# BIBLIOMETRIC ANALYSIS OF CORPORATE SOCIAL RESPONSIBILITY – DIFFERENT COUNTRIES' PERSPECTIVE

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#### **Abstract**

The following article is devoted to show the geographical regional concentrations: national and continental, in the area of the scientific research being conducted on corporate social responsibility. The author, by using bibliometric analyses on the representative data set (bibliographic records concerning scientific articles) taken from the global bibliographic database Scopus, reveals which countries and continents are characterised with the greatest and most valued achievements of scientific research over corporate social responsibility.

Firstly, the evolution of theoretical models of corporate social responsibility is presented, which shows how wide and polymorphic research area the analysed conception is. Furthermore, the basis of bibliometric analyses, which the author uses to realise the goal of the article, is outlined. The review of previously conducted bibliometric analyses of corporate social responsibility has been also presented, and the lack of these concentrating on national and continental aspects is stressed. Then, there are four research questions formulated and the procedure of undertaken researches, according to which the author has carried out adequate analyses.<sup>1</sup>

**Key words:** corporate social responsibility, bibliometric analyses, regional concentrations.

Classification JEL: M12 – Personnel Management.

# 1. Introduction – initial remarks

Corporate social responsibility (CSR) is a conception that has been recently developed and dealt with by a number of business researchers. It is not only a vague idea, but the conception applicable in practice of the contemporary business. Sources of the conception are found in the U.S., however, it is not certain whether and to what extent a statement of regional (national) narrowing of researches over CSR only to this geographical area is authorised. For years of evolution of this conception, it has had a possibility of deeply rooting also in other regions of the world. The following article is focused on searching for regional (national and continental) concentrations, as far as researches over corporate social responsibility are concerned. The analyses presented below shall allow to explain where the most intense scientific researches in this issue are conducted, and from what regions researches are characterised with the highest impact on scientific circles. This shall allow other researchers dealing with CSR to identify the countries developing in this matter, to search more effectively the research results from regions of better response, and to understand better the development and diffusion of the corporate social responsibility conception from the global perspective.

# 2. Theoretical models of corporate social responsibility

Taking into account a model approach to corporate social responsibility that reflects the nature of an organisation's functioning and allows understand better, and to improve their managing through research and analysis of the reality of the business world, one may indicate three stages in the evolution of this conception.

In the first stage (before 1980) one-dimensional approaches dominated [i.a., Eells (1959, pp. 33–41; 1960, pp. 334–340), Schulsberg (1969, pp. 65–76) or Walton (1967, pp. 127–

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141)] and they were rather of a postulatory character, however, beginnings of the systemic or process approach were also visible [i.a., Giegold (1976, pp. 5–8), Cardinal, Sanderson and Wingerter (1977, pp. 34–40), Davis and Blomstrom (1975, p. 20), Hay and Gray (1974, pp. 135–143), Bowman and Haire (1975, pp. 49–58)]. The greatest achievement of those years was, however, a pyramidal model of Carroll (1979, pp. 497–505) and researches from the 80's based, to the great extent, on this model [i.a., Wilson (1980, pp. 17–24), Spencer and Butler (1987, pp. 573–577)]. Additionally, two-dimensional models appeared i.a., Dalton and Cosier (1982, pp. 19–27) and approaches denying philanthropic responsibility as the highest form of CSR, e.g., Heatch (1987, pp. 24–28). Nevertheless, models with a number of variables of an analytical character were developed [i.a., a model of Fachey-Wokutch (1983, pp. 128–142), Moser (1986, pp. 69–72), Mintzberg (1984, pp. 90–115) or the MARM model (Marketing Approach to Responsive Management), (Murray, Montanari, 1986, pp. 815–827)].

There, the process approach, or even the systemic one, has been signalised, and a strategic dimension of CSR that had been already outside the postulatory conception and started to concentrate on specific issues regarding the functioning of business in the social surroundings has been underlined. The 90's (the second stage) brought a revision of the Carroll's model in terms of philanthropic responsibility, Pinkston and Carroll have reduced its importance (1996, pp. 199–206). Moreover, concentrating over practical issues of business functioning known from the previous decade has brought a critical approach involving discontinuation of only the binary deliberations, e.g., Freeman, Liedtka (1991, pp. 92–98), Carson (1993, pp. 171–176), Sethi (1996, p. 60). As a result, it has been started to search urgently for common points, a consistency sphere of two areas – business and society, e.g., Dalton and Daily (1991, pp. 74–78), Harrison and Freeman (1999, pp. 479–485), Wokutch and Shepard (1999, pp. 527–540). Attempts at searching for consistency of the conception have led to further development of analytical models of a number of variables, i.a., L'Etang (1995, pp. 125–132), Bucholz (1991, pp. 19–31), Pava and Krausz (1997, pp. 337–347) or Robertson and Nicholson (1996, pp. 1095–1106).

