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DEVELOPMENT OF PERFORMANCE EVALUATION THEME: A SISTEMATIC ANALYSIS OF THE LITERATURE

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Resumo
Esta pesquisa objetivou identificar o desenvolvimento da literatura sobre avaliação de desempenho. Trata-se de pesquisa exploratória e descritiva, com abordagem quali-quantitativa por meio de análise bibliométrica. Com base nas análises realizadas foi possível constatar que o artigo de destaque é Neely, Gregory e Platts (1995). O artigo de maior influência dentro do PB é de Bourne, Mills, Wilcox, Neely e Platts (2000), citado por 38 trabalhos do PB. Evidenciaram-se quatro grandes *clusters* de autores, conectados entre si, Andy Neely, Mike Bourne, Ken Platts, Mike Kennerley, Monica Franco-Santos, Veronica Martinez e Umit Bititci. A grande maioria (82%) foi publicada por periódicos do Reino Unido. As palavras-chave "*performance management*" e "*performance measurement*" são as mais utilizadas. Denota-se diversidade de áreas relacionadas ao tema. A área de operações abrange 50% dos estudos; administração e estratégia concentra 42% e área contábil apenas 8% dos trabalhos empíricos. Há ênfase na mensuração do desempenho (55%), e é pequena a parcela que se preocupa com a integração das duas. O *Balanced Scorecard* é a ferramenta que mais predomina nos estudos (23%), individualmente ou em combinação com outra ferramenta; 30% desenvolveram suas pesquisas propondo modelos baseados na literatura e 24% basearam-se em proposta desenvolvidos pelos autores.

Palavras-chave: Avaliação de desempenho; mensuração; gestão; revisão de literatura.

Abstract
The objective of this research was to identify the development of literature on performance evaluation. It is an exploratory and descriptive research study, with a quali-quantitative approach through bibliometric analysis. The analyses showed that the main featured article was by Neely, Gregory and Platts (1995). The most influential article in the BP was Bourne et al. (2000), with the highest level of betweenness. There are four large clusters of prominent authors, connected among themselves, namely, Neely, Bourne, Platts, Kennerley, Franco-Santos, Martinez and Bititci. The vast majority was published by journals based in the United Kingdom. The field of operations covers 50% of the studies; management and strategy cover 42% of the works while accounting covers only 8% of empirical studies about performance evaluation. In the literature, there is great emphasis on performance measurement (55%), but a small portion of works have focused on the integration of the two fields. The Balanced Scorecard is the tool that predominates in most studies (23%), either alone or in combination with another tool; in 30% of the works, research was developed by proposing models based on the literature while in 24% of them it was based on a proposal developed by the authors.

Keywords: Performance evaluation; measurement; management; review of the literature; bibliometric analysis.

1. Introduction

Performance evaluation is fundamental to the management of any organization (Choong, 2014a; Melnyk, Bititci, Platts, Tobias & Andersen, 2014). Organizations can use such an evaluation to direct efforts to control and correct strategies, thus establishing goals and the level of desired performance, as well as compare the latter with the level actually achieved. They can also use it for communicating their strategic intention and highlight, for everyone in the organization, the importance of what has been measured, and how important it is in order to achieve the strategic objectives of the organization (Melnyk *et al.*, 2014).

The use of performance measurement and management systems is often recommended to facilitate the implementation of strategies and improve organizational performance (Lebas, 1995; Melnyk *et al.*, 2014; Cuccurullo, Aria & Sarto, 2016). In addition, previous studies have shown that performance evaluation influences people's behavior, organizational capabilities and organizational performance (Franco-Santos, Lucianetti & Bourne, 2012).

Performance evaluation is a topic that has received considerable interest from researchers, in view of the large number of professional and academic conferences, and the high number of articles published on the topic, which has been growing exponentially as of the second half of the 1990s (Neely, Gregory & Platts, 1995; Neely, 1999; Bourne, Mills, Wilcox, Neely & Platts, 2000).

According to Bititci, Garengo, Dorfler and Nudurupati (2012), performance measurement began with double-entry bookkeeping, which enabled not only registration of transactions but also monitoring of wealth evolution. It was improved over time, and other ways to monitor performance were added by managerial accounting, always with a focus on financial measurement. Later, after the industrial revolution, the focus of accounting data was moved to operational aspects, such as cost monitoring, productivity, time spent, etc. However, focus was still placed on aspects which were essentially financial. Later, the focus of performance measurement was moved to more strategic aspects, involving product quality, production flexibility, and satisfaction of customers and stakeholders, thus moving toward a more strategic type of control, covering the financial and non-financial dimensions, and resulting in the emergence of several other criteria and indicators.

In this sense, it can be seen that the literature has been developing towards the resolution of practical problems, whose emphasis is to measure the performance of a particular aspect and submit the result of this measurement, without a concern for an effective use of such information for managerial purposes (Neely, Gregory & Platts, 1995; Neely, 1999; Nudurupati, Bititci, Kumar & Chan, 2011; Micheli & Mari, 2014; Valmorbida & Ensslin, 2016). In addition, as Performance Evaluation evolved, it began to be recognized as a tool for information about measurement for an effective use in organizational management (Otley, 1999; Berry, Coad, Harris, Otley & Stringer, 2009). Instead of emphasizing the control of organizational performance, the focus has been shifted to understanding what such performance means and how it can be improved (Bititci *et al.*, 2012). This shift of emphasis poses challenges to the practice of performance evaluation when one seeks to understand what specific conditions can lead to an improvement in performance. However, this shift opens up opportunities for research.

