

# Performance Measurement in Social Economy Organizations: a bibliographic survey using the *METHODI ORDINATIO* approach

## ABSTRACT

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The fundamental aim of social organizations is to have an impact on social, environmental or community issues in their surrounding regions. Therefore, measuring performance is imperative to the continuity of their operations. Performance measurement in social organizations involves assessing the achievement of social goals through organizational activities considering a range of indicators (such as production, outcomes, etc.) and dimensions (such as environmental preservation, social change, economic sustainability, etc.). With the purpose of building the state of the art in performance measurement in social economy organizations, this survey used *Methodi Ordinatio*, a new methodology that assists in identifying and classifying relevant papers related to a particular theme. In order to identify and classify the scientific production surrounding performance measurement in social organizations, three bibliographic databases were searched, including works from 2006 to 2015. This survey confirms the applicability of the *Methodi Ordinatio* approach in identifying and classifying relevant studies around specific scientific themes. It also enabled the identification of some gaps in the current literature, such as the lack of instruments, methods, frameworks, and models that consider qualitative elements of performance measurement in social economy organizations, and the limited number of studies in developing countries. Additionally, the analysis showed a growing interest in the theme with an increase in the number of publications over the last six years of the study period. Moreover, the social network analysis confirmed limited international collaboration and low connectivity among the authors listed in the portfolio, with the occurrence of only 28.31% of all possible relationships.

**KEYWORDS:** Performance Measurement. Social Organizations. Social Economy. Bibliometric Analysis. *Methodi Ordinatio*.

## INTRODUCTION

Social Economy organizations work to link public administration with the private sector (BELLUCI et al., 2012) and include a wide range of entities, such as non-governmental (NGOs), nonprofit, or solidarity economic organizations, acting in accordance with their founding concepts (BAGNOLI; MEGALI, 2011; MEADOWS; PIKE, 2012; EBRAHIM; RANGAN, 2014). The common purpose of these social enterprises is to promote social change in the communities in which they act. Consequently, measurement of their performance arises from the need to evaluate the impacts of the activities developed by these organizations (STEVENS et al., 2015).

However, it is necessary to evaluate not only the impacts occurring in the surrounding community, but also determine how this information is used to improve future activities developed by these social enterprises (SILLANPÄÄ, 2011; EBRAHIM; RANGAN, 2014). In this sense, Vanz and Stumpf (2010) highlighted the pertinence of developing new procedures driven by bibliometric analysis, aiming to more efficiently assess the scientific state of the art around a theme.

To determine the state of the art on performance measurement in social economy organizations, a bibliometric analysis was performed using the *Methodi Ordinatio* approach. *Methodi Ordinatio* is a methodology that makes use of scientific indexes, such as journal impact factor, year of publication, and number of citations on Google Scholar, to identify the most relevant studies, gaps, and potential for further studies associated with a specific theme (PAGANI et al., 2015). Several authors have used these indicators independently in a wide range of bibliometric studies, including Sombatsompop et al. (2010) evaluating the performance of public universities in Thailand, Xie and Willett (2012) assessing the development of computer science in China, and Araujo et al. (2017) analyzing the scientific production of solidarity economy organizations in Brazil. However, only the *Methodi Ordinatio* method brings together all these indicators in a single model to pinpoint the gaps in the literature (GONZÁLEZ-ALCAIDE et al., 2016).

This approach enables us to address issues identified by other authors regarding the evaluation of quality indicators related to scientific production around a theme, such as the relevance of universities, workgroups, and researchers (TAHIRA et al., 2016), as well as the impact factor of the journal (OGUNGBENI et al., 2016). Despite the fact that performance measurement tools have been used in some segments of the third-sector, this methodology is innovative and extremely relevant in verifying the effectiveness of actions developed by these social organizations (ARENA et al., 2015). Herein, this study uses the *Methodi Ordinatio* to analyze recent scientific production related to the evaluation of the activities of social organizations in the period ranging from 2006 to 2015.