During the next decade, after 2000 (the third stage), another revision of the Carroll's model has appeared – a pyramidal model has been replaced by the set of a three-dimensional area [the model of Schwartz and Carroll (2003, p. 503–530)]. Newly appearing analytical models of a number of variables, i.a., Matten and Moon (2008, pp. 404–424) or Hemingway and Maclagan (2004, pp. 33–44) have been subjected to attempts at being integrated in the search for consistency from the previous decade [the model of Jamali (2007, pp. 1–27; 2010, pp. 181–200), Quazi and O'Brien (2000, pp. 33–35)], more complex models have also appeared, e.g., the TRM model (Total Responsibility Management) of Waddock, Bodwell and Graves (2002, pp. 132–148), quality management and quality management systems have been an inspiration, i.a., Maon, Lindgreen and Swaen (2009, pp. 71–91) or Zweltsloot (2003, pp. 201–207).

In a more and more clear way CSR has been perceived as a future investment bringing benefits, i.a., McWilliams and Siegel (2001, pp. 117–127), Peloza (2006, pp. 52–72) or Godfrey, Merrill and Hansen (2009, pp. 425–445), additionally, an interest in CSR in this aspect from the point of view of marketing has been increased, i.a., Luo, Bhattacharya, Korschun, Sen (Luo & Bhattacharya, 2006, pp. 1–18; Bhattacharya et al., 2009, pp. 257–272), Mohr, Webb and Harris (Mohr et al., 2001, pp. 45–72; Mohr & Webb, 2005, pp. 121–147). Among complex models, one shall also distinguish a three-dimensional model of Ketola (however, it has already got holistic elements), (Ketola, 2008, pp. 419–435) as well as the Visser's model indicating evolution and developmental potential in corporate social responsibility (Visser, 2010a, pp. 231–251; Visser, 2010b, pp. 7–22).

However, taking into account the application in business and consistency of the society and business, so the one which has been searched for years and may be summed up the term of dual strategic benefits, the greatest achievement is claimed to be the model of Porter and Kramer based on models previously checked in business practice – value chain and a Porter's diamond (*Porter & Kramer*, 2006, pp. 78–92).

This short review of CSR models has already presented that this is not a homogeneous conception but rather the polymorphic one. Nevertheless, so far one observes the lack of reliable researches allowing state what specific geographical regions of the world dominate to the greatest extent in the researches over CSR. Bibliometrics seems to be the most proper in order to carry them out.

## 3. Bibliometric analyses

Since the times of Alan Pritchard (1969, pp. 348–349), the term bibliometrics has been used to determine a set of research techniques for quantitative analyses of publications and patents (Klincewicz, 2009, pp. 130–156) being the streams of information (Marszakowa-Szajkiewicz, 1996, p. 33). Some of the authors analyse in details the connections and differences between bibliometrics and patentometrics, as well as webometrics, technomoetrics, scientometrics, or informetrics (Nowak, 2006, pp. 23–26). Klincewicz enumerates two approaches that are applicable in bibliometric researches (Klincewicz, 2012, pp. 35–36):

- Evaluative approach that is said to be helpful to asses, e.g., particular researchers, authors, academic centres, or geographical regions;
- Descriptive approach that may help to analyse tendencies of scientific and technological development, identify crucial authors, researchers, inventors, scientific and technological centres, or geographical regions.

