

## A BIBLIOMETRIC ANALYSIS OF CREATIVE ACCOUNTING RESEARCH

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**Abstract:** Creative accounting is a term used to reflect the techniques and practices used to manipulate financial accounting in order to meet the stakeholders' requirements. Its use is controversial as it is considered to incorporate only those practices and techniques within legal boundaries; however, manipulation could easily lead to fraud. This paper conducts a bibliometric overview of the creative accounting research on the Web of Science (WOS) platform and it identifies the most frequently used terms with regard to creative accounting, by means of the VOSviewer software tool. The results of such analysis, together with deductive content analysis revealed that in what concerns the research on creative accounting conducted so far, emphasis is placed on the creative accounting practices and processes. The terminology used in this research field revolves around words and phrases such as creativity, process, company, practice, creative accounting practice, management and also around terms as fraud, fiscal rule, advantage. Therefore, it can be stated that creative accounting research focuses on the practices used, it studies the involvement of the management of the company in such creative practices and is heavily analyzed in close connection with accounting and fiscal fraud.

**Keywords:** Bibliometric analysis, Bibliometric mapping, Creative accounting, VOSviewer.

**JEL codes:** M41

### Introduction

The main objective of this paper is to determine the state of knowledge in what concerns the research related to creative accounting as per the Web of Science platform. It contains a bibliometric overview of the creative accounting research and it identifies the most frequently used terms with regard to creative accounting. In order to achieve this goal the VOSviewer software is used (<http://www.vosviewver.com>; van Eck & Waltman, 2010). Moreover, by means of deductive content analysis the main aspects studied in the relevant research literature revolving around creative accounting are identified and presented.

To the best of our knowledge, no other bibliometric analysis studies focused on creative accounting research. We believe that the results of this research could be of use for scholars, academics and students as they reveal the subject areas that have not been studied yet and that could be researched in the future.

Research studies on bibliometric analysis in the accounting field (Merigó & Yang, 2017) focused on identifying the most relevant research in the field classified by papers, authors, journals, institutions and countries. The authors found the most influential journals and revealed that United States institutions are the most influential worldwide.

Other studies (Silva & Niyama, 2019) analyzed the evolution of scientific production, using Lotka's law in order to analyze the productivity of the authors.

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Similar scientometric and bibliometric analyses were found to be related to key account management literature (Kumar et al., 2019), lobbying in accounting regulation, social and environmental accounting research in the public sector (Fusco & Ricci, 2019), Strategic Management Accounting (Petera, 2017), natural resource accounting (Zhong et al., 2016), etc.

### **Theoretical background**

The concept of creative accounting has long been debated in the international literature. Some authors strongly condemn these creative accounting practices, while others argue that in certain situations they can be useful. However, regarding the results of creative accounting practices, it is generally agreed upon that they help improve the image of a company as far as its stakeholders are concerned and that they are used in order to obtain certain advantages or to avoid certain legal provisions or regulations.

Creative accounting is the boundary between alternative approaches allowed by law and fraudulent financial reporting. Nonetheless, the application of creative accounting may be tolerated in certain circumstances and may save the business from failure.

Some authors (Cugova & Cug, 2020) identify the main determinants of creative accounting, such as the desire of managers in making the company's management look better than it actually is; valuation problems; investor pressure; the impact of the company's activity on the environment; risk reduction, etc.

In the same direction, (Gîntă, 2019) states that the use of „creative accounting is a result of the flexibility allowed by current accounting regulations, which, if used in good faith, helps to give a true picture of the financial situation and performance of companies”.

Creative accounting is the result of the opportunity to adapt to the rules that work within the existing accounting regulations and which, if applied without detours, could lead to a true picture of the company's financial position and performance (Frumusanu, 2014).

Popa (2012) claims that creative accounting is one of the manipulative practices that has developed over time in the financial field. Although such a practice is subject to the law, it deliberately deceives users of financial information, forming a false image of a company. Nowadays, creative accounting has become a complex phenomenon with effects that worry practitioners.

According to (Dumitrescu, 2014), creative accounting is a deceptive practice because it does not present the real situation and the economic-financial performance of a company. However, it is also regarded as a positive and beneficial technique as it advances solutions to the financial crisis problems.

Other authors (Ababneh & Aga, 2019) defined creative accounting practices as the deliberate withholding of a firm's real financial situation and engagement with financial disclosure management to portray the desired financial status.

Bhasin (2016) is more drastic and recommends that creative accounting practices should be considered a serious crime and, as such, accounting bodies, courts and other regulators should take very strict punitive measures to stop these practices. Such recommendations were made following a survey which revealed that the practice of creative accounting is always a deliberate attempt to gain an undue advantage for accountants, managers and companies.

In essence, creative accounting implies that an organization takes advantage of those existing or more flexible regulatory "loopholes" to distort published accounting information. Although there is a clear difference between creative accounting and breaking the law on purpose (fraud), both are related to financial difficulties and are intended to deceive (Zuca & Ioanas, 2012).

