Leadership and Corporate Social Responsibility: Mapping the Conceptual Structure of Research

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Abstract
Purpose: The aim of the study is to identify, with the use of co-word analysis, and explore leading thematic areas in research investigating intersections between leadership and corporate social responsibility. The research process is focused around the following study questions: (1) What are the leading thematic areas in research on intersections between leadership and corporate social responsibility?, (2) Are there similarities and differences between leading topics identified through co-word analysis with the findings from previous studies employing systematic literature review and research topic profiling methodologies? (3) What is the usefulness of co-word analysis for mapping leading thematic areas comparing to systematic literature reviews and research topic profiling?
Design/methodology/approach: The study employs the method of keywords co-occurrence analysis, which is a type of co-word analysis, categorized among science mapping methods. The bibliometric data for analysis are retrieved from Scopus. The analysis and visualization of keywords co-occurrence is supported by VOSviewer software.
Findings: The four following thematic areas have been identified in research production on intersections between leadership and corporate social responsibility: (1) sustainable strategy and sustainable development, (2) leadership and ethics, (3) humans in the organisational
context, and (4) responsible leaders in sustainable and responsible organisations. Thematic areas identified through co-word analysis show similarities with the findings from previous mapping studies conducted with the use of systematic literature review and research topic profiling. More similarity is visible in the case of research topic profiling, which likewise co-word analysis is categorized among bibliometric methods. As a method used for mapping thematic structure of a research field, co-word analysis is found to show more advantages than research topic profiling and systematic literature reviews.

**Research and methodological implications:** The study contributes to the body of knowledge through identifying leading thematic areas in research on intersections between leadership and corporate social responsibility. It is also valuable from the methodological point of view as it gives the chance to discuss advantages and disadvantages of various research methods employed for mapping the conceptual structure of a research field.

**Originality/value:** The added value of the study is mostly of theoretical and methodological character. The study seems to be the first attempt to map the conceptual structure of the analysed research field with the use of keywords co-occurrence analysis. It also compares and contrasts the findings from various methods used for mapping the conceptual structure of the field.

**Paper type:** Review.

**Keywords:** leadership, corporate social responsibility, CSR, bibliometrics, science mapping, co-word analysis, keywords co-occurrence analysis, Scopus, VOSviewer.

1. **Introduction**

Leadership and corporate social responsibility are the variables embedded in the context of positive organizational potential (Stankiewicz, 2013). Leadership is found to be one of antecedents of corporate social responsibility (Haffer, 2013). Waldman and colleagues (2006), who study the influence of transformational leadership on companies’ engagement in CSR activities, warn that “studies that ignore the role of leadership in CSR may yield imprecise conclusions regarding the antecedents and consequences of these activities” (Waldman et al., 2006, p. 1703). Leadership styles which are associated with a positive bias towards company’s orientation to social responsibility initiatives include: transformational leadership (Du et al., 2013; Groves and LaRocca, 2011; Waldman et al., 2006), ethical leadership (Wu et al., 2015;
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Zhu et al., 2014), charismatic leadership (Vlachos et al., 2013), servant leadership (van Dierendonck, 2011) or responsible leadership (Gond et al., 2012).