To analyse corporate social responsibility from the national perspective, the descriptive approach shall be used, restricted to scientific articles due to the attempt at exploring the scientific area, and management sciences in particular. Basic benefits of a bibliometric analysis being applied are worth to mention (Klincewicz, 2012, p. 39). Analyses are based on quantitative and reliable data that are not easy to be falsified or misrepresented. Results of conducted analyses are also applicable in terms of a credible interpretation. The basis of bibliometric analyses is made by measureable results in the form of publications in various contexts, thus, they are based on a solid foundation, and not, e.g., on hard to verify opinions of expert groups. Worth indicating is the opinion of Marszakowa-Szajkiewicz, elaborating that bibliometric analyses are carried out on wide sets of data ranging globally, the research material is ample and at the same time objectified, which may by hardly gained in terms of other analyses (Marszakowa-Szajkiewicz, 1996, p. 38). Analyses of that type have also their restrictions, most of which concern the probability of omission of certain relevant items that for some reason have not been taken to the analysed data set, e.g. unregistered in English bibliographic bases crucial publications in languages other than English, omitted pieces of information published in books, incomplete data in some periods (usually the earliest and the latest), (Klincewicz, 2012, p. 39; Kozłowski, 2012, p. 87).

A basic type of data being bibliometrically analysed is the one that concerns publications. Usually, there are abstracts of the articles together with a detailed set regarding an author, scientific centre, source, etc. The data are aggregated in global bibliometric bases (Marszakowa- Szajkiewicz, 1996, p. 34), and as far as their international character is concerned, a dominating language is English. Among the most well-known bases one may enumerate: Web of Science, Scopus, Inspec, Chemical Abstracts Service (CAS), Compendex, ACM Digital Library, Medline, the search engine Scirus, and the search engine Google Scholar. Apart from these bibliographic databases that may be helpful to conduct bibliometric

analyses, researchers are also able to use the full-text bases, e.g., EBSCO, ProQuest, or JSTOR. There are full texts of articles, books, or scientific elaborations in there, not only their bibliographic descriptions enabling bibliometric analyses being conducted. On the other hand, however, data exporting is not available in the form that shall allow any preparations by using specialised bibliometric software. Worth mentioning, bibliographic bases, such as Scopus or Web of Science have already had previously formatted data from the full-text bases. Full-text bases are not the best platform to be analysed bibliometrically, and, e.g., content analysis is much more suitable.

## 4. Bibliometric analyses of corporate social responsibility

Bibliometric analyses have been already used to elaborate on CSR, although it happened relatively rarely. For instance, relations between Corporate Social Responsibility and Corporate Social Performance have been analysed during the last 30 years on the basis of data from Web of Science (Bakker et al., 2005, pp. 283–317; Bakker et al., 2006, pp. 7–19). Analyses of authorship, sources, and citations have been conducted, and also articles have been classified as theoretical (conceptual, explorative, predicative), prescriptive (instrumental and normative), and descriptive. Analyses have shown that the majority of articles are theoretical, and their lesser amount is of a descriptive or prescriptive character. Analyses of Bakker, Groenewegen, and Hond have been continued. Alcañiz, Herrera, Pérez, and Alcami have carried out similar analyses concerning the years 2003–2006, keeping the same search criteria, same phrases, and identical areas of thematic analyses. Analysing articles further from the angle of their being rooted in management and marketing has been the only modification (Alcañiz et al., 2010, pp. 332–344).

Also, bibliometric analyses have been conducted concerning the idea of sustainability and its connections with management, development, environmental aspects, stakeholders' theory, and corporate social responsibility (*Novais et al.*, 2012, pp. 6587–6596). Admittedly, the analyses of Novais, João and Serralvo cover as many as 68 years, however, they do not deal directly with corporate social responsibility, only indicate their connection with the issue of sustainability. Analyses of key words, regions, institutions, sources, and authorship rather result in the connection of the idea of sustainable development and environmental aspects in management.

A different analysis elaborated by Leita, Yagasaki, Aken, and Martins regards, among many, the aspects of indicators and organisational results' measurement, the issue of sustainability, triple bottom line, and corporate social responsibility in the above mentioned aspects. Thus, it was specifically profiled, and not embracing general areas of corporate social responsibility. According to bibliometric analyses such as chronological, of discipline, citations, sources, and key words, there is a gap noticed between the organisational results' measurement (productivity) and the issue of sustainability, and it occurred as well that there was a relation existing between corporate social responsibility and financial results (*Leita et al., 2012, p. 1–10*), similar to the researches of Bakker and his team. The issue of sustainability has been also analysed in the context of marketing (*Chabowski et al. 2011, pp. 55–70*). The analysis of Chabowski, Mena and Gonzalez-Padron is one of the widest analyses being conducted concerning the sustainable marketing context with an application of bibliometric methods.