Thus, there is a need to rethink research on performance evaluation by recognizing the challenges faced by managers as well as offering scientific contributions for the purpose of resolving practical problems experienced in the organizational context (Bititci *et al.*, 2012). For this reason, the literature on the topic has to be mapped in order to offer insights on advances and identify opportunities for future research.

Therefore, the aim of the present study is to identify the production of relevant literature on performance evaluation, in order to describe authors, journals, relevant articles,

the development of performance measurement and management, tools in use and fields of development of the research.

It should be noted that this article is aimed at highlighting the literature about the theme in order to provide an overview of the literature with a view to promoting the development of new research studies and, hence, align performance evaluation with organizational needs.

2. Methodological Procedures

The present research, in terms of the nature of its objective, is characterized as an exploratory and descriptive study. First, a selection was made of a representative fragment of the literature produced on performance evaluation, seeking to build a robust portfolio which consisted of theoretical and empirical studies. In this portfolio, the authors seek to describe the characteristics of publications with information about authorship, journals and outstanding articles. They also present research networks on the topic, network of citations and co-citations (Gray, 2013).

To approach the research problem, data were collected from secondary sources in international databases and then analyzed under a qualitative perspective. Although the research is based on bibliometric analysis, an in-depth analysis was made of the results, hence they differ from the simple count of occurrences (Creswell, 2009).

The instrument of intervention Knowledge Development Process - Constructivist (ProKnow-C) was used in this research to undertake an analysis of the characteristics of the publications because it enables the selection of a representative portfolio on the topic, thus reducing the bias inherent in this activity. The next sections will describe (i) data collection procedures; and (ii) data analysis procedures.

2.1. Data collection procedures

The development of this step is motivated by the interest of researchers in the fragment of the literature relative to the topic “Performance Evaluation”, addressed in theoretical and empirical research. Thus, for conducting this research, the instrument Knowledge Development Process - Constructivist (ProKnow-C) was used because it is a structured process for selection and analysis of literature by researchers, for the purpose of construction of knowledge on a particular subject, under the interests and boundaries of the researchers who put it into practice, according to a constructivist view, which allows for a critical analysis of the bibliographic portfolio (BP) built from the delimited fragment of the literature (Loos, Merino & Rodriguez, 2016; Valmorbida & Ensslin, 2016; Valmorbida & Ensslin, 2017).

To achieve the objective of this research, steps 1 and 2 of ProKnow-C were followed: (i) selection of the bibliographic portfolio; and (ii) bibliometric analysis. The first step, selection of the bibliographic portfolio, was performed as shown in Figure 1.

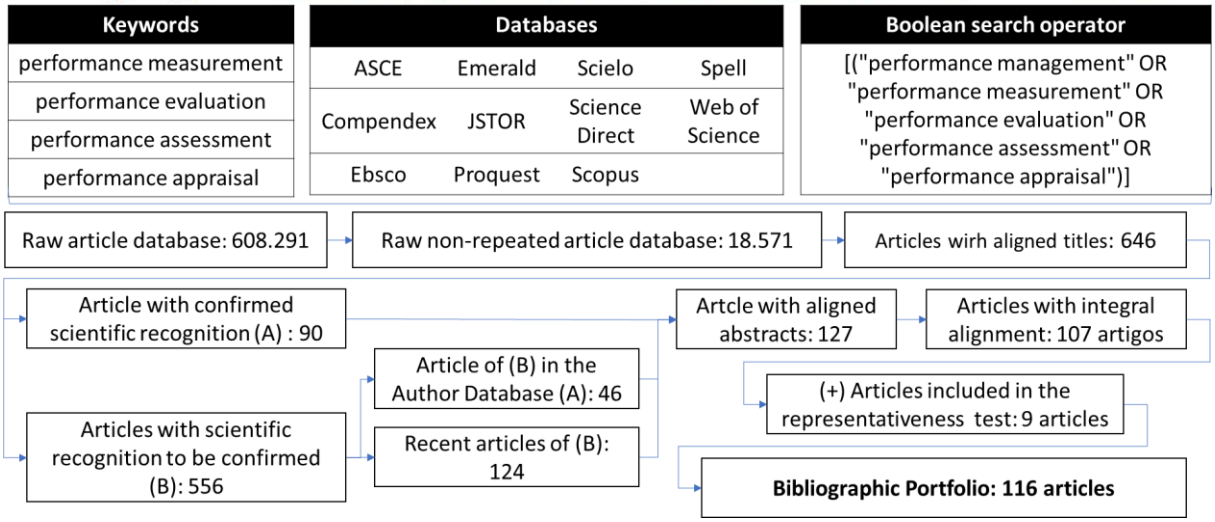

Figure 1 - Selection of the Bibliographic Portfolio
Source: Designed by the authors.

For the operationalization of ProKnow-C, groups of keywords are defined to represent the theme to be researched in the databases. The representation of these keywords is confirmed through a random selection of the articles which are found. When new keywords are found, the process is restarted until the keywords representing the theme are finished. The aim of such constructivist procedure is to include all possible articles about the theme.