## RESEARCH METHODOLOGY

This paper presents exploratory research in which the *Methodi Ordinatio* (PAGANI et al., 2015) is used as a quantitative approach to classify and analyze scientific production that assesses the effectiveness of activities developed by solidarity economy organizations around the world. We used the *ProKnow-C*

process (TASCA et al., 2010; ENSSLIN et al., 2013) to gather the data and then identify and quantify the indicators (TURRIONI; MELLO, 2012).

Initially, a search for the phrase “Performance Measurement” combined with the terms “Social Enterprise”, “Nonprofit”, and “Social Economy”, was conducted across three of the main scientific and technical literature databases: Scopus, Web of Science, and Science Direct (VIEIRA; GOMES, 2009). The search terms had to be present in the Abstract, Title, and/or Keywords, taking into account only scientific articles and reviews published between 2006 and 2015 with full-texts available. Subsequently, titles and abstracts were read to further filter the results and collate the indicators into a Zotero virtual library (GEORGE MASON UNIVERSITY, 2016). The social network density was analyzed using the UCINET® software (BORGATTI 2002; PARK et al., 2016).

After concluding the selection procedures, each article was individually analyzed using a standardized form addressing three main topics: 1) The article: publication year, journal index, number of citations, keywords, language; 2) The methodological approach: nature of the study, instruments of research, type of social organization, country; 3) The authors: number of authors per article, institutional affiliation, nationality, gender.

Typically, the authors declare their nationality and institutional affiliation in the articles. The authors' data was verified through Curriculum Vitae available on university websites, while the articles' relevance was analyzed based on the number of citations as listed on Google Scholar. The journal impact factor was obtained from the Journal Citation Reports Science Edition - JCR (ISI, 2015). Based on these variables, analyses were conducted to identify the state of the art regarding the assessment of effectiveness of solidarity economy organizations.

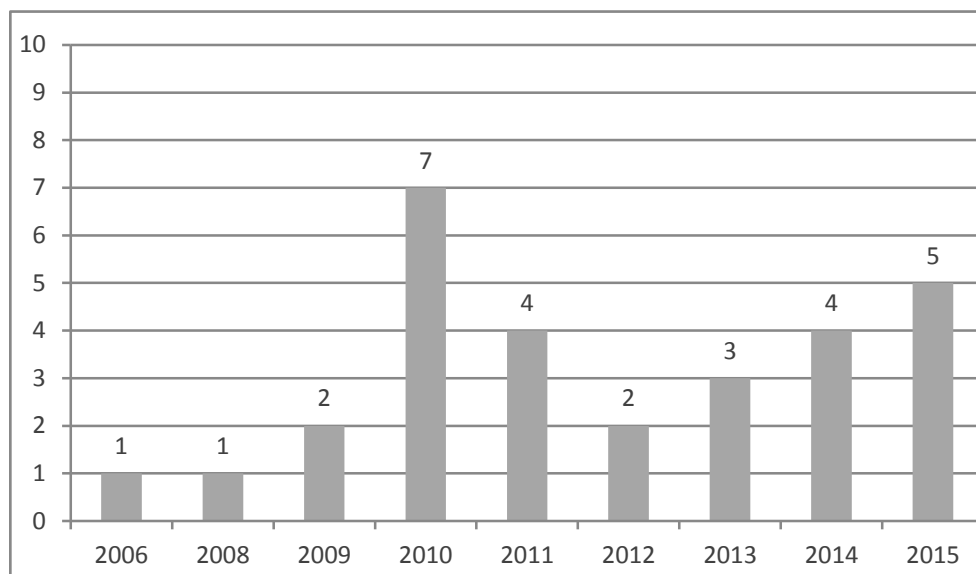
## FINDINGS AND DISCUSSIONS

The initial survey identified 315 articles. After discarding the repeated references (86), 229 distinct scientific articles remained. Of these, only 112 offered open access to the full text. Next, the titles and abstracts of the 112 studies were read to assess their alignment with the scope proposed by this survey. This reading led to the rejection of 83 studies; although they included the aforementioned keywords, they were removed because they were either non-scientific (i.e., testimonials) or discussed results unrelated to performance measurement in social economy organizations, such as contracts, partnerships, environmental sustainability, among other themes. Finally, a portfolio was assembled containing 29 studies.