The scholars’ interests in combining the variables of leadership and corporate social responsibility into their studies have been growing through the decade of the 2010s, which is confirmed by bibliometric analyses based on data from Scopus (Lis et al., 2017) and Web of Science Core Collection (Lis and Cegliński, 2017). Recognizing the growing need for studies on intersections between the concepts of leadership and corporate social responsibility (Karaszewski and Lis, 2014a, 2014b), the research community associated with Journal of Corporate Responsibility and Leadership has undertaken efforts to fill this gap and map the research field. So far, these efforts have been focused on bibliometric descriptive studies of the field and its systematic literature review. Lis and Cegliński (2017) conducted general research profiling (cf. Porter et al., 2002) of the field aimed at analysing research productivity manifested by the number of publications and the number of citations they received as well as identifying the most productive countries, research institutions, authors, source titles and the most prominent (most often cited) references. Czerniachowicz et al. (2017) employed the methodology of systematic literature review to discover the leading research issues regarding the links between leadership and CSR. In another study, Lis and his colleagues (Lis et al., 2017) extended the profiling of research on intersections between leadership and corporate social responsibility to the component of topic profiling. Their study included the identification of leading topics in the research field based on the analysis of keywords provided by the studied body of publications and detailed topic profiling from the perspective of journals, authors, subject areas and core references. Although this study is very comprehensive, the qualitative analysis of leading research topics, based on the researchers’ intuition, should be considered as its weakness. As honestly admitted by the authors, “grouping of keywords in clusters considered to represent key topics in the research field is flawed with the subjectivity of authors embedded into this procedure” (Lis et al., 2017, p. 61). Thus, they recommend, as one of the future lines of research, to replicate the topic profiling analysis with the use of more advanced bibliometric methodology. Bibliometric methods, and particularly science mapping methods (Zupic and Čater, 2015), seem to be an appropriate means to conduct such an analysis. Nevertheless, as of 31
August 2020, any bibliometric study of research on intersection between leadership and corporate social responsibility has been found among the publications indexed in the Scopus database. This fact provides motivation for conducting such a study and comparing its findings with the results of earlier systematic literature review (Czerniachowicz et al., 2017) and traditional topic profiling (Lis et al., 2017).

The aim of the study is to identify, with the use of co-word analysis, and explore leading thematic areas in research investigating intersections between leadership and corporate social responsibility. The research process is focused around the following study questions: (1) What are the leading thematic areas in research on intersections between leadership and corporate social responsibility? (2) Are there similarities and differences between leading topics identified through co-word analysis with the findings from previous studies employing systematic literature review and research topic profiling? (3) What is the usefulness of co-word analysis for mapping leading thematic areas comparing to systematic literature reviews and research topic profiling? The remainder of the manuscript consists of the methodology, results presentation and discussion sections.

2. Method of study

The study employs the method of keywords co-occurrence analysis, which is a type of co-word analysis (He, 1999) categorized among science mapping methods (Klincewicz et al., 2012; Zupic and Čater, 2015). The bibliometric data for analysis were retrieved on 31 August 2020 from Scopus, which is recognized as one of the leading databases indexing high quality scientific publications. The parameters of the research profiling process are included in Table 1.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Searching formula</td>
<td>‘leadership’ AND (‘corporate social responsibility’ OR ‘CSR’)</td>
</tr>
<tr>
<td>Scope of search</td>
<td>Article titles, abstracts, keywords</td>
</tr>
<tr>
<td>Date range</td>
<td>All years</td>
</tr>
<tr>
<td>Document type</td>
<td>All</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on data retrieved from Scopus (access on 31 August 2020).
The sample counts 725 items. The most often represented subject areas, defined by Scopus on a non-exclusive basis, include: Business, Management and Accounting, Social Sciences, and Economics, Econometrics and Finance. Journal articles are the dominant type of publication, followed by book chapters and conference papers. Almost the entire research production is written in English. The publications comprising the sample provide 2,505 keywords (including both Author and Index Keywords), among which 1,973 occurred only once. Detailed characteristics of the sample are provided in Table 2.