When the adherence of keywords is confirmed, the raw database of articles is defined. A fragment of the literature about the topic being addressed is selected after alignment analysis of title, abstract and full-text articles, recent articles and articles from the test of representativeness (articles representing the references of the BP). Through this structured process, 116 articles were selected and compose the Bibliographic Portfolio of the present research.

2.2. Data analysis procedures

After selection of the 116 articles which composed the bibliographic portfolio, they were analyzed for: (i) identification of most cited articles, consulted on Google Scholar (https://scholar.google.com/); (ii) the most productive authors, counted by the number of articles of such author in the BP (without distinction between authorship and co-authorship), grouped by frequency. Further analysis was performed of co-citation networks, by means of the software programs Ucinet (Borgatti, Everett & Freeman, 2002) and VOSViewer (Van Eck & Waltman, 2010) ; (iii) journals most devoted to the topic, with consultation to the JCR and SJR of each journal, while making a distinction between theoretical and empirical articles; iv) keywords most frequently used in the articles, analyzed by counting the number of occurrences and organized in the software VOSViewer; v) field of development of the study, with classification of the empirical articles into three categories: accounting, strategy and operations, grouped by counting the number of occurrences; vi) emphasis on performance measurement and management, with articles grouped by counting the number of occurrences; and (vii) tools used by empirical studies, grouped by frequency.

3. Results

The first variable of analysis refers to articles with greater scientific recognition by peers, which compose the Bibliographic Portfolio. Together, 116 articles contained a total of 34,238 citations. Out of this total, the 10 major theoretical and empirical studies (five of each type) accounted for 13,818 citations.

As shown in Table 1, the main featured article is Neely, Gregory and Platts (1995), "Performance measurement system design: A literature review and research agenda", published in 1995 and republished, upon invitation of the editor in 2005, to celebrate 25 years of the International Journal of Operations and Production Management, because of its relevance and timeliness, even 10 years after its publication. In this study, the authors sought to highlight the main problems about performance measurement and the proposition of a research agenda. Although the authors come from the field of engineering, in this research they presented concepts of fields such as production, administration and accounting.

Table 1 - Articles in BP with the highest scientific recognition by peers

Citations	Theoretical studies
4025	Neely, A., Gregory, M. J., & Platts, K. (1995). Performance measurement system design: A literature review and research agenda. International Journal of Operations & Production Management, 15(4), 80-116.
2127	Otley, D. T. (1999). Performance management: A framework for management control systems research. Management Accounting Research, 10(4), 363-382.
1672	Behn, R. D. (2003). Why Measure Performance? Different Purposes Require Different Measures. Public Administration Review, 63(5), 586-606.
1453	Neely, A. (1999). The performance measurement revolution: why now and what next? International Journal of Operations & Production Management, 19(2), 205-228.
1187	Bourne, M., Mills, J., Wilcox, M., Neely, A., & Platts, K. (2000). Designing, implementing and updating performance measurement systems. International Journal of Operations & Production Management, 20(7), 754-771.
Citations	**Empirical studies**
967	Neely, A., Mills, J., Platts, K., Richards, H., Gregory, M. J., Bourne, M., & Kennerley, M. (2000). Performance measurement system design: developing and testing a process-based approach. International Journal of Operations & Production Management, 20(10), 1119-1145.
693	Bhagwat, R., & Sharma, M. K. (2007). Performance measurement of supply chain management: A balanced scorecard approach. Computers & Industrial Engineering, 53(1), 43-62.
645	Kennerley, M., & Neely, A. (2003). Measuring performance in a changing business environment. International Journal of Operations & Production Management, 23(2), 213-229.
536	Lohman, C., Fortuin, L., & Wouters, M. (2004). Designing a performance measurement system: A case study. European Journal of Operational Research, 156(2), 267-286.
513	Kloot, L., & Martin, J. (2000). Strategic performance management: A balanced approach to performance management issues in local government. Management Accounting Research, 11(2), 231-251.

Source: Research data.

In addition, it can be seen that Andy Neely stands out not only because he published theoretical and empirical research studies which received the greatest scientific recognition, but also because he authored most studies among the major ones (5 articles). A diversity of fields could also be noted; Production, Accounting and Administration are the main fields of research for performance evaluation; moreover, there was an exchange of knowledge between fields, as in Bhagwat and Sharma (2007) and Kloot and Martin (2000): these studies used a methodology from administration and accounting (Balanced Scorecard) and applied it in production supply chain and in the public sector.

Despite the major studies of the field are acknowledged by the scientific community, analyses should be made of the sources that they use to build their theoretical basis. While the activities of publication and innovation produce great amounts and various types of research data (Park, Yoon & Leydesdorff, 2016), the analysis of co-citation of authors is an important method to discover the intellectual structure of a given scientific field (Zhao & Chen, 2014; Ma, Dai, Ni & Li, 2009), because a quality indicator for the analysis of authorship can play a guiding role by informing the research community (Park, Yoon & Leydesdorff, 2016).

Thus, to determine the density of the co-citation network of the BP, one uses the number of relations divided by the maximum number of possible relations (Park, Yoon & Leydesdorff, 2016). The density of a network is simply the average value of binary inputs

and, therefore, density and average value are identical. In this way, density found for the network of co-citation of this study (0.036) indicates that 3.6% of all possible collaborations occurred, which is considered to be a low percentage. After density was identified, the centrality of the network was measured.