## ARTICLE BIBLIOMETRIC ANALYSIS

An analysis of distribution by year was conducted for the 29 scientific studies, as shown in Figure 1. As shown in the figure, there is no linearity regarding the number of publications per year, with 2010 standing out with seven articles, and no studies published in 2007.

Figure 1 - Articles related to performance measurement in social economy organizations published between 2006 and 2015



The data corroborates the comments of several authors (BELLUCI et al., 2012; BENJAMIN; CAMPBELL, 2015; GRIECO et al., 2015) who note that the importance of social impacts and the accountability of social economy organizations have become increasingly prominent in the literature. Despite the growing number of publications, there is still a scarcity of studies on performance measurement specifically related to nonprofit organizations (THOMSON, 2010; MACLONDOE; BARMAN, 2013).

Table 1 - Most relevant journals related to performance measurement in social economy organizations between 2006 and 2015

Journal	# of publications
Nonprofit and Voluntary Sector Quarterly	10
Annals of Operations Research; Voluntas	2
Quality & Quantity; Benchmarking: An International Journal; Systemic practice and action research; Annals of Public and Cooperative Economics; California Management Review; Measuring Business Excellence; Cuadernos de Economía y Dirección de la Empresa; Organization studies; Entrepreneurship Theory and Practice; Socio-Economic Planning Sciences; Facilities; The European Journal of Health Economics; International Journal of Operations & Production Management; International Review on Public and Nonprofit Marketing; Journal of Small Business and Enterprise Development	17 (1 each one)
<i>Total overall</i>	29

Table 2 – The ten most cited articles related to performance measurement in social economy organizations published between 2006 and 2015

Article's title	Authors, year	# of citations
Measuring Performance in Social Enterprises	Bagnoli and Megali (2011)	158
Does Performance Measurement Improve Strategic Decision Making? Findings From a National Survey of Nonprofit Social Service Agencies	LeRoux and Wright, 2010	116
Performance measurement: Examining the applicability of the existing body of knowledge to nonprofit organizations	Moxham, 2009	101
The Accountability Movement: What's Wrong With This Theory of Change?	Carman, 2010	79
Exploring the Role of Funders' Performance Reporting Mandates in Nonprofit Performance Measurement	Thomson, 2010	51
Made to measure: taming practices with results-based accountability	Keever, Treleaven, Sykes and Darcy, 2012	48
What Impact? A framework for measuring the scale and scope of social performance	Ebrahim and Rangan, 2014	44
FAHP Sensitivity Analysis for Measurement Nonprofit Organizational Performance	Wu, Chang and Lin, 2008	43
Staff Perceptions of Variables Affecting Performance in Human Service Organizations	Packard, 2010	43
Performance Management for Social Enterprises	Meadows and Pike, 2010	32

Subsequently, we analyzed the journals in which the articles were published. The results are shown in Table 1. The journal *Nonprofit and Voluntary Sector Quarterly* stands out with the largest number of publications, with ten articles in the filtered portfolio, followed by *Annals of Operations Research*, and *Voluntas*, both with two studies. It is worth mentioning that the majority of the 18 journals listed have only one identified article in the portfolio, whereas the journal *Nonprofit and Voluntary Sector Quarterly* includes one third of the articles analyzed, demonstrating its representativeness related to the studied theme.

Table 2 presents the ten most cited articles in the portfolio, based on citations listed on Google Scholar as of October 31st, 2016. Citations and references are the threads that formally connect publications in terms of content and impact indexes (MARX; BORNMANN, 2015; 2016). The number of citations reflects points of strength and weakness, and as such is often employed in research evaluations. This analysis demonstrated that each article has been cited at least twice, with the most cited article, "Measuring Performance in Social Enterprises", receiving 158 citations (BAGNOLI; MEGALI, 2011).

