accounting Research* (693 quotations or an average of 43.3 quotations per year).

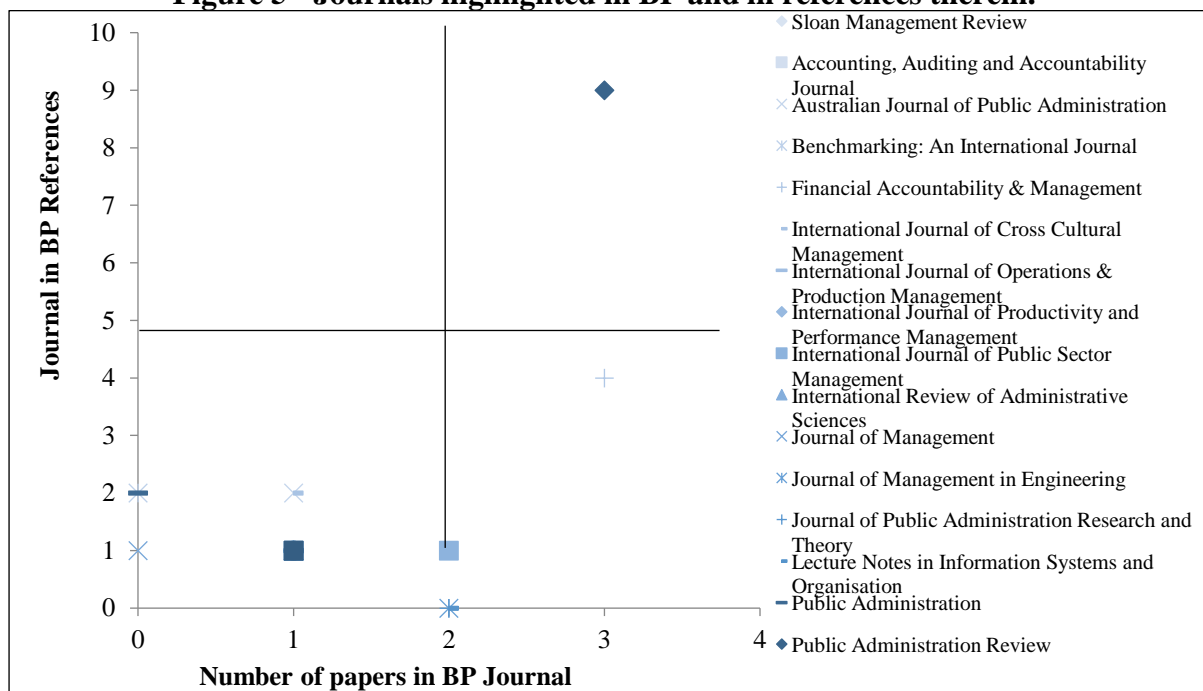
It is worth highlighting the profiles of the authors with the most quotations. The first author, Anthony Atkinson, is a professor of accounting at the School of Accounting, University of Waterloo in Ontario, Canada. The second author, John Waterhouse, is the director of the

School of Accounting, University of Waterloo. The third author, Robert Wells, serves as Chief Financial Officer at the Bank of Montreal, Canada.

It is also note worthy that Robert Kaplan, whose article is the second-most cited, applies the BSC to nonprofit organizations and is Professor Emeritus in Leadership Development at Harvard Business School, which he joined in 1984 after 6 years at the Carnegie-Mellon University Business School, where he served as a rector from 1977 to 1983.

The second aspect analyzed in the BP articles was the journal's receptivity to the given research topic, which helps to identify the journals more likely to disseminate studies and research on public sector performance evaluation, as shown in Figure 5.

Figure 5 - Journals highlighted in BP and in references therein.



Source: Prepared by authors (2016).

The journal *Public Administration Review* (PAR) is published by the American Society of Public Administration and stands out in the sample, with three papers in the BP and nine papers quoted by other research papers in the BP. PAR is a North American journal that serves scholars and professionals. It was first published in 1940 and is dedicated to public administration issues.