Figure 2 shows the most influential articles on the network. The determination of degree centrality is calculated by the number of articles with which a given article is directly connected. In-degree centrality (InDegree) corresponds to the sum of interactions that this particular article has with others (being cited), while the out-degree centrality (OutDegree) corresponds to the sum of the interactions that other articles present with that one (citing other works). Table 2 shows the main in-degree and out-degree centrality values of the articles in the BP.

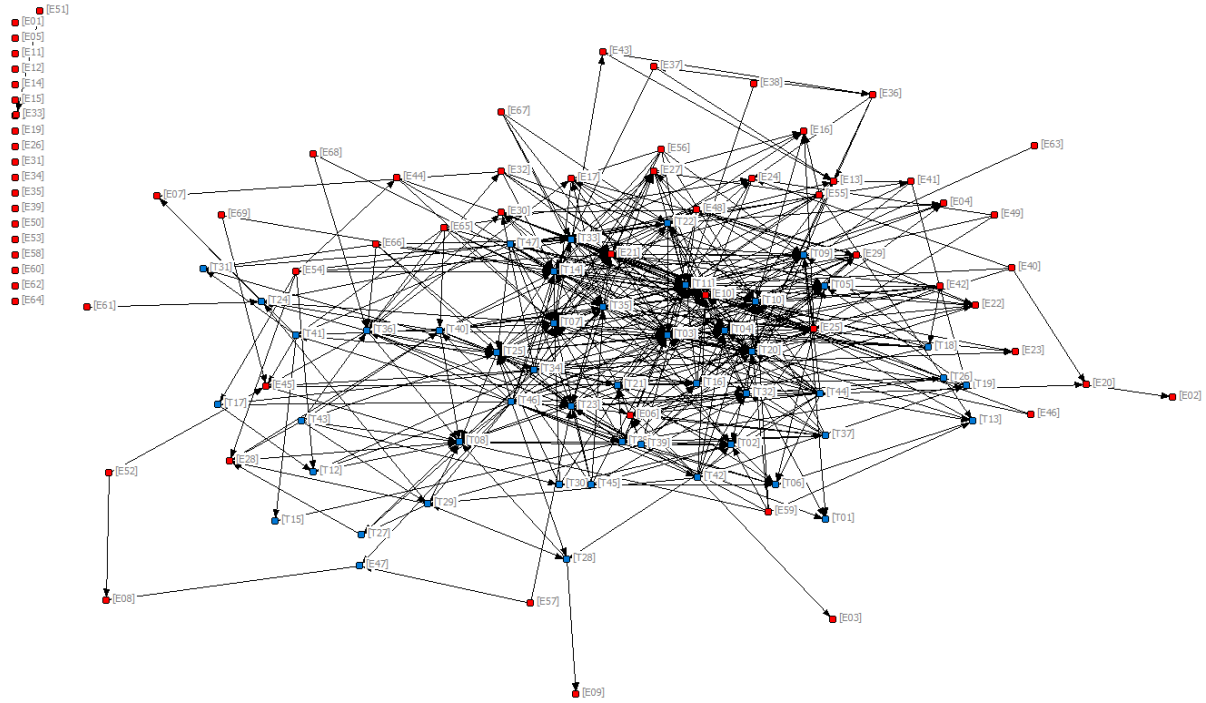

Figure 2 - Network of co-citation among articles in the BP and their references
Source: Research data.

The most influential article in the BP is [T11] - Bourne, Mills, Wilcox, Neely and Platts (2000), entitled "Designing, implementing and updating performance measurement systems". Its influence is highlighted with 38 citations among the 115 (116-1) possible citations in the BP, because in this study, the authors address and discuss the phases of the life cycle of performance measurement systems (PMS): design, implementation, use and continuous update of the PMS. In this way, by segmenting the life cycle of PMS, each part of this cycle could be analyzed in more detail for the following research studies.

The article [T03] has out-degree centrality of 32. Although this research of Neely, Gregory and Platts (1995) does not stand out in terms of degree centrality, it is s a reference for scientific discovery, as previously mentioned.

The other main articles which stand out are [T07] Neely (1999), [T10] Bititci, Turner and Begemann (2000) and [T14] Kennerley and Neely (2002). In Neely (1999), "The performance measurement revolution: why now and what next?", the author argues that there are seven main reasons why business performance measurement has become so up-to-date: the changing nature of work; increased competition; initiatives for specific improvements; national and international awards for quality; changes in organizational roles; changes in

external demands; and the power of information technology. In addition, the author describes the historical evolution of the theme of performance evaluation.