However, according to Marx and Bornmann (2015), the number of citations in itself is not particularly significant; the use of three parameters to evaluate the academic relevance is suggested, such as the number of publications, number of citations, and citation average (YAN et al., 2016). Thus, the *Methodi Ordinatio* approach was applied to identify the academic relevance of filtered articles, evaluating parameters including the journal impact factor – JCR® (ISI, 2015), publication year, and number of citations (PAGANI et al., 2015). The ten most relevant articles identified by *Methodi Ordinatio* are listed in Table 3.

The results summarized in Tables 2 and 3 show that the first three articles classified either by number of citations or by *Methodi Ordinatio* are the same. Additionally, of the seven other articles, four were classified with different rankings in both lists and the remaining three are different among the two methods used. This result shows the effectiveness of the *Methodi Ordinatio* to select and classify relevant articles on a topic, since it takes into account important variables such as the publication year and the journal impact factor, and not exclusively the number of citations (Table 2).

Table 3 – The ten most relevant articles related to performance measurement in social economy organizations from 2006 and 2015 based on the *Methodi Ordinatio* approach

Article's title	Authors, year	InOrdinatio
Measuring Performance in Social Enterprises	Bagnoli and Megali (2011)	208
Does Performance Measurement Improve Strategic Decision Making? Findings From a National Survey of Nonprofit Social Service Agencies	LeRoux and Wright, 2010	156
Performance measurement: Examining the applicability of the existing body of knowledge to nonprofit organizations	Moxham, 2009	131
What Impact? A framework for measuring the scale and scope of social performance	Ebrahim and Rangan, 2014	124
The Accountability Movement: What's Wrong With This Theory of Change?	Carman, 2010	119
The Social and Economic Mission of Social Enterprises: Dimensions, Measurement, Validation, and Relation	Stevens, Moray and Brunnel, 2016	110
Made to measure: taming practices with results-based accountability	Keevers, Treleaven, Sykes and Darcy, 2012	108
Performance Measurement for Social Enterprises	Arena, Azzone and Bengo, 2015	105
How Organizational Stakeholders Shape Performance Measurement in Nonprofits: Exploring a Multidimensional Measure	MacIndoe and Barman, 2013	102
Measuring Value Creation in Social Enterprises: A Cluster Analysis of Social Impact Assessment Models	Grieco, Michelini and Iasevoli, 2015	100

The keyword assessment identified a total of 102 keywords. The most often used were “Performance Measurement” (nine incidences), followed by “Social Enterprise” and “Accountability” (four incidences each), in contrast to 92 keywords that occurred only once. Regarding the publication language, the majority of studies in the assembled portfolio were published in English (96.55%), with only one published in Spanish. The article published in Spanish (HERNANGÓMEZ et al., 2009) in a journal with an impact factor of 0.286, has just two citations and is ranked as 28th in the *Methodi Ordinatio* portfolio. This is a lower ranking than other articles published later, in English, and in journals with no impact factor, such as Rey Garcia et al. (2013), which has 11 citations, and occurs in 20th place in the *Methodi Ordinatio* classification.

### BIBLIOMETRIC ANALYSIS OF METHODOLOGIES

Initially, the article’s research methodology was analyzed in terms of approach, classifying the studies into theoretical or practical. The articles were then analyzed considering the methodological instruments used. The portfolio contained 26 practical and three theoretical studies, as shown in Table 4.

Table 4 - Methodological approach used in scientific articles related to performance measurement in social economy organizations published between 2006 and 2015

Methodological Instrument	# of articles
Model	10
Survey; Framework	12 (6 each one)
Multiple cases and/or case studies	3
Interviews; Content Analysis; System; Participatory action research	4 (1 each one)
<i>Total</i>	<i>29</i>

Ten articles were identified as developing and/or presenting models: six were based on the Data Envelopment Analysis (DEA) methodology (DUFFY et al., 2006; HERNANGÓMEZ et al., 2009; REGO et al., 2010; BERBER et al., 2011; BELLUCCI et al., 2012; MEDINA-BORJA; TRIANTIS, 2014); one was based on the Analytic Hierarchy Process (AHP) – Fuzzy methodology (WU et al., 2008); one on the Balanced Scorecard (MEADOWS; PIKE, 2010); one on the theory of change and the logical model (CARMAN, 2010); and one presented models that approach performance measurement from the presuppositions of linearity and separability using the parametric method of translog cost function and nonparametric DEA (BANKER et al., 2014).

