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Corporate Social Responsibility in the Light of Management Science – Bibliometric Analysis

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Abstract

At each stage of the development of scientific research, it is necessary to know the potential areas of this research, and their severity. The tool enabling their understanding is the bibliometric technique, which in relation to scientific research is defined as the quantitative analysis (using mathematical and statistical methods) of publications focused on the implementation of information functions regarding the development of the research area. The aim of this article is to present the results of the bibliometric analysis of scientific research on the concept of corporate social responsibility. The analysis was performed with the use of the VOSviewer software, as well as the data analysis tool available in the Web of Science base.

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Keywords: corporate social responsibility; research areas; bibliometric analysis

1. Introduction

At each stage of the development of scientific research, it is necessary to know the potential areas of this research, and its severity. The tool enabling their understanding is the bibliometric technique, which in relation to scientific research is defined as the quantitative analysis (using mathematical and statistical methods) of publications focused on the implementation of information functions concerning the development of the research area [1, 2].

Bibliometric analysis [12] can be used to identify the research areas within the concept of corporate social responsibility. Particularly useful in this case is the technique based on the analysis of the co-occurrence of words (called Co-word analysis) in the analysed text (primarily in scientific publications), [3]. This technique can be applied

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at the level of titles, keyword lists, summaries of publications, or even entire contents (the entire record), [4]. The cooccurrence of words cannot only indicate the existence of areas/sub-areas of research, but also can be used to identify the directions for further development of the research area [5]. The analysis was performed with the use of the VOSviewer software, as well as the data analysis tool available in the Web of Science base databases.

This article presents the results of the bibliometric analysis of the scientific research regarding the concept of corporate responsibility, and in particular the presentation of maps of the relationship between keywords, maps of clusters of research areas, as well as the maps of the density of keyword citations.

2. Research method

This study analysed the scientific texts included in the Web of Science TMCore Collection bibliographic database. The analysis of the co-occurrence of words was performed with the use of the VOSviewer software, (Visualizing Scientific Landscapes), version 1.6.1. of March 16 2015, developed by the Leiden University Centre for Science base and Technology Studies in the Netherlands. The software is based on an algorithm called "visualization of similarities" or VOS [2] and provides a graphical representation of the bibliometric networks, and in particular, enables the mapping of the relationship between keywords, indication of the most common terms in the defined description of a bibliographic record, highlighting the cluster groups of the analysed concepts, mapping the intensity of the citations of the highlighted concepts [6, 7].

Bibliometric analysis identifying the areas of research within the concept of corporate social responsibility took place in three stages shown in Figure 1.



Fig. 1. Stages of bibliometric analysis used to identify research areas within the concept of corporate social responsibility.

Source: [8].

Stage 1 included a search for records in the Web of Science TMCore Collection database. The search was narrowed down to two criteria, namely: the period of publications, (the analysis covered the period from 2010 to 08.07.2015) and the keywords in the article title or as the topic of the article (search words are: "corporate social responsibility", "CSR"). The result of the database search was the identification of 7069 publications meeting the accepted criteria. The records with their full descriptions (author, title, and source, abstract) were exported to a text file.

The purpose of stage 2 was to prepare visualization (map) of links between thematic areas. The visualization was prepared with the use of the VOSviewer software by importing a text file with the records deriving from the Web of Science TMCore Collection database. The process of generating maps begins with the extraction of keywords, the repeatability of which in bibliographic descriptions is at the level of at least 100 (software for this purpose utilizes the method of Binary Counting). As a result of the extraction process, 90,955 keywords were found. As many as 2,290 words occurred at least 10 times. Due to the number of keywords, the range of words has been limited for concepts the incidence of which amounted to at least 100 times. 241 keywords were selected this way. The words that are not substantially related to the research area of CSR, such survey, aim, issue, number were eliminated from the catalogue of proposed words. On the basis of the prepared database it was possible to develop a map of links between keywords, map of clusters of research areas, and a map the intensity of citations of the analysed concepts.

Stage 3 is the analysis of the results obtained during the test procedure.

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