Table 2 - InDegree and OutDegree centrality of the articles of the BP and descriptive statistics

Articles with higher InDegree			Articles with higher OutDegree			Descriptive statistics				
Code	**InD.**	**OutD**	**Code**	**OutD.**	**InD.**		**OutDeg**	**InDegr**	**NrmOutDeg**	**NrmInDeg**
[T11]	38.000	4.000	[T46]	26.000	0.000	**Mean**	4.190	4.190	3.643	3.643
[T03]	32.000	0.000	[T35]	18.000	7.000	**Std Dev**	5.029	6.872	4.373	5.976
[T07]	26.000	1.000	[T33]	18.000	6.000	**Sum**	486.000	486.000	422.609	422.609
[T10]	23.000	2.000	[T44]	17.000	0.000	**Varianc**	25.292	47.223	19.124	35.707
[T14]	21.000	7.000	[T20]	15.000	8.000	**SSQ**	4,970.000	7,514.000	3,758.034	5,681.664
[E10]	21.000	2.000	[T38]	15.000	1.000	**MCSSQ**	2,933.828	5,477.828	2,218.395	4,142.025
[T04]	19.000	1.000	[T34]	15.000	1.000	**Euc. Norm**	70.498	86.683	61.303	75.377
[E21]	18.000	8.000	[T47]	14.000	0.000	**Min.**	0.000	0.000	0.000	0.000
[T08]	18.000	0.000	[T39]	14.000	1.000	**Max.**	26.000	38.000	22.609	33.043
[T23]	16.000	3.000	[E48]	13.000	0.000	**N of Obs.**	116.000	116.000	116.000	116.000
[T25]	15.000	11.000	[E25]	13.000	5.000	**Network Centralization (Outdegree)**				19.130%
[T05]	13.000	2.000	[T40]	12.000	3.000	**Network Centralization (Indegree)**				29.656%
[T02]	12.000	0.000	[T25]	11.000	15.000					
[T09]	10.000	3.000	[T42]	11.000	1.000					
[E06]	10.000	0.000	[T22]	10.000	7.000					

Source: Research data.

In the research “Dynamics of performance measurement systems”, Bititci, Turner and Begemann (2000) explored the use of IT-based management tools in order to ensure that the performance measurement system of an organization continues to be integrated, efficient and effective at all times. The article shows that the levels of understanding at the time, together with the methods, tools and techniques available, were sufficient to develop truly dynamic performance measurement systems.

In Kennerley and Neely (2002), the authors seek to present a picture of the factors that affect the evolution of performance measurement systems, with data describing the forces that shape the evolution of measurement systems used by different organizations.

Among the first 15 studies that highlight degree centrality, only 03 are empirical. Articles [E10], of Neely, Platts, Richards, Gregory, Bourne and Kennerley (2000), with 21 citations; [E21] of Kennerley and Neely (2003) with 18 citations and [E06] of Flapper, Fortuin and Stoop (1996) with 10 citations. Although these studies have predominantly empirical characteristics, some of the authors are the most prominent in the field, with a history of academic research on the theme.

Network centralization, expressed in percentage, reveals particular properties of the network structure as a whole and refers to general cohesion or to the integration of the network (Park, Yoon & Leydesdorff, 2016). Networks, for example, can be more or less centered around nodes or sets of specific nodes. In this research, centralization indexes were InDegree (19.30%) and OutDegree (29.656%).

The analysis of degree of betweenness corresponds to the possibility of a node (article) to mediate the communication between the pairs of nodes (other articles). The intersection is, therefore, a measure of the number of times that a vertex occurs in a geodesic. Normalized interaction in centrality is when interaction is divided by maximum possible interdependence expressed in percentage. The Table 3 shows this analysis.

Again, the article [T11], of Bourne et al. (2000) stands out with the highest number of betweenness. Because this research has a higher degree of betweenness, it is an article with a privileged position to the extent that readers "fall" into the geodesic paths between other pairs

of this network. The first value (101,767) represents the total numbers of pairs of nodes that the article is able to connect. The second value (0.7760) corresponds to the normalized degree of betweenness, in percentage.

Table 3 - Major degrees of betweenness of the co-citation network of articles in the BP and descriptive statistics

Degrees of betweenness			Descriptive statistics		
	Betweenness	nBetweenness		Betweenness	nBetweenness
[T11]	101.767	0.776	Mean	11.440	0.087
[T20]	100.340	0.765	Std Dev	23.135	0.176
[T25]	99.182	0.757	Sum	1,327.000	10.122
[T35]	89.963	0.686	Variance	535.247	0.031
[T14]	85.129	0.649	SSQ	77,269.109	4.496
[T33]	74.280	0.567	MCSSQ	62,088.684	3.612
[E21]	63.042	0.481	Euc Norm	277.973	2.120
[E25]	49.387	0.377	Minimum	0.000	0.000
[T04]	47.285	0.361	Maximum	101.767	0.776
[T05]	46.194	0.352	N of Obs	116.000	116.000
[T32]	43,647	0,333			
[T36]	42,806	0,327			
[T21]	39,840	0,304			
[T16]	39,525	0,301			
[T22]	38,149	0,291			

Source: Research data.

The authors of the articles in the BP are presented on an authorship map in Figure 3, developed with the software VOSViewer. It shows the clusters relative to the groups of research on the subject.