Of the six identified surveys, each applied a different approach, including: relationship between performance measurement and effectiveness in strategic decision making (LEROUX; WRIGHT, 2010); performance measurement in terms of personnel involved (PACKARD, 2010); outcome measurement in nonprofit organizations and its relationship to funders' reporting mandates (THOMSON, 2010); managers' perspectives on stakeholders' importance for outcome measurement standards (MACLNDOE; BARMAN, 2012); evaluation of organizational values and their influence on organizational performance (HELMIG et al., 2015); and a final study validating the identification of dimensions and



measures for understanding the delineation of social and economic missions (STEVENS et al., 2015).

Of the six articles that presented and/or developed frameworks, the “Logical Model” stands out, as it was employed as a basis for two studies (EBRAHIM; RANGAN, 2014; ARENA et al., 2015). Other individual approaches were used in the remaining studies as follows: the Conceptual Systems Approach (STRAUB et al., 2010); the three pillars of sustainability: economic, social, and environmental (BAGNOLI; MEGALI, 2011); the development of Theoretical Measurement Framework based on a Social Economic Continuum (SEC) (CROSSAN et al., 2011); and the development of a marketing-based framework for evaluating nonprofit effectiveness (REY GARCIA et al., 2013).

In terms of case studies, one article presents a single case study that measured some performance practices (MOXHAM, 2009), while the other two present multiple case studies. One approached how frontline staff work in partnership with clients to set an agenda for change and achieve desired results (BENJAMIN; CAMPBELL, 2015). The other focused on the performance measurement process in three areas: (a) staff perspectives on the definition of client outcomes; (b) technology resources and limitations; and (c) organizational structures and processes supporting performance measurement (CARNOCHAN et al., 2014).

The four remaining studies used a range of different methodologies: interviews regarding key elements of performance measurement (SILLANPÄÄ, 2011); participatory action research for Results-Based Accountability (RBA) (KEEVERS et al., 2012); analysis of 10 outcome measurement guides targeted to nonprofits (BENJAMIN, 2013); and the classification system of Social Impact Assessment models and frameworks (GRIECO et al., 2015).

In relation to performance measurement processes, two methods stand out: the DEA methodology and the Logical Model. These models are widely applicable and relevant for measuring and comparing the performance of social economy organizations. The DEA methodology, used in six studies, measures resource efficiency independent of the input/output combinations or adopted technologies (CHARNES et al., 1978). The Logical Model used in two studies consists of basic elements inherent to social organizations: activities, inputs, outputs, outcomes, and impact (EBRAHIM; RANGAN, 2014). These results agree with the statement by Bagnoli and Megali (2011) who emphasized that the development of studies and measurements that consider qualitative elements are essential for performance measurement in social enterprises.

Based on these results, it is clear that studies have focused on quantitatively measuring and evaluating performance. This shows the lack of, and need for, studies on performance measurement in social organizations with qualitative approaches since social economy organizations are evaluated in terms of their ability to meet their social goals, such as benefits to users and impact on general well-being (STEVENS et al., 2015).

The diverse range of themes and approaches addressed in different studies shows that researchers are concerned with the development of proposals that can effectively help social enterprises in their communities. Of the 26 practical studies, the organizations were classified based on their activities as discerned



from the authors' listed affiliations. Table 5 shows the categorization of practical studies, in which hospitals and health institutions are grouped as "health services". Nine studies did not specify the type of organization to which the research was applied, classifying them generically under nonprofit organizations; four studies specified the organizations studied as social enterprises, without clarifying their operational activities. Of the 13 remaining studies, four related to care service organizations, three were related to health service organizations, and two addressed educational service organizations. Finally, four studies were conducted in other types of social organization: NGOs; housing associations; community organizations; and Fair Trade.