Another journal that contributes significantly to the BP and to its references is *Financial Accountability and Management* (FAM), published by the School of Business at the University of Edinburgh. It is a scholarly journal that emphasizes new thinking on governance, accounting, financial management, and resources of all types of organizations (nonprofit, governmental, and others). FAM contributes three articles to the BP and four articles to references in the BP.

The *International Journal of Public Sector Management* contributes two publications to the BP and is published by Emerald Insight Group. It appears in the Applied Social Sciences Index and Abstracts and has been published continuously for 29 years. It focuses on issues routinely faced by public administrators, managers, and policy makers in a context requiring improvement in efficiency and efficacy in situations of scarcity of resources and increased public expectations. In 2014, the journal received submissions from 42 countries.

Lecture Notes in Information Systems and Organizations also contributes two articles to the BP. Indexed in Scopus and published by Springer; this journal seeks to provide a point of reference and comparison in the study of information and organization systems. It focuses on the relationship between technology and information and organization systems.

The *Journal of Management Engineering* also contributes two articles to the BP. It is published by the American Society of Civil Engineers and has a Scientific Journal Ranking (SJR) impact factor of 1.111. Finally, the *Journal of Public Administration Research and Theory*, published by Oxford Journals, also contributes two articles and has an SJR impact factor of 2.833.

4.2. Bibliometric Analysis: Advanced Features

The advanced features or performance evaluation guidelines were classified as per Srimai et al. (2011) and Melnyk et al. (2013) after each article was read in full. This step involved examining the authors' discourse on the concept and objectives of public sector performance evaluation systems.

Chart 1 - Classification of performance evaluation based on Srimai et al. (2011)

BP Articles		Performance Evaluation Approach			
		(1) From Operations to Strategy	(2) From Measurement to Management	(3) From Static to Dynamic	(4) From Manager to Stakeholders
Title	Quotations	(1)	(2)	(3)	(4)
1. A stakeholder approach to strategic performance measurement (1997)	1117		X		X
2. Strategic performance measurement and management in non-profit organizations (2001)	763		X		
3. An Institutional Perspective on Performance Measurement and Management in the 'New Public Sector' (2000)	687				X
4. Implementing Performance Measurement Innovations: Evidence from Government (2004)	512		X		
5. Applying the balanced scorecard concept: an experience report (2001)	401	X	X		
6. Performance measurement myths in the public sector: a research note (2004)	293		X		
7. Managing for results in state government: Evaluating a decade of reform (2006)	278		X		
8. Public management reform and organizational performance: An empirical assessment of the U. K. Labour government's public service improvement strategy (2006)	161		X		
9. Performance management practices in public sector organizations: Impact on performance (2008)	160		X		
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Chart 2 - Classification of performance evaluation based on Srimai et al. (2011) (continuação)					
BP Articles		Performance Evaluation Approach			
		(1) From Operations to Strategy (2) From Measurement to Management (3) From Static to Dynamic (4) From Manager to Stakeholders			
Title	Quotations	(1)	(2)	(3)	(4)
10. Managerial effectiveness of government performance measurement: Testing a middle-range model (2007)	127				X
11. Performance measurement systems in the Finnish public sector (2007)	119				X
12. Developing balanced scorecards in local authorities: a comparison of experience (2004)	108		X	X	
13. Performance measurement: A remedy for increasing the efficiency of public services? (2006)	94		X		
14. The impact of balanced scorecards in a public sector environment - Empirical evidence from Dunedin City Council, New Zealand (2007)	88	X			
15. Introducing benchmarking in the Czech Republic and Slovakia: Processes, problems and lessons (2008)	52		X		
16. Constraints in the implementation of performance management systems in developing countries: The Ghanaian case (2009)	48				X
17. Distinctive research patterns on public sector performance measurement of public administration and accounting disciplines (2008)	41		X		X
18. Using the balanced scorecard to manage performance in public sector organizations: Issues and challenges (2012)	40				X
19. Performance measurement and business excellence: The reinforcing link for the public sector (2007)	37				X
20. The rise and use of balanced scorecard measures in Australian government departments (2011)	37		X		
21. Performance measurement and accountability in an Australian fire service (2009)	34				X
22. Utilizing performance measurement to modernize the Greek public sector (2006)	29	X		X	
23. The management model and factors driving performance in public organizations (2009)	27			X	
24. Performance management, managerial authority, and public service performance (2014)	24		X		
25. Toward Performance, Quality and Environmental Management in Local Government: The Case of Spain (2009)	15	X	X		
26. Public performance management systems: Embedding Practices for Improved Success (2011)	14	X	X		
27. Performance Management in the Public Sector (2015)	8	X		X	