Excepting the previously mentioned continuation, bibliometric analyses designed by Bakker, Groenewegen and Hond have inspired to undertake other researches, e.g., bibliometric analyses of social entrepreneurship and social enterprises carried out by Granados, Hlupic, Coakes, and Mohamed. There, it has been also used a division of articles into theoretical, prescriptive, and descriptive, designed by the authors (*Granados et al.*, 2011, pp. 198–218).

Additionally, bibliometric analyses only partly concerning CSR have been conducted. Business ethics was their main topic. The researches of Zhenzhong Ma (Ma, 2009, pp. 255– 265) have regarded citations and been conducted in the context of authorship, sources, and also co-citation. Zhenzhong Ma demonstrated the change of interest within business ethics from the issue of decision making and relation CSR - CSP to the theory of stakeholders and relations between customers' behaviour and corporate social responsibility. These researches of Z. Ma have been continued, the author together with his team (Dapeng Liang, Kuo-Hsun Yu, Yender Lee) conducted the analysis of citation, and co-citation in the aspect of authorship. In this case, results occurred to be different, in researches over business ethics one may distinguish four relevant issues: theory of morality and social contract, ethics of decision making, corporate social responsibility, and theory of stakeholders (Ma et al., 2012, pp. 286– 297). Using similar methods, Tseng, Duan, Tung, and Kung have still concluded differently. The citation analysis in the context of source and authorship, and also the co-citation analysis have resulted in three main issues, they are as following: ethical decision making, including unethical cases; corporate governance, and organisations' results, as well as rules and ethical codes (Tseng et al., 2010, pp. 587-597).

The Portuguese researches have also appeared, which were laden with a great regionalism and a small set of data, although already directly connected with CSR (the amount of 216 articles in the period ranging from 1997 to 2007), (Amaral Moretti, 2009, pp. 68–86).

## 5. Research methods and research questions

According to the assumptions of descriptive bibliometrics, in following analyses the concentrations emerging in researches over corporate social responsibility from the point of view of geographical regions: national and continental, have been searched for.

First, the source of data for specific analyses has been determined. Having tested previously enumerated bibliographic databases, which was made by searching for the phrase 'corporate social responsibility' in the widest search box of each of them, one base that came up with the highest amount of records was chosen. Web of Science database had 2,158 results, and Scopus 2,713 which is 555 results more, meaning 25.72% more. Thus, to further analyse corporate social responsibility, Scopus base has been chosen.

The next step of a research procedure was testing different variants of searching through Scopus base. The phrase "corporate social responsibility" has been decided to be put in the widest search box, which is Article Title, Abstract, Keywords. In case of choosing other search criterion, results in the database are less satisfactory. The parallel concerning different search variants is presented in the Table 1.

Another step of the research procedure was to determine time frames of data from the search process. Taking into account few records shown up till 1999 (their number has never been higher than 10), and also sets of still growing data (in a test search results from 2010 were still growing, which led to instability of the set of data), the set of data devoted to following analyses has been limited to time frames 2000–2009. The amount of data before 2000 has not been enough, however, after 2009 data have not been fully comprehensive yet.

Furthermore, the aim was to clear the database, which allowed begin conducting specific analyses. In particular, data not connected with management sciences have been eliminated (e.g., sciences representing mathematics, physics, medicine, engineering, etc.). Records of bibliographic data regarding documents other than scientific articles have not been also taken into consideration (e.g., errata, editorial notes, reviews).

As a result, a stable (not changing in time) set of bibliographic data concerning scientific articles from 2000 to 2009 appeared, which was used to carry out exploration analyses from the angle of national and continental concentrations within the CSR conception. The phrase "national and continental concentrations" is used due to the concentration on the CSR issue

from the point of view of regions geographically corresponding to particular countries and continents, and the number of scientific articles made within their boundaries. Additionally, the analyses of a scientific response in terms of countries and continents have been conducted. These analyses underline the attention that has been paid by the scientific communities to the articles representing particular countries or continents. To elaborate on this phenomenon an analysis of citations of the articles recorded in the database has been used.

Table 1. Results of different search criteria in the Scopus base (own study on the basis of data from the Scopus base)

No.	Phrase searched	No. of records	Comment
1.	'Corporate social responsibility'	2022	Wide set of records, relatively little contaminated; minimal risk of not including to the analysis articles not connect with CSR
2.	'Social responsibility of business'	50	Small set of records
3.	'Social responsibility'	18066	Wide set of records, but to a large extent contaminated; many records in terms of, e.g., medicine, nursing, or social science; additional risk of including to the analysis articles not connected with CSR
4.	CSR	4331	Wide set of records, but to a large extent contaminated; many records in terms of, e.g., medicine, engineering, or physics; additional risk of including to the analysis articles not connected with CSR

Explanation: Using phrases presented in the Table 1 (except CSR) without quotation marks increases substantially the search result, however, at the same time, increases contamination and the risk of including into the analysis articles not connected with corporate social responsibility.