### Table 2. Parameters of the research sample

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of publications</td>
<td>725</td>
</tr>
<tr>
<td>Subject Areas (number of publications)</td>
<td>Business, Management and Accounting (540); Social Sciences (308); Economics, Econometrics and Finance (222); Arts and Humanities (122); Environmental Science (79); Engineering (50); Energy (38); Decision Sciences (37); Psychology (35); Computer Science (21); Medicine (18); Earth and Planetary Sciences (10); Agricultural and Biological Sciences (6); Chemical Engineering (3); Health Professions (3); Materials Science (3); Mathematics (3); Nursing (2); Physics and Astronomy (2); Chemistry (1); Pharmacology, Toxicology and Pharmaceutics (1); Veterinary (1)</td>
</tr>
<tr>
<td>Document type (number of publications)</td>
<td>Article (526); Book Chapter (73); Conference Paper (49); Review (32); Book (30); Note (4); Conference Review (3); Editorial (3); Erratum (2); Short Survey (2); Undefined (1)</td>
</tr>
<tr>
<td>Language (number of publications)</td>
<td>English (708); Spanish (11); French (2); Polish (2); Portuguese (2); German (1)</td>
</tr>
<tr>
<td>Number of keywords</td>
<td>2505</td>
</tr>
<tr>
<td>Number of keywords occurring once</td>
<td>1973</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on data retrieved from Scopus (access on 31 August 2020).

The analysis and visualization of keywords co-occurrence was supported by VOSviewer software (van Eck and Waltman, 2010, 2018). Both Authors and Index Keywords were included into analysis. The full
counting method was employed. The detailed parameters employed for the analysis are explained in Table 3. The number of high-frequency keywords to be included into analysis was calculated as recommended by Donohue (1974), as cited in Guo et al. (2017).

Table 3. Parameters of VOSviewer software used for analysis

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value/Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum number of occurrences of a keyword (threshold)</td>
<td>7</td>
</tr>
<tr>
<td>Number of high-frequency keywords (taken for analysis)</td>
<td>63</td>
</tr>
<tr>
<td>Normalization method</td>
<td>Association strength</td>
</tr>
<tr>
<td>Layout</td>
<td>Attraction – 2; Repulsion – 0</td>
</tr>
<tr>
<td>Clustering</td>
<td>Resolution – 1; Min. cluster size – 10</td>
</tr>
<tr>
<td>Visualization</td>
<td>Scale – 1.00 (network analysis), 1.20 (item density analysis); Weights – occurrences</td>
</tr>
<tr>
<td>Labels</td>
<td>Size variation – 0.50;</td>
</tr>
<tr>
<td>Lines</td>
<td>Size variation – 0.50; Min. strength – 0; Max. lines - 1000</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on data retrieved from Scopus (access on 31 August 2020).

3. Research results

As already mentioned, the publications included in the research sample provide 2,505 keywords. The number of high-frequency keywords taken for co-occurrence analysis is 63. Among them the most prominent expressions are: ‘corporate social responsibility’ (326 occurrences), ‘leadership’ (161), ‘sustainability’ (68), ‘CSR’ (57) and ‘sustainable development’ (53). The analysis of keywords density is visualized in Figure 1.

Identification of leading research topics is conducted with the use of the network visualisation function of VOSviewer software, which groups high-frequency keywords into thematic clusters representing the conceptual structure of a research field (cf. Figure 2). In the map the proximity between the items represents their relatedness. It means the closer two keywords are located to each other, the stronger
Figure 1. Item density visualisation of research on intersections between leadership and CSR
Source: Own elaboration based on data retrieved from Scopus and analysed in VOSviewer.

Figure 2. Network visualisation of research on intersections between leadership and CSR
Source: Own elaboration based on data retrieved from Scopus and analysed in VOSviewer.
relationship between them is noticed. The size of frames corresponds to the prominence of a keyword, measured by the number of occurrences. Detailed composition of thematic clusters identified in Figure 2 is provided in Table 4, which includes the keywords categorized into each of the clusters and corresponding numbers of occurrences. The most prominent items (i.e. those with at least 20 occurrences) are bolded.