continua

Chart 3- Classification of performance evaluation based on Srimai et al. (2011) (continuação)					
BP Articles		Performance Evaluation Approach			
		(1) From Operations to Strategy (2) From Measurement to Management (3) From Static to Dynamic (4) From Manager to Stakeholders			
Title	Quotations	(1)	(2)	(3)	(4)
28. Performance Management in the Public Sector: The Ultimate Challenge (2015)	7	X			
29. Total quality management in public administration organizations: an application of data envelopment analysis in the police service (2015)	7		X		
30. The strategy framework for performance measurement in the public sector (2014)	5	X			
31. The usefulness of performance reporting in local government: comparing Italy and Spain (2013)	4		X		
32. Motivation of Public Managers as Raters in Performance Appraisal: Developing a Model of Rater Motivation (2014)	2	X			
33. Performance Measurement in the Public Sector: Example of the Building Administration Authorities in Taiwan (2014)	1		X		
34. Performance improvement, culture, and regimes Evidence from the Ontario Municipal Performance Measurement Program, 2000-2012 (2015)	1	X			X
35. Public sector performance management: Evaluating the organizational outcome of business intelligence based budget information system in the context of the federal ministry (2014)	1		X		
36. Public Agency Performance Management for Improved Service Delivery in the Digital Age: Case Study (2015)	1	X			
37. Performance management in the local public sector in France: an administrative rather than a political model (2015)	0			X	
38. The adoption and implementation of performance measurement process in Italian public organizations: the influence of political, cultural and rational factors (2015)	0		X		
39. Toward excellence in public administration: organization theory-based performance management model (2015)	0	X	X		

Source: Prepared by authors (2016).

The Chart 1 to confirm each article's classification, excerpts were carefully analyzed to obtain supporting evidence. Note that a given article may serve more than one evaluation because the approaches are not exclusive and may be complementary.

Articles from the same period have distinct approaches to performance evaluation. In general, a predominance of evolutionary bias exists from measurement to management, because the authors agree that the vision and strategic objectives of the organization should define the focus and nature of its performance measurement system, facilitating the implementation and the achievement of the proposed goals (Atkinson, et al., 1997; Kaplan, 2001; Modell, 2004; Wisniewski, & Olafsson, 2004; Sotirakou, & Zeppou, 2006; Greatbanks, & Tapp, 2007; Montesinos, & Brusca, 2009; Ensslin, et al. 2020a; Ensslin, et al., 2020b; Longaray, et al., 2019; Ensslin, et al., 2014). The reason MFR has failed in previous occasions may be due to a lack of interaction between the performance evaluation, the desired results, and corporate

governance as well as because the performance evaluation models used ignore the singularities of each organization, causing the model to lose the legitimacy of its users (Moynihan, 2006; Ensslin, et al., 2020a). Cavalluzzo and Ittner (2004) show noticeable benefits of performance evaluation for the government sector. The implementation and design of a performance evaluation model in the public sector differs from that in the private sector, in part because some stakeholders have conflicting needs and because managerial skills are lacking (Rantanen, et al., 2007). Greatbanks and Tapp (2007) adapted the balanced scorecard to the public sector by modifying the original criteria devised by Kaplan and Norton (1996).

Regarding the strategic use of performance evaluation, Charbonneau et al. (2015) emphasized the need to analyze the particularities of each context. Public policies are distinct; as such, they call for different evaluation and measurement systems. The best way to manage what is measured needs to be considered: no single, general way exists to improve organizational performance (Charbonneau, et al., 2015).

Even in the light of Srimai et al. (2011) classifications, it is remarkable that most authors are concerned with satisfying stakeholder concerns and demands in the evaluation. For Atkinson et al. (1997), the role of strategic planning is to determine the relationship between the organization and the interested parties, including how these stakeholders can help the institution achieve its primary goals and what they should receive in return. Yang and Hsieh (2007) recognized that the external political environment in which public organizations operate significantly impacts their behavior and overall performance. Elected leaders and citizens are the most relevant stakeholders for public organizations and, consequently, for the performance evaluation (Yang, & Hsieh, 2007).