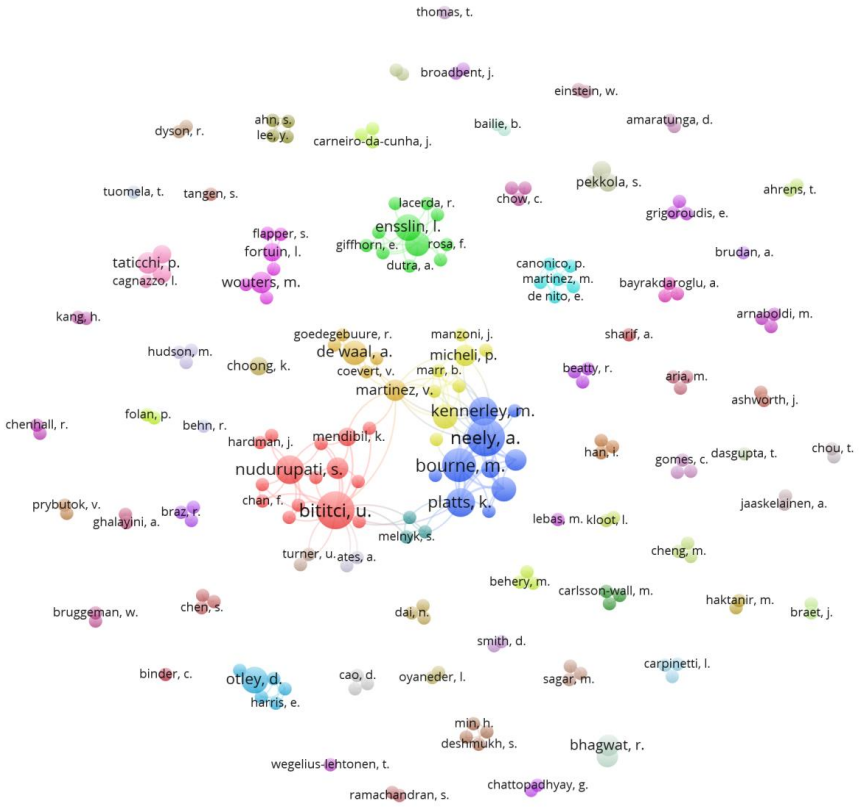

Figure 3 - Authorship map of articles of BPs
Source: Research data.

This analysis allows the visualization of the existence of prominent groups as regards research on performance evaluation. Centrally, the map shows the existence of four large clusters, connected among themselves, by means of outstanding authors, such as Andy Neely, Mike Bourne, Ken Platts, Mike Kennerley, Monica Franco-Santos, Veronica Martinez and Umit Bititci. Together, this large group is responsible for 37 articles of the fragment selected from the literature, and it represents 32% of the total. Other clusters, led by David Otley, Leonardo Ensslin, Marc Wouters and Paolo Taticchi, also feature highlights.

An analysis was also made of the studies according to their nature, and the authors of theoretical and empirical studies were identified. Figure 4 shows the highlights found in this analysis. As a result, the following authors of theoretical articles stand out: Andy Neely, who authored 9 theoretical articles, and Mike Bourne, who authored 6 articles. Umit Bititci can also be cited as author of theoretical studies. However, he stands out from other authors, especially for the total number of empirical works he has authored: 7 articles.

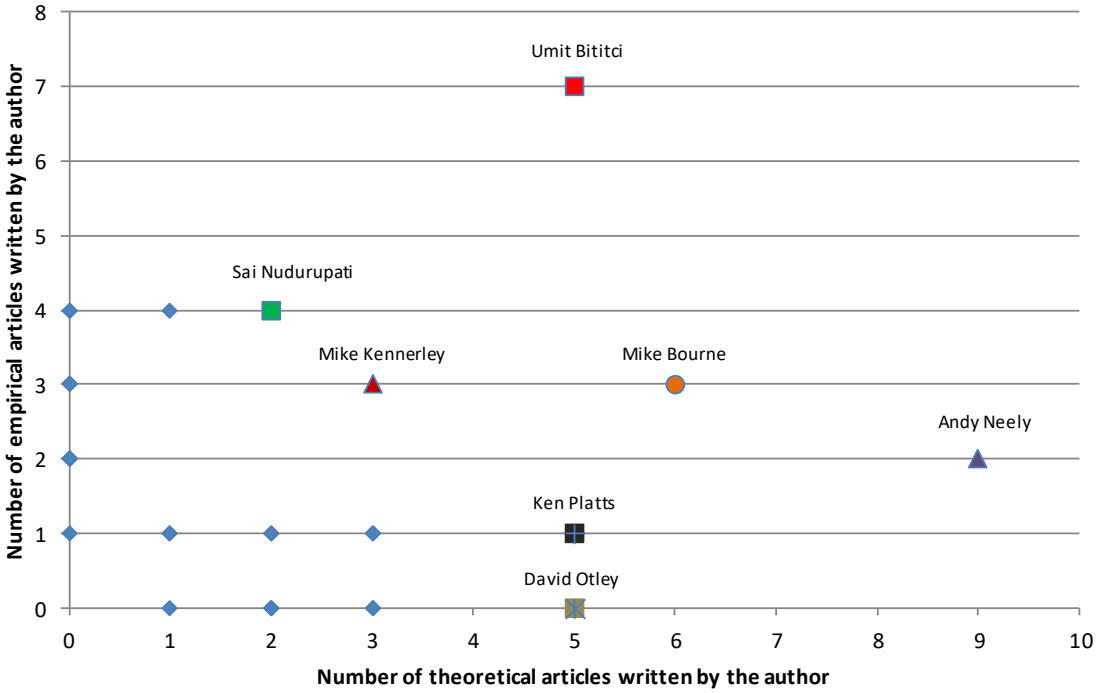

Figure 4 – Outstanding authors in BP
Source: Research data.

Another factor which was analyzed for outstanding authors is their research path. It was confirmed that among the most prominent authors of the BP, there is a line of specific and continuous research in Performance Evaluation, which actually involves the integration of multiple institutions.