The database consists of 1,272 records, which may be recognized as representative for this period, in no other global bibliographic data base there is a greater set. Before a factual exploration has been started, four research questions had been determined, which allowed to systematise the bibliometric analyses:

- RQ1. What tendencies may be identified as far as national concentrations of corporate social responsibility is concerned?
- RQ2. What tendencies may be identified as far as continental concentrations of corporate social responsibility is concerned?
- QR3. Which countries have gained the greatest attention of scientific communities in terms of corporate social responsibility?
- RQ4. Which continents have gained the greatest attention of scientific communities in terms of corporate social responsibility?

### 6. Applicable analyses

#### **6.1. National concentrations**

Within the RQ1 one may discover that, taking into account a geographical distribution of scientific articles concerning CSR, in the analysed period there were created in 57 countries, among which the U.S. and Canada have got the highest amount of the articles, over 50% in total, on the third position Great Britain was placed with the result of 20%. The high position of Great Britain is encouraging as a proof of a strong European contribution in the CSR development, which is also deeply rooted the culture and tradition of Europe. Among the first ten, apart from the U.S., Canada, and Australia, there are seven European countries. The lack

of the Asian countries in the top of classified positions may be surprising. The national distribution of the number of articles is presented in the Table 2.

This classification is absolute, takes into consideration only a result in the form of the number of published scientific articles on CSR. It does not include, however, a relevant causation, which is a density of universities (academic centres) in the countries concerned. In terms of this determinant, which is a relative indicator of a position counted as a quotient of the absolute number of scientific articles and the estimated number of academic centres, the above classification has been significantly changed. All in all, the U.S. domination has been undermined, with the number of centres amounting to 3,274 and the number of articles being 375, the U.S. has only gained the 18th position, which is a weak result. Worth indicating, the U.S. among all the countries in the classification has achieved the highest number of academic centres, it is an unquestionable leader in this matter, the number of academic centres in the U.S. is higher than 1719 comparing to the country being on the 2nd position in the classification (Indonesia – 1555).

Table 2.	Regional	frame of	fCSR -	absolute	classification (	(own study)
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No.	Country	No. of articles	Percentage
1	The U.S.	375	29.48%
2	Canada	340	26.73%
3	UK	244	19.18%
4	Netherlands	78	6.13%
5	Australia	70	5.50%
6	Italy	28	2.20%
7	Norway	26	2.04%
8	Sweden	26	2.04%
9	Finland	23	1.81%
10	Switzerland	21	1.65%

Explanation: 100% = 1272; The total in a column "No. of articles" is higher than the total of all the articles in the analysed database due to double or multiple authorship of articles.

Thus, it may be summed up that the U.S. domination in the absolute set is an effect of a high number of academic centres, and not the high interest in CSR, or the high indicator of scientific productivity of the authors. In the relative set Canada is placed first with a relative indicator of a position at the level of 1.67; on the 2nd position there is Great Britain (1.05), and on the 3rd place Australia (0.77). In the relative configuration it is visible that also the Asian countries start to be relevant, Hong – Kong being on the 4th position is the proof of it (0.65). However, in the first ten there are 5 European countries. This classification taking into account a relative indicator of a position seems to be more objective rather than the absolute classification. Details of the relative classification are presented in Table 3.

In a bipolar relational configuration in terms of both the absolute classification (a number of articles) and the relative one (a relative indicator of a position) having given adequate positional ranks based on those, the highest attention deserves Canada, Great Britain, Australia and Netherlands. These countries take main places in the light of both classifications. Such a configuration seems to value particular countries in the most objective and comprehensive manner. The detailed parallel of particular countries regarding the relative classification (a relative indicator of a position) and the absolute one (a number of articles) is presented on the Figure 1.