Greiling (2006), with 94 quotations in the BP, stated that the mere existence of performance evaluation does not automatically produce increased efficiency in the public sector. He addressed the issue of multidimensional efficiency, which is not satisfied with just achieving positive economic results but demands attention to democracy, political aspects, and social actions. The impacts on efficiency of the constraints under which the public sector operates must be particularized. Situations exist in which performance measurement boosts efficiency in terms of cost and processes (Greiling, 2006).

Nemec et al. (2008) are concerned about measuring to manage. They advocate that benchmarking is the best way to evaluate performance in developing countries. In many cases, they claim this is not done due to the absence of reliable data for analysis.

The article of Jääskeläinen and Laihonon (2014), with five quotations, provides an evaluation model that integrates managerial needs and measurement criteria for each evaluative approach, facilitating implementation of the strategy. They fall into classification (2) of Srimai et al. (2011). Sotirakou and Zeppou (2006), with 29 quotations, fall into the classifications (3) and (4) by emphasizing the need for more research to include the views of other stakeholders within a public organization (e.g., public managers and political leaders) on the actual importance of each descriptor for organizational success.

Analyzing the BP articles according to the classification system of Melnyk et al. (2013) (see Table 1), 28 articles are classified as measurement systems and 11 articles as performance management systems. Thus, most articles include processes for establishing metrics and collecting, analyzing, and interpreting performance data in the context of public management. About 30% of the BP articles describe processes to examine the differences between actual and desired results, signaling the need to adopt measures to improve organizational actions.

The bibliometric analysis demonstrates that publications related to public sector performance evaluation are consistent and relevant, demonstrating that the scientific

community has devoted efforts in discussing the subject, although, except in developed countries, the application of these studies in public management remains incipient.

Analysis of advanced features from the classification of Srimai et al. (2011) and Melnyk et al. (2013) demonstrate that scientific studies emphasize operational activities more than performance measurement, although strategic concerns about performance management receive considerable attention. Few studies focus on performance evaluation from the viewpoint of public sector stakeholders, although this is beginning to appear in new research.

5. Conclusions

To build knowledge for researchers, this study aimed to analyze the characteristics of international scholarly publications that address public sector performance assessment. To achieve this goal, an instrument was selected based on constructivist philosophical intervention; specifically, ProKnow-C, which permitted the formation of a BP containing 39 articles affiliated to the keywords used in the literature search.

This literature review identifies significant concerns in public sector performance evaluation, especially considering the NPM doctrine and the importance of efficiency and efficacy in public management. The paper also shows the multidimensional character inherent in public sector performance evaluation, which should address the demands of diverse stakeholders.

Applying a bibliometrics analysis to this BP revealed its basic characteristics, identifying redundant articles and the authors' trajectories. The advanced features were then analyzed grounded on guidelines from the research of Srimai et al. (2011) and Melnyk et al. (2013).

The bibliometric analysis indicates that, in the study of public sector performance evaluation, the most important journal in the BP and its references is the *Public Administration Review*. Most of its authors have followed a research career in performance evaluation, especially Yang et al. Scrutiny of the advanced features of research papers reveals a marked tendency to verify performance evaluation as tool to foster organizational strategy, by focusing not only on the listed metrics but also on achieving organizational purposes and its singularities. In addition, there is an emerging research trend contemplating the inclusion of meeting stakeholder concerns while fulfilling organizational goals in the context of performance evaluation.

This study has the following delimitations. First, the literature search was restricted to articles in published in English and journals indexed in at least one of the six selected databases available on the Internet. Authors recognize that other languages are also important for debate and may include important information as a way of broadening the analysis of variants, but it was part of the research scope delimitation as described on methodological framework. Second, analysis of the research papers in the BP according to the advanced variables outlined in the text is influenced by the authors' interpretations.

Finally, it is suggested, that future research may focus on expanding this study by searching other databases, considering other languages, and delineating different advanced variables.

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