Table 4 shows the journals that have published more articles on performance evaluation.

Table 4 - Outstanding journals

Journal	T*	E**	C***	Location	JCR	SJR	H-index
I. J. of Operations & Production Management	10	10	20	UK	2.252	2.198	94
Management Accounting Research	6	5	11	USA	-	1.913	56
I. J. of Productivity & Performance Management	3	7	10	UK	-	0.785	31
Measuring Business Excellence	4	4	8	UK	-	0.338	19
I. J. of Production Economics	3	4	7	Netherlands	2.782	2.749	144
Production Planning & Control	1	5	6	UK	1.532	1.295	50

I. J. of Business Performance Management	4	2	6	UK	-	0.194	15
Computers & Industrial Engineering	1	2	3	UK	2.086	1.63	88
British Accounting Review	3	0	3	USA	1.340	0.711	42
I. J. of Contemporary Hospitality Management	0	2	2	UK	2.176	1.329	35
Accounting, Organizations and Society	0	2	2	UK	2.464	2.515	90
Benchmarking: An International Journal	0	2	2	UK	-	0.556	38
Journal of the Operational Research Society	0	2	2	UK	1.225	1.026	75
Management Decision		2	2	UK	1.134	0.909	48
I. J. of Production Research	1	1	2	UK	1.693	1.445	91
Journal of Manufacturing Technology Management	1	1	2	UK	-	0.605	45

Caption: * Theoretical; ** Empirical; *** Consolidated. UK=United Kingdom; USA=United States of America.
Source: Research data.

The scope of most of the journals that publish the largest number of articles on performance evaluation (62.5%) was oriented to the field of operations, production and productivity. This is the case of the International Journal of Operations & Production Management, which accounts for most publications on the subject, both in empirical and in theoretical articles, and the International Journal of Productivity & Performance Management. However, other journals, e.g., Management Accounting Research, are oriented to the publication of research on managerial accounting. It was also found that the vast majority (82%) of the selected articles was published by journals based in the United Kingdom.

Figure 5 shows the distribution of keywords used by the articles.

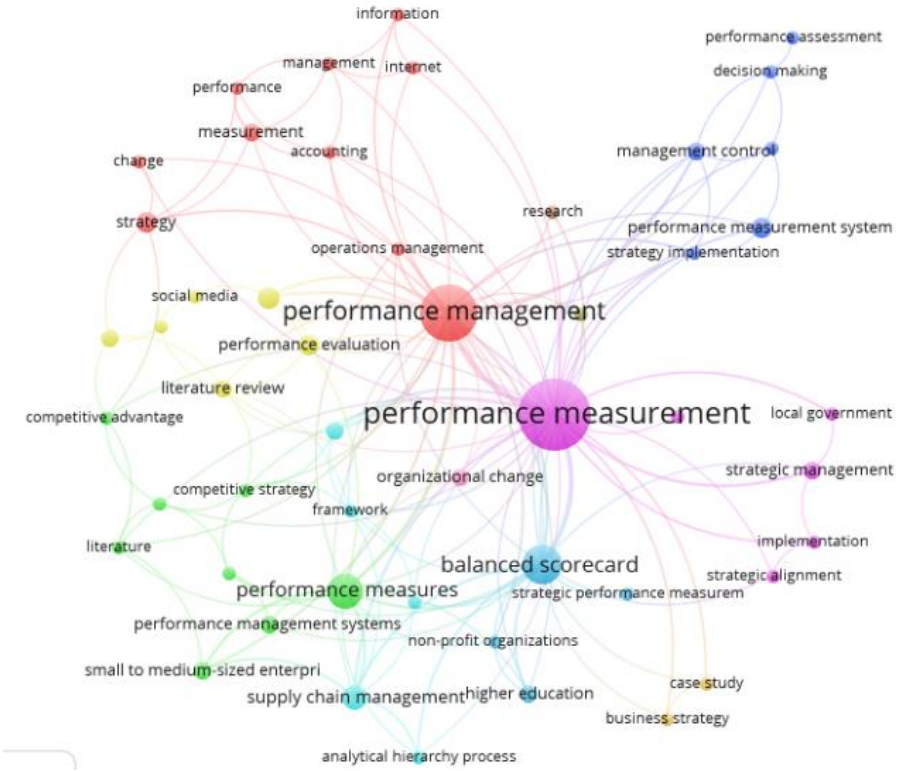

Figure 5 - Keywords most used by the articles
Source: Research data.

It was found that the words "performance management" and "performance measurement" are the most commonly used. It is also possible to identify the set of topics

relative to performance evaluation, aligned with the various fields of research on this theme. They were found to be aligned with themes such as local government, strategic management, small and medium-sized enterprises, strategy and competitiveness, among others, in addition to the tools used in research, such as Balanced Scorecard and AHP.

With respect to the areas that use performance evaluation, it is widely accepted that organizational performance is a multifaceted concept and, therefore, it is not surprising that, more than once, the issue of how the performance of organizations can best be measured was approached by a variety of researchers from different disciplines [04]. Field research was approached by a diverse group of people (Franco-Santos et al., 2007), as can be seen with the authors identified previously.