Table 5 - Type of organization assessed by the practical studies listed in the portfolio

Type of organization	# of articles
Nonprofit Organizations	9
Social Enterprises; Care Services	8 (4 each one)
Health Services	3
Educational Services	2
Non-Governmental Development Organizations (NGDOs); Housing Associations; Community Organizations; Fair Trade	4 (1 each one)
<i>Total</i>	<i>26</i>

Of the 13 countries in which the surveyed studies were developed, the USA was the main publisher (42.31%), followed by Italy (11.54%), and the United Kingdom (7.69%). Just one study (3.85%) was carried out in collaboration with more than one country: USA and India. The following countries each published one study: Finland, Spain, Netherlands, Ireland, Taiwan, Portugal, Australia, Belgium, and Germany.

### BIBLIOMETRIC ANALYSIS OF AUTHORS

The 29 articles include 71 different researchers, with the number of authors per article ranging from one to five (one article has five authors and six articles have one author). These findings demonstrate that publications evaluating performance measurement in social economy organizations are carried out by small research groups. The occurrence of small research groups had been found in other areas of scientific research, as described by Dehdarirad et al. (2015) in their research on women in science and higher education, and by Araújo et al. (2017) in their research on the solidarity economy.

More than half of authors are male (67.61%), supporting the findings presented by Mauleón et al. (2013) that there is a growing number of women involved in scientific production (MAULEÓN et al., 2013). However, Dehdarirad et al. (2015) note that this change is slow and unequal in many sectors.

The nationality of the institutional affiliation declared by 71 researchers is summarized in Table 6. The authors belong to 14 different nationalities, with the USA the most productive country in relation to the theme, consisting of 27

authors (38%). According to a Financial Times (2016) review of the 25 best business schools in the world 13 are located in the USA, which explains the country's prominence in studies related to the theme. In terms of international collaboration, we found only two articles (6.9%) with authors of different nationalities, indicating that international collaboration is limited and likely due to local specificities.

Table 6 - Nationality of the authors and co-authors' institutional affiliation

Nationality	# of authors
USA	27
Italy	11
Spain	6
Australia	4
Germany; Belgium; United Kingdom; Taiwan; The Netherlands; Portugal	3
Ireland	2
Finland; Northern Ireland; Puerto Rico	1
<i>Total</i>	<i>71</i>

Finally, a Citation Map was built (Figure 2) to outline the relevance of the scientific articles included in the portfolio. In this figure, each author received a researcher ID, and the connections show the studies cited by other authors. Thus, we can observe the relations established by the researchers through their interactions (MARTELETO, 2001).

Figure 2 - Citation map among the authors in the portfolio highlighting the five most cited articles

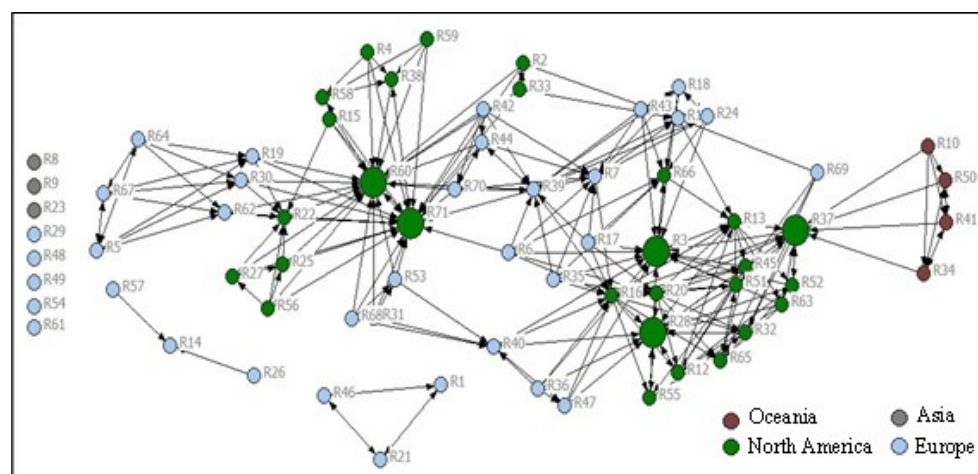


Figure 2 represents the connections among the authors listed, in which the researchers without connections are positioned along the edges of the map. The five most cited authors listed in the portfolio are North American, which are highlighted by larger dots. According to this analysis, the central author is William W. Cooper (R71), with 23 citations, followed by Rajiv D. Banker (R60) with 22 citations. Alnoor Ebrahim (R3), Joanne G. Carman (R28), and Lehn M. Benjamin

