



# A bibliometric analysis of creativity in the field of business economics

Mauricio Castillo-Vergara\*, Alejandro Alvarez-Marin, Dario Placencio-Hidalgo

Department of Industrial Engineering, University of La Serena, Benavente 980, La Serena, Chile

## ARTICLE INFO

### Keywords:

Creativity  
Business  
Economic  
Innovation  
Bibliometric

## ABSTRACT

Creativity and its study is not a new topic. However, this concept has recently begun to be incorporated in business economic studies. The objective of the current study is to establish the results of creativity research in the scope of business economics. Using VOSviewer (Centre for Science and Technology Studies, Leiden University, Leiden, The Netherlands) and SciMAT (University of Granada, Spain) for the construction of scientific maps, the analysis of the most relevant studies in this field was conducted to establish how research has evolved in this area. The results show that initially, creativity was seen as an important skill of an individual and has gradually come to be recognized as a performance drive within organizations to serve as a basis for the development of various study models. The results presented in this study will enable future authors studying creativity to focus their studies more effectively.

## 1. Introduction

Over the last few decades, the interest in creativity within the scope of business has grown significantly, and the importance of creativity is related to the impact on the competitiveness of businesses (Berg, 2016; Groza, Locander, & Howlett, 2016). Teams with the best results in creativity tests will be more successful than those that score lower on such tests (Bobic, Davis, & Cunningham, 1999) (Oldham & Cummings, 1996). Creativity within organizations is defined as the root of innovation (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Amabile & Pratt, 2016; Valaei, Rezaei, & Wan, 2017), given that creativity triggers the generation of new and appropriate ideas, products, processes and solutions (Perry-Smith, 2006).

There is evidence to suggest that creativity as a trait is a characteristic of entrepreneurial success (Ludvig et al., 2016), is an important drive for the entrepreneurial process, helps the discovery of new business opportunities, and highlights the key role that innovation and entrepreneurship play as sources of economic growth (Tu & Yang, 2013). Individual creativity supplies the base for organizational creativity and innovation, and the results have been linked with business performance and survival (Shalley & Gilson, 2004).

Furthermore, science has been rapidly evolving, resulting in what has been called “information overload” and, more recently, “filter failure” (Huggett, 2013). The abundant scientific information associated with new information technologies has been an incentive for researchers to seek new ways to analyze these large volumes of information, giving rise to a new discipline: bibliometrics. Bibliometric

methods are able to generate reliable and robust quality indicators (Gongora, 2010) useful for comparing or classifying large concepts, although they are not suitable for comparing particular researchers or making comparisons within groups of research (Devos, 2011).

Despite the recent growing interest in creativity, the current knowledge of bibliometric analyses regarding creativity is scarce. Recently, analyzed studies have not yet determined the quantity or quality of research in the scope of business economics. Although some studies have been conducted, these have been limited to specific questions. In a study by Feist and Runco (1993), 311 publications in the Journal of Creative Behavior between 1967 and 1989 were studied. Beghetto, Plucker, and MaKinster (2001) studied the 32 volumes published up to that date in the Journal of Creative Behavior. Kumar, Mondol, and Kumar (2013) analyzed the 12 volumes of the Journal of Creative Behavior between 2006 and 2008. Subsequently, Long, Plucker, Yu, Ding, and Kaufman (2014) looked at creativity, focusing on four journals specializing in creativity spanning different disciplines. More recently, Williams, Runco, and Berlow (2016) conducted an analysis on publications between 1990 and 2015 using research strings associated with creativity; the types of documents were limited to articles, reviews, and procedural documents.

Therefore, the purpose of the current study is to close this gap and to analyze the quality and quantity of creativity studies within the scope of businesses over time. This article presents a bibliometric analysis using the VOSviewer and SciMat software, as well as an analysis of research time intervals using the Web of Science data base. The main objective was to establish the quantity and main results of the research

\* Corresponding author.

E-mail address: [mhcastillo@userena.cl](mailto:mhcastillo@userena.cl) (M. Castillo-Vergara).

on creativity in the field of business economics, given the development seen in this area in the last few years.

### 1.1. Creativity

Creativity has been conceptualized as (a) individual personality traits that facilitate the generation of new ideas, (b) the process of the generation of new ideas, (c) the results of creative processes, and (d) favorable environments for new ideas and behavior (Alves, Marques, Saur, & Marques, 2007). This conceptualization has led to multiple definitions of creativity. For Torrance (1962), an important component of creativity is defined as the ability to detect gaps, propose various solutions to solve problems, produce new ideas, and recombine and sense a new relationship between ideas (Almeida, Prieto, Ferrando, Oliveira, & Ferrándiz, 2008). Another important supporter of creativity is Guilford (1967), who proposed the term “creativity” in the 20th century and postulates that creativity and intelligence are two separate concepts. For Guilford, creativity was understood to be a different form of intelligence, calling it divergent thinking, in contrast to convergent thinking, which was traditionally measured in common intelligence tests (Esquivias, 2004). In 1959, Parnes defined creativity as “the ability to find relationships between ideas previously unrelated and that manifest through new schemes, experiences or new products” (Vernon, Hocking, & Tyler, 2016). While there is no single definition of creativity, Runco and Garrett (2012) postulate that although the standard definition of creativity requires two components, originality and efficacy, it does not imply that this concept should be left unstudied. By 1971, the term was already associated with the business world, and Oerter stated that “creativity represents the group of conditions that lead to manufacturing products or to new ways that contribute to an enrichment of society” (Kritikou et al., 2008).