*Table 3. Regional frame of CSR – relative classification (own study)* 

No.	Country	No. of articles	No. of academic centres according to www.webometrics.info	Relative indicator of a position
1	Canada	340	204	1.67
2	UK	244	233	1.05
3	Australia	70	91	0.77
4	Hong Kong	17	26	0.65
5	Sweden	26	50	0.52
6	Netherlands	78	160	0.49
7	Finland	23	51	0.45
8	Singapore	7	18	0.39
9	Norway	26	67	0.39
10	New Zealand	16	45	0.36
18	The U.S.	375	3274	0.11

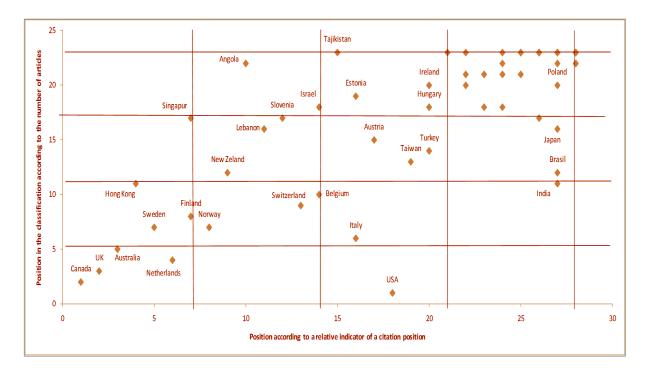


Figure 1. Relational positional distribution of regions according to the absolute classification (a number of articles) and the relative one (a relative indicator of a position), (own study)

To sum up the national CSR perspective according to RQ1, one needs to indicate that domination of the U.S. has been diminished, the United States has not been a leader in this issue any more. The main positions belong currently to Canada, Great Britain, Australia, and Netherlands. In the pursuit of leaders there are Hong-Kong, Sweden, Finland, and Norway. The United States has been declassed to the 18<sup>st</sup> position, which is a dramatic failure when having at the same time the highest number of academic centres in the classification.

#### **6.2.** Continental concentrations

Supposing that instead of analysing particular countries, a continental distribution of published scientific articles on CSR is taken into consideration, which is described in RQ2, North America is a leader (almost 50% of achievements), followed by Europe (over 35%), Asia and Australia (with results only at the level of 6–7%), only then, there are classified South America and Africa with extremely low results. A detailed absolute classification (a number of articles) in the continental light is shown in the Table 4.

On the other hand, taking into consideration a relative indicator of a position, on the 1st position there is Australia due to a relatively high number of articles and few academic centres. North America is on the 2nd place, and Europe on the 3rd one. The greatest change concerns Australia, thanks to taking into account a relative indicator of a position, it has been moved from the 4th to the 1st position. Additionally, Europe and North America's positions have been changed also to the 2nd and 3rd places respectively. A detailed relative classification (a relative indicator of a position) in the continental light is presented in the Table 5.

*Table 4. Continental frame of CSR – absolute classification (own study)* 

No.	Continent	No. of articles	Percentage
1	North America	652	48.05%
2	Europe	492	36.26%
3	Asia	100	7.37%
4	Australia	84	6.19%
5	South America	19	1.40%
6	Africa	10	0.74%

Explanation: 100%=1.271

*Table 5. Continental frame of CSR – relative classification (own study)* 

No.	Continent	No. of articles	No. of academic centres according to www.webometrics.info	Relative indicator of a position
1	Australia	84	135	0.62
2	North America	652	4831	0.13
3	Europe	492	4976	0.10
4	Asia	100	4964	0.02
5	Africa	10	635	0.02
6	South America	19	2175	0.01

Summing up the continental parallel in the accordance with RQ2, it needs to be pointed out that in both classifications North America has been placed ahead of Europe. Having the classification according to a relative indicator of a position objectified, the 1st position has been taken by Australia. Results of other continents are substantially low and irrelevant. Asia claiming to be the most economically and technologically dynamic continent, unfortunately, in this context has very weak results. Admittedly, in the absolute context it takes the 3rd place, however, its relative indicator of a position shows that its real position is similar to the place of Africa (0.02) being opinionated as the least developed continent.