(R37) have 17, 14, and 11 citations, respectively. The 71 researchers are distributed across 14 countries and four continents, presenting a network density index below 5%. This result points to the limited connectivity among researchers working on this theme. In addition, the average degree of input of all relationships is 28.31%, meaning that less than one third of total possible relationships occurred (PARK et al., 2016).

## CONCLUSIONS

Through the quantification and analysis of a set of indicators related to 29 journal articles published from 2006 to 2015, a bibliometric analysis was performed based on the *Methodi Ordinatio*. The aim of the analysis was to identify the state of the art regarding performance measurement in social economy organizations. The meaningful findings revealed by this study are:

- a) The *Methodi Ordinatio* is applicable and useful in the classification and identification of relevant articles related to the studied theme;
- b) There is a growing interest in the theme of performance measurement in social organizations, especially in nonprofit organizations located in developed countries (North America and Europe);
- c) The main journal publishing this theme is *Nonprofit and Voluntary Sector Quarterly*, with approximately one third of the scientific production over the 10-year period;
- d) The scientific community studying performance measurement in social organizations is mainly composed of small and disconnected research groups located in a number of different countries;
- f) As a consequence, the level of social network interaction has low density with a limited average number of citations;
- g) The use of quantitative models, frameworks, systems and/or methods are predominant in performance measurement for social organizations.

Considering these findings, the main limitations identified in the current literature are the limited number of instruments, methods, frameworks and/or models that consider qualitative elements of performance measurement in social organizations; and the shortage of studies in emerging and/or underdeveloped countries, particularly considering that the mission of social economy organizations is focused on general well-being and economic, social, and environmental sustainability. Thus, studies that address these gaps offer significant potential for future analysis.

# Medição de desempenho nas organizações de economia social: um levantamento bibliográfico aplicando a abordagem METHODI ORDINATIO

## RESUMO

O objetivo fundamental de uma organização social é promover o impacto social nas comunidades onde está inserida, com foco em questões sociais, ambientais ou comunitárias; portanto, medir seu desempenho é imperativo para a continuidade de suas operações. A medida do desempenho nas organizações sociais envolve vários aspectos (como produção, resultados, etc.) e dimensões (como preservação ambiental, mudança social, sustentabilidade econômica, etc.) para avaliar seus objetivos sociais, alcançados através de suas atividades organizacionais. Com o objetivo de construir o estado da arte na medição de desempenho em organizações de economia social, esta pesquisa utilizou a metodologia Methodi Ordinatio, uma nova metodologia que auxilia na identificação e classificação de artigos relevantes em torno de um tema. A fim de identificar e classificar a produção científica em torno do tema citado foram pesquisadas três bases de dados, incluindo obras de 2006 a 2015. Esta pesquisa demonstra a aplicabilidade da abordagem Methodi Ordinatio na identificação e classificação de estudos relevantes em torno de temas científicos relevantes. A pesquisa também permitiu identificar algumas lacunas associadas ao atual estado da arte do tema em questão, como a falta de instrumentos, métodos, frameworks e modelos capazes de considerar elementos qualitativos de medição de desempenho em organizações de economia social e a falta de estudos sobre o tema nos países em desenvolvimento. Além disso, também apontou um crescente interesse pelo tema, com um aumento do número de publicação nos últimos seis anos do período analisado. Além disso, a análise da rede social confirmou pouca colaboração internacional e baixa conectividade entre os autores listados no portfólio, com apenas 28,31% das relações possíveis.

**PALAVRAS-CHAVE:** Medição de desempenho. Organizações sociais. Economia Social. Análise bibliométrica. Methodi Ordinatio.

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