Creativity is the ability to generate something new, whether it be a product, a technique, or a way to bring reality into focus, according to Gervilla (1980). Amabile et al. (1996) propose that due to growing turbulence, greater competition and unpredictable changes in jobs, it is important to encourage creativity in employees within organizations since it contributes fundamentally to an organization's competitive advantage.

Today, the concept of creativity is associated with achieving objectives, the presentation of new results, the emergence of new products (Santos, Uitdewilligen, & Passos, 2015), or the development of new and appropriate solutions (Agogue, Levillain, & Hooze, 2015).

As organizations face new and more complex challenges, the ability to respond in an innovative fashion is based on a group of supported actions that drive creativity (Gundry, Muñoz-Fernandez, Ofstein, & Ortega-Egea, 2016), and businesses find themselves having to adapt to correctly manage innovation projects to attain success, which has far-reaching consequences for long-term competitiveness (Behrens, 2016).

## 2. Methods

### 2.1. Bibliometric analysis

The current study is retrospective in nature and uses a bibliometric analysis of secondary data. This type of analysis generates useful information for researchers evaluating scientific activity (Rey-Martí, Ribeiro-Soriano, & Palacios-Marqués, 2016). A bibliometric analysis examines bibliographic material from an objective and quantitative perspective that proves useful in organizing information within a specific field (Albort-Morant & Ribeiro-Soriano, 2016); hence, a bibliometric analysis using key words allows the analysis of details in the main topics of research within a domain and relationships at the micro level (Chen & Xiao, 2016).

The current study consisted of the following steps: 1. definition of the field of study 2. selection of the database, 3. adjustment of research criteria, 4. codification of recovered material and 5. analysis of the

information.

### 2.2. Choice of database

Document information was recovered from the Web of Science's SCI-Expanded by Thomson Reuters. The SCI-Expanded index includes 8471 journals with citations in 174 scientific disciplines, according to the Journal Citation Reports (JCR) of 2012 (Kun-Yang & Yuh-Shan, 2014). This database is multidisciplinary and is comprised of three citation indices: the Science Citation Index Expanded, Social Sciences Citation Index and Arts & Humanities Citation Index (Waltman, 2016). It has been established that the Web of Science has a significant advantage over other data bases because it includes social sciences literature (Norris & Oppenheim, 2007).

This study analyzes publications from 1975 to the current date of the analysis, since the first scientific publication regarding creativity in the field of business was in 1975. The key words included in the search were “creativity”, “creativity”, “creative”, “creatively”, “creativity”, “creativity”, “creativity”, and “creativity” using the Boolean operator “or” in the topic field. The results of this search yielded a total of 64,302 publications, which were filtered by the field “research areas = Business Economic”, since this is the area of interest for the analysis, yielding 6747 documents. The database was filtered by “articles”, obtaining a total of 5710 results, which were used to develop the current study. The search was conducted during the last week of August 2017.

### 2.3. Codification process

Once the search was conducted, a unique data base was created in a flat file containing the entire registry with the variables of author, language, year of publication, type of research, country, field of research, key words and cited references in each of the publications included in the search. The study time intervals were also defined to conduct a content analysis.

### 2.4. Indicators

In accordance with the indicator definitions proposed by Cadavid-Higuaita, Awad, and Franco-Cardona (2012), the current study will utilize quantity indicators that measure the productivity of a researcher, journal or institution in terms of the number of publications. These quality indicators aim to measure the frequency with which a publication, author or journal is cited in other publications, whereas structural indicators measure connectivity among publications.

### 2.5. Software

Two tools were used in the analysis. (A) VOSviewer: A free access information technology program developed by Waltman and Van Eck (2012) for the construction and visualization of bibliometric maps. The main advantage of this program over most information technology programs available for bibliometric mapping is that it focuses on the graphical representations of the maps. This is particularly useful when visualizing large maps, making interpretation easy, and is mainly used in the creation of maps based on network data (Cobo, López-Herrera, Herrera-Viedma, & Herrera, 2011; Dae-Hyun, Keuntae, Sangyong, & Soon-ki, 2016); and b) SciMAT: developed by the “SECABA” group from the University of Granada, which allows the construction of scientific maps as well as better visualization of the evolution within a scientific area (Cobo, López-Herrera, Herrera-Viedma, & Herrera, 2012).

VOSviewer is a computer program that was developed for creating, visualizing, and exploring scientific bibliometric maps. The program is available for free at [www.vosviewer.com](http://www.vosviewer.com) (Van Eck, Waltman, Dekker, & Van den Berg, 2010). VOSviewer permits the creation of term maps. A term map is a two-dimensional map in which the frequency of

Download English Version:

<https://daneshyari.com/en/article/7425154>

Download Persian Version:

<https://daneshyari.com/article/7425154>

[Daneshyari.com](https://daneshyari.com)