## 6.3. National scientific response

As far as the attention of scientific circles in the national context is concerned, which was determined in RQ3, a domination of the U.S. in the case of an absolute number of citations is unquestionable, the said number is 3904 of citations, which is 1/3 of the total number of citations (33.25%), almost 1/4 has been gained by Canada (24.55%), whereas on the 3rd position there is Great Britain with its percentage in the absolute citation number at the level of 17.17%. Further percentages are much lesser (less than 7% of the total). In the absolute parallel, then, three countries are the leading powers: the U.S., Canada, and Great Britain being slightly behind, their total percentage in all the citations is almost 3/4 (74.98% specifically). However, the attitude to prioritise countries from the point of view of a number of citations based only on one single measure, i.e., an absolute citation sum, would not be totally proper; similar to the previous analysis of national concentrations. Therefore, one ought to scrutinise this issue in a more detailed manner, also in this case the U.S. domination is not so obvious at all. Because if taking into account a relative indicator of a citation position (expressed as a quotient of the absolute citation sum and the estimated number of academic centres in the region) binding the absolute citation number and the number of academic centres in a particular country, which aims at determining the position of a given country including differences in density of academic centres, the classification has changed. Similar to the previous national classification, also this time the U.S. has disappeared from the 1st place and in this context takes only the 15th position (a relative indicator of a citation position -1.19).

On the 1st and 2nd place there are Canada (14.13) and Great Britain (8.66) respectively. Thus, it is clearly visible that the U.S. is equipped with a great number of relatively weak centres, because regarding this average distribution and the extremely high amount of academic centres, and confronting it with the absolute citation sum, the result is not satisfactory. Canadian and British centres being looked at from this angle are more effective (a smaller number of centres, a high relative indicator of a citation position). Therefore, it would be misleading to claim that the U.S. has the strongest position in terms of the CSR development, one should say rather that the U.S. has a single dominant (few) academic centres, which cannot be generalised in the national context. Such a generalised statement would be more proper in the context of Canada or Great Britain right due to a much higher relative indicator of a citation position and their leading position also from the absolute point of view. This indicates that in these regions there are few academic centres with less scientific response resulting in citations. The detailed presentation of a national parallel in the context of a number of citations is in the Table 6.

Summing up the national analysis of the scientific response (RQ3), one shall underline that attention is to be deserved mainly by Canada, Great Britain, Netherlands, Australia, Norway, Austria, Sweden, Hong Kong and Switzerland. These are the countries with the highest results in both classifications (an absolute citation sum and a relative indicator of a citation position). Attention shall be also paid to the U.S. due to the fact that the U.S. is an unquestionable leader in terms of an absolute citation sum being far ahead of other countries. The detailed parallel of relations between these two classifications (in the light of an absolute citation sum and a relative indicator of a citation position) is presented in the Figure 2.

Furthermore, to sum up the national distribution, according to RQ3, in the absolute context, the U.S. dominates (1/3 of citations), followed by Canada and the European countries. However, taking into consideration a relative indicator of a citation position, the classification has changed: the U.S. loses its position and now gains the 15th place. Two following countries take the 1st and 2nd places respectively. The situation is, hence, analogical to the previous national analysis. The U.S. is characterised with a great number of

academic centres, many of which is relatively weak and do not have any successes in terms of a citation issue, in Europe and Canada the density of centres is lesser, however their response is stronger, they are more productive.

Table 6. National distribution in the context of a number of citations (own study)

No.	No. of articles	Country	Absolute citation sum	No. of centres in the country	Relative indicator of a citation position	Position according to a relative indicator of a citation position
1	375	The U.S.	3904	3274	1.19	15
2	340	Canada	2882	204	14.13	1
3	244	UK	2017	233	8.66	2
4	78	Netherlands	760	160	4.75	3
5	70	Australia	331	91	3.64	4
6	26	Norway	152	67	2.27	7
7	21	Switzerland	135	107	1.26	14
8	10	Austria	132	77	1.71	10
9	28	Italy	120	203	0.59	21
10	15	Taiwan	110	157	0.70	18
11	13	Turkey	103	162	0.64	20
12	26	Sweden	96	50	1.92	9
13	17	India	91	1555	0.06	37
14	17	Hong Kong	89	26	3.42	5
15	18	Belgium	85	100	0.85	16

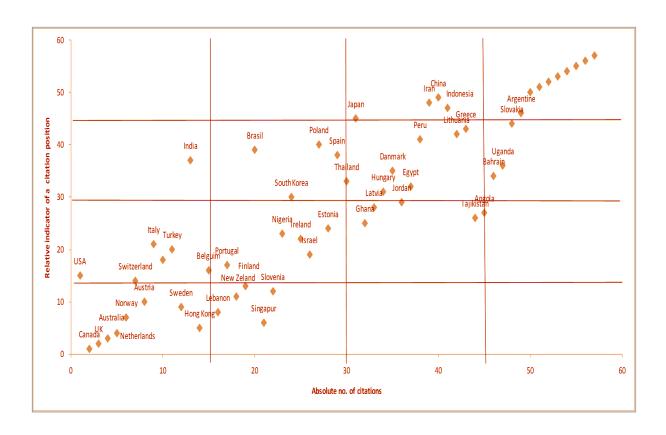


Figure 2. The most relevant countries in the context of a number of citations (own study)