**Table 4.** Composition of thematic clusters in research on intersections between leadership and CSR

<table>
<thead>
<tr>
<th>Cluster number / colour / label</th>
<th>Number of items</th>
<th>Items (number of occurrences)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1 / red / sustainable strategy and sustainable development</td>
<td>19</td>
<td>competition (10); competitive advantage (13); corporate social responsibilities (CSR) (37); corporate social responsibility (CSR) (31); corporate strategy (14); customer satisfaction (8); economic and social effects (18); industrial management (8); industry (9); management (13); marketing (7); personnel (8); public policy (7); social aspects (19); social responsibilities (7); societies and institutions (9); stakeholders (13); strategic planning (9); sustainable development (53)</td>
</tr>
<tr>
<td>Cluster 2 / green / leadership and ethics</td>
<td>17</td>
<td>accountability (7), business (9), China (15), decision making (8), environmental management (11), ethical leadership (25), ethics (41), gender (8), globalization (8), India (9), innovation (14), leadership (161), organisational identification (7), stakeholder (7), stakeholder management (7), strategy (9), transformational leadership (24)</td>
</tr>
<tr>
<td>Cluster 3 / blue / humans in the organisational context</td>
<td>14</td>
<td>article (20), employment (8), environment (9), female (8), human (27), humans (15), job satisfaction (8), male (7), organization (8), organizational culture (8), perception (9), public relations (8), social behavior (9), social responsibility (35)</td>
</tr>
<tr>
<td>Cluster 4 / yellow / responsible leaders in sustainable and responsible organisations</td>
<td>13</td>
<td>business ethics (27), corporate citizenship (10), corporate governance (18), corporate responsibility (9), corporate social responsibility (326), corporate sustainability (9), CSR (57), financial performance (9), leadership development (13), responsible leadership (23), servant leadership (10), stakeholder theory (12), sustainability (68)</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on data retrieved from Scopus (access on 31 August 2020).
The first cluster, marked in red in Figure 2 and located in the western flank of the map, combines the CSR issues with the strategic management perspective of an organisation. ‘Sustainable development’ is the most prominent expression in the cluster. The strategic management perspective is represented by such expressions as ‘corporate strategy’ and ‘strategic planning’. The focus on the context of an industry (manifested in keywords ‘industrial management’ and ‘industry’), ‘management’ and ‘marketing’ as well as company competitiveness (expressions ‘competition’ and ‘competitive advantage’, ‘customer satisfaction’) strengthen this strategic management flavour. Simultaneously, social aspects are very much highlighted. ‘Corporate social responsibility(ies)’ and ‘social aspects’ are among the most prominent high-frequency keywords in the cluster. Expressions such as ‘stakeholders’ and ‘societies and institutions’, ‘economic and social effects’, ‘public policy’ and ‘personnel’ manifest responsibility of this strategic management approach towards internal and external stakeholders. Thus, Cluster 1 is labelled as ‘sustainable strategy and sustainable development’.

The second cluster, marked in green and located in the central part of the map, seems to be quite heterogenous and interwoven with Clusters 1 (red) and 4 (yellow), and partly with Cluster 3 (blue). ‘Leadership’, ‘ethics’, and ‘ethical leadership’, which are the most prominent items, constitute the core of the cluster. One of the branches (including such keywords as ‘strategy’, ‘decision making’, ‘innovation’ and ‘globalization’) is linked with strategic management issues represented in Cluster 1. The expressions such as ‘transformational leadership’, ‘stakeholder management’ and ‘India’ are located in within the space occupied by Cluster 4 and they deal with the issues of responsible leadership and management. Finally, the last branch, located between Clusters 1 and 3, gives attention to ‘accountability’, ‘stakeholder[s]’, ‘environmental management’ and ‘gender’. Accepting its heterogeneity and taking into account the most prominent expressions, Cluster 2 is named as ‘leadership and ethics’. An interesting question arises why Cluster 2 is interwoven with three other clusters. It may be hypothesized that such relationships derive from its central position in the conceptual map of the research field, firstly, as Cluster 2 establishes a kind of a bridge among other clusters. Secondly, the keyword ‘leadership’ included in Cluster 2 is the capstone concept for the whole research field, which may result in this interchange and close relationship of its components with other clusters.
The third cluster, of blue colour located in the eastern part of the map, focuses on the organisations’ social responsibility towards their employees (vide ‘employment’). ‘Social responsibility’ and ‘human(s)’ are among the most often occurring expressions. Gender equality is recognized, as there are keywords referring both to males and females. ‘Social behaviours’, ‘job satisfaction’ and ‘perception’ are noticed among studied issues. The organizational context is very distinctive, which is manifested in such words as ‘organization’ and ‘organizational culture’. Thus, Cluster 3 is branded as ‘humans in the organisational context”.