As regards the field of development of the study, the classification of areas is aligned with Franco-Santos, Lucianetti and Bourne (2012). Based on a wide variety of disciplines, including accounting, strategic management and business strategy, human resources management, production and operations management, marketing, service management, industrial engineering, facilities management, public sector management, psychology, change management and organizational behavior (Neely, 1999; Franco-Santos et al., 2007; Waggoner; Neely; Kennerley, 1999; Berry et al., 2009; Bititci et al., 2012; Yadav; Sushil; Sagar, 2014; Van Camp; Braet, 2016), they sorted the fields into Accounting, Strategy and Business Operations and Engineering (Franco-Santos et al., 2012).

It was found that the field of operations covers 50% of the selected studies, i.e., 35 empirical articles, followed by the field of administration and strategy, which concentrates 42% of the studies (29 articles). The field of accounting has only 8% of empirical studies (5 articles) on performance evaluation, which is surprising, considering that accounting paved the way for studies in the field (Otley, 1999; Bititci et al. 2012).

As regards the emphasis placed on performance evaluations, the works were analyzed for their concern with performance measurement and effective performance management. Performance measurement includes procedures for definition of objectives, data collection, analysis and interpretation of data on performance, while performance management involves evaluating differences between actual and desired results, identifying and signaling differences that are critical (thus ensuring the intervention of management), understanding why deficiencies have occurred, and, when necessary, introducing and monitoring corrective measures to bridge significant gaps in performance (Melnyk et al., 2014).

There is a predominant emphasis in the literature on performance measurement (55%) (38 articles). The focus of the other 29% (20 articles) lies only on performance management. There is still a small portion of works that are concerned with the integration of these two fields, considering that 15% of the works (11 articles) being analyzed were focused on measuring performance, i.e., they were oriented towards the effective use of information produced for management of an organization.

Another analysis was performed for the performance evaluation tools. As mainly results, the Balanced Scorecard is the tool that predominates in most studies (23%), whether used alone or in combination with another tool. Yet, research in 30% of the works was developed by proposing models based on the literature. The other 24% was based on proposals developed by the authors.

4. Final remarks

Performance evaluation is crucial to the management of any organization. Over time, it has been gaining interest from the academy. However, it is clearly necessary to reflect on research conducted on performance evaluation, in order to give scientific contributions to identify and seek solutions to practical problems experienced in the organizational context.

Thus, the objective of this research was to identify the development of literature on performance evaluation, in order to identify the articles with greater scientific recognition, which are the most relevant, the most cited and the most referenced as well as authors, journals, keywords in use, fields of development of the research studies, emphasis on performance measurement and management and tools used by the scientific community which is devoted to the theme.

The analyses showed that the main featured article is Neely, Gregory and Platts (1995), with "Performance measurement system design: A literature review and research agenda", published in 1995 and republished, upon invitation of the editor in 2005, to celebrate 25 years of the International Journal of Operations and Production Management, because of its relevance and timeliness, even 10 years after its publication. The article of greater influence within the BP is "Designing, implementing and updating performance measurement systems", of Bourne, Mills, Wilcox, Neely and Platts (2000), with the highest number of betweenness, having been cited by 38 works in the BP.

There were four large clusters of authors, connected among themselves, by means of outstanding authors, such as Andy Neely, Mike Bourne, Ken Platts, Mike Kennerley, Monica Franco-Santos, Veronica Martinez and Umit Bititci, who represent leading researchers of the theme of performance evaluation. Together, this large group is responsible for 37 articles of the fragment selected from the literature, and it represents 32% of the total.

Most of the journals which were most receptive to the theme (62.5%) are from the field of operations, as is the case of International Journal of Operations & Production Management and International Journal of Productivity & Performance Management. The second most receptive journal was Management Accounting Research, geared towards managerial accounting. The vast majority (82%) was published by journals based in the United Kingdom.

The keywords "performance management" and "performance measurement" are the most commonly used. However, there is a wide range of fields related to the theme. The area of operations covers 50% of the studies; management and strategy cover 42% of the works while accounting covers only 8% of empirical studies on performance evaluation, which is surprising, considering that accounting paved the way for studies in the field (Otley, 1999; Bititci et al. 2012).

In the literature, there is great emphasis on performance measurement (55%). Only 29% of research was focused on performance management. There is still a small portion of works that are concerned with the integration of the two fields. Still, it was noted that the Balanced Scorecard is the tool that predominates in most studies (23%), used either individually or in combination with another tool; in 30% of the works, research was developed by proposing models based on the literature and, in 24% of them, research was based on a proposal developed by the authors.

It should be emphasized that this article sought to highlight the literature about the theme in order to allow for an overview of such literature, in order to promote the development of new research studies to align performance evaluation with organizational needs. Because of the volume of literature on this subject, a representative fragment had to be selected for the proposed analysis. This selection was performed with the aid of ProKnow-C. Moreover, the processes of the representativeness test and feedback at the time of selection, whose aim was to eliminate the eminent bias of the research, were an attempt to ensure that no important article was left out of the selection.

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APPENDIX: Codes of the works composing the bibliographic portfolio used during research

Theoretical studies

[T01]Gregory, M. (1993). Integrated performance measurement: A review of current practice and emerging trends. *International Journal of Production Economics*..

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[T06]Neely, A. (1998). Three modes of measurement: theory and practice. *International Journal of Business Performance Management*.

[T07]Neely, A. (1999). The performance measurement revolution: why now and what next? *International Journal of Operations & Production Management*.

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