Certainly, this statement does not concern the leading American centres (Boston, Harvard, New York). In the relational distribution (a relative indicator of a citation position and an absolute citation sum) the following countries deserve our attention: Canada, Great Britain, Netherlands, Australia, Norway, Austria, Sweden, Hong Kong, Switzerland, and the USA.

## **6.4.** Continental scientific response

Accumulating a national parallel of the scientific response to the continental level (RQ4) in the absolute context, an order of positions is not surprising. On the 1st place there is North America (due to excellent absolute results in the U.S. and Canada), followed by Europe, other continents have gained a much lower absolute citation sum. However, in terms of relativity, using the relative indicator of a citation position the 1st place has been taken by Australia with over a doubled relative indicator of a citation position.

This result has been gained mainly due to the fact that it has had relatively few academic centres with a relatively high absolute citation sum. Thus, summing up the continental approach, attention ought to be paid to the following three: North America, Europe, and Australia. The continental distribution in the context of a number of citations is shown in the Table 7.

Table 7. Continent	ıl distributior	ı in the contex	t of a number	of citations	(own study)
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No.	No. of articles	Continent	Absolute no. of citations	No. of academic centres on the continent according to www.webometrics.info	Relative indicator of a citation position	Position according to a relative indicator of a citation position
1	652	North America	5843	4831	1.21	2
2	492	Europe	3647	4976	0.73	3
3	100	Asia	450	4964	0.09	4
4	84	Australia	379	135	2.81	1
5	19	South America	72	2175	0.03	6
6	10	Africa	53	635	0.08	5

### 7. Researches' limitations

As a final conclusion of the analyses it seems to be essential to enumerate the most relevant researches' limitations. Currently, analyses and their results concern the set of data taken from the Scopus base within time frames from 2000 to 2009. The database includes only bibliographic data about the scientific articles shown up after filling the phrase "corporate social responsibility" in the widest search criterion 'Article Title, Abstract, Keywords'. In the connection with this fact, analyses on the foundation of a different basis, limited by means of other indicators, created with applying different variants of searching, may give various results. Also, analyses conducted in the accordance with a different procedure or by other researcher searching for various tendencies and concentrations, thus, analyses exploring various perspectives of corporate social responsibility, may differ, similar to the fact being presented together with the characteristics of some of the bibliometric analyses connected with CSR.

### 8. Conclusions and recommendations

Taking into consideration the above mentioned results and limitations of conducted analyses, a few recommendations for researchers dealing with CSR may be formulated.

Corporate social responsibility is of substantial interest of a number of researchers from wide variety of countries (57 countries) and from all the continents, thus it shall not be omitted while analysing different perspectives. Over 75% of the achievements in the analysed period of time have been developed in the U.S., Canada, and Great Britain, and exactly in these researches conducted in these regions one may find the highest number of pieces of information, these are the places where the CSR analyses are conducted the most often and their number is the greatest. Particularly important there seem to be researches carried out in Canada, Great Britain, Australia, as well as in Sweden, Netherlands, Finland, and Norway, from the point of view of the highest values of a relative indicator of a position these countries shall be claimed as the most relevant and to the highest extent their achievements ought to be taken into consideration in further analyses. In the continental context, however, North America, Europe, and Australia shall be included in the analyses.

On the other hand, if taking into account the highest scientific response of the researches being conducted, it occurs that from the angle of an absolute citation sum, researches from the U.S., Canada, and Great Britain are dominant (75% in total). If, however, a relative indicator of a citation position is taken into consideration, also Netherlands, Australia, Norway, Austria, Sweden, Hong Kong, and Great Britain shall count. The U.S. in this light has lost its dominant position, taking the 15<sup>th</sup> place, then, the leading positions belong to Canada and Great Britain. The researches from these countries have occurred to be the most valuable and exploring them further one may find many of interesting contexts connected with CSR. The scientific response in the continental scale allows to, first of all, be interested in the researches from North America, Europe, and Australia.

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