The fourth cluster, coloured in yellow, occupies the central-north position of the map and refers directly to leadership in the context of corporate social responsibility and sustainability. ‘Corporate social responsibility’, ‘CSR’ and ‘sustainability’ are found to be the most prominent items. ‘Responsible leadership’ and ‘servant leadership’ are two attributive forms of leadership enumerated among high-frequency keywords. The role of ‘leadership development’ is noticed. Moreover, such aspects as ‘business ethics’, ‘corporate citizenship’ and ‘corporate governance’ are mentioned. Thus, the header ‘responsible leaders in sustainable and responsible organisations’ denotes thematic interests grouped in Cluster 4.

4. Discussion

In response to the first study question, the analysis of the conceptual structure of research on intersections between leadership and corporate social responsibility has resulted in identification of the four following thematic areas: (1) sustainable strategy and sustainable development, (2) leadership and ethics, (3) humans in the organisational context, and (4) responsible leaders in sustainable and responsible organisations. Now, the focus will be given to the second study question and discussing similarities and differences between leading topics identified through co-word analysis with the findings from systematic literature review and research topic profiling.

Comparing and contrasting the findings of this study with the outcomes of systematic literature review (Czerniachowicz et al., 2017), two important methodological differences should be noticed regarding the number of publications under the study and the unit of analysis. A science mapping study provides the opportunity to analyse a much
wider body of literature comparing to a traditional literature review. In the case of compared studies, the number of analysed publications was 725 for the keywords co-occurrence analysis and 37 for the literature review. The studies differ as well in regard to the unit of analysis, which is a keyword for the co-word analysis and a research article for the systematic literature review. In regard to the content, thematic areas identified through systematic literature seem to be very fragmented and detailed while compared with an aggregate outcome of the network analysis of high-frequency keywords co-occurrence. Czerniachowicz and her colleagues (2017) enumerate 15 various research problems and issues regarding intersections between leadership and CSR. Many of them are represented by only one publication taken for systematic literature review analysis. On the one hand, such a detailed analysis may be useful to find any single interesting topic in a field. Nevertheless, on the other hand through identifying four leading thematic clusters, science mapping provides better opportunities to understand the conceptual structure of a field. What is interesting, in discussion of results, Czerniachowicz et al. (2017) exclude the least populated research topics, focusing on six of them attracting the most of scholars’ attention. In regard to the topics identified in both studies, numerous similarities may be observed. Both of them mention such issues as: responsible leadership and role of leaders for promoting corporate social responsibility, ethics and ethical leadership, responsibility towards employees.

Comparing and contrasting the findings of this study with the work by Lis and his associates (2017), which employed the traditional topic profiling methodology (cf. Martinez et al., 2012), firstly a rapid growth of research outcome in the field should be noticed. Both of the studies used the same searching formula and source of bibliometric data and within 3 years (between July 2017 and August 2020) the number of retrieved publication records increased from 432 to 725, which means an increase by 68%. In regard to methodology, in both studies keywords provided by retrieved publications were the units of analysis. Nevertheless, in the traditional topic profiling study, keywords were manually grouped on the affinity basis and then headers were attributed to the established clusters, which could have resulted in some biases and should be considered as a weakness. In the case of the keywords co-occurrence study, the process of network analysis was conducted automatically with the use of VOSviewer software. In their
work, Lis et al. (2017) point out the eight following topics in research on intersections between leadership and corporate social responsibility: ‘corporate social responsibility’, ‘leadership’, ‘ethics’, ‘sustainability’, ‘attributive leadership’, ‘strategic management issues’, ‘values, attitudes and behaviours’, ‘environmental issues’ and ‘knowledge management and innovations’. Comparing the findings of the studies, many similarities should be noticed. Both of them embed the issues of leadership and corporate social responsibility in the contexts of strategic management, sustainability and ethics. In general, stability of research interests in the field may be observed between 2017 and 2020.

As regards differences, in the 2017 research topic profiling study, such aspects as ‘values, attitudes and behaviours’, ‘environmental issues’ and ‘knowledge management and innovations’ are more highlighted. While the 2020 keywords co-occurrence study gives more emphasis to situation of organisation members.

In response to the second study question, thematic areas identified through co-word analysis show similarities with the findings from previous mapping studies conducted with the use of systematic literature review (Czerniachowicz et al., 2017) and research topic profiling (Lis et al., 2017). In regard to the systematic literature review study, these common topics include: responsible leadership and role of leaders for promoting corporate social responsibility, ethics and ethical leadership, responsibility towards employees. Embedding the issues of leadership and corporate social responsibility in the contexts of strategic management, sustainability and ethics is characteristic of the topic profiling and keywords co-occurrence studies. In both cases, some differences should be mentioned as well. Summing up, more similarity is visible in the case of research topic profiling, which likewise co-word analysis is categorized among bibliometric methods.

In response to the third study question, among the methods employed for mapping leading thematic areas, a traditional systematic literature review shows the most of weaknesses and seems to be the least relevant for this kind of study while bibliometric methods i.e. topic research profiling and co-word analysis prove their value. Nevertheless, co-word analysis supported with visualization software seems to shows some advantages. Firstly, it mitigates subjectivity resulting from “manual” assigning keywords to the clusters by researchers. Secondly, it visualizes graphically the placement of keywords in the map giving possibility to notice strength of relatedness among the items and thematic areas.
5. Conclusions

The added value of the study is mostly of theoretical and methodological character. It contributes to the body of knowledge through identifying leading thematic areas in research on intersections between leadership and corporate social responsibility. Mapping the research field indicates to other researchers the main research lines and research interests. Comparison of the study findings with the results of earlier works mapping the field with the use of systematic literature reviews and research profiling methodologies provides the opportunity to better understand the conceptual structure of the field. Moreover, such a comparative analysis seems to be valuable from the methodological point of view as it gives the chance to discuss advantages and disadvantages of various research methods employed for mapping the conceptual structure of a field.

For better understanding of the study and its findings, research process limitations should be identified and discussed. Firstly, dependence on Scopus as the only source of bibliometric data for analysis should be considered among such weaknesses. Although Scopus is a worldwide recognized database of high quality publications, its resources are very much biased towards publications written in English, neglecting those in other national languages. Secondly, inherent limitations associated with the methodology of co-word analysis need to be revealed, to mention its dependence on the quality of indexing processes among others (the so-called indexer effect).

Summing up, appreciating the value of the study for mapping the conceptual structure of the field, it is recommended to expand the research by investigating the intellectual structure of research on intersections between leadership and corporate social responsibility with other science mapping methods such as: citation analysis (Moed, 2005), co-citation analysis (Small, 1973), bibliographic coupling (Kessler, 1963) and co-author analysis (Acedo et al., 2006). This study focuses on identification of leading thematic areas, while providing no insight concerning the most important emerging topics that will attract scholars’ attention in the near future. Thus, recognizing such ‘hot’ topics in the research field seems to be another interesting line of research exploiting the potential of science mapping methodologies, and co-word analysis in particular.
References


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