In our opinion, creative accounting refers to accounting practices that may (or may not) follow accounting principles or standards, but that deviate from their purpose in order to obtain various image advantages in front of stakeholders. The question remains the same: where is the boundary between legal and illegal, between creative accounting and accounting fraud?

### **Research methodology**

In order to achieve the main goal of this research we have defined the following research objectives:

- *Performing a bibliometric analysis on creative accounting research using the Web of Science platform;*
- *Establishing the most frequently used terms with regard to creative accounting research.*

The workflow used in order to carry the bibliometric analysis was centered first on data retrieval, afterwards on preprocessing, then on network extraction, mapping, analysis and finally visualization (Cobo et al., 2011).

The Web of Science platform – current publisher Clarivate Analytics, includes more than 34.502 journals, proceedings, books, patents and data sets and it covers 166 million records (journals, books, and proceedings), 43 million patent families (> 87 million patents) and 8.9 million data sets (Matthews, 2020).

The search protocol on the Web of Science platform:

- Database selected: All databases (WOS, BCI, CCC, DRCI, DIIDW, KJD, MEDLINE, RSCI, SCIELO, ZOOREC);
- Basic search on the word “accounting” in Title and “creative OR creativity” in Title – TITLE: (accounting) AND TITLE: (creative or creativity);
- Timespan: All years 1975 – 2020.

We also tried searching for the word “accounting” in Title and “creative OR creativity” in Topic but the search also retrieved documents that were not related to creative accounting research.

The search retrieved 150 results from 1976 (2 records) until 2020 (3 records). The years with most published articles are 2012 (14), 2011 (12), 2016 (11) and 2019 (11). The count includes Early Access articles also.

As per the countries/ regions, most records were found in USA (26) and then in England and Romania, with 17 records each, Australia 8 records and France, 6 records. Majority of the retrieved documents are articles (84), meeting (34) some are review (20), books (5) and others. The sources for titles: Proceedings of the International Conference Accounting and Management Information Systems as well as Accounting Review.

In what concerns the research domains, most records (110) are from Social Sciences and from Science Technology. In what concerns the research areas, the results are shown below (Table no. 1):

**Table no. 1: Result analysis based on Research Areas, Creative accounting research in databases: WOS, BCI, CCC, DRCI, DIIDW, KJD, MEDLINE, RSCI, SCIELO, ZOOREC**

No	Field: Research Areas	Record Count	% of 150
1	BUSINESS ECONOMICS	71	47%
2	PSYCHOLOGY	18	12%
3	ENGINEERING	16	11%
4	BEHAVIORAL SCIENCES	13	9%
5	COMPUTER SCIENCE	13	9%

\* Source: *Web of Science platform.*

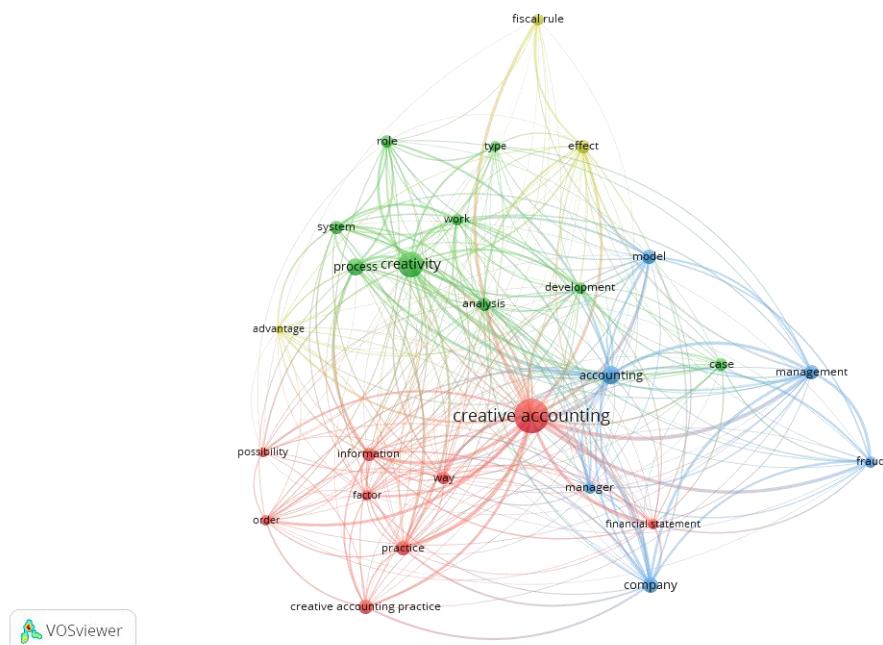
Afterwards we exported the 150 retrieved records into a plain text format containing the following information: Author, Title, Source and Abstract that was imported in the VOSviewer software for further analysis.

## Results and discussions

By use of VOSviewer software we created a co-occurrence map based on the text data exported from the bibliographic database files (WOS platform), using as counting method full counting (van Eck & Waltman, 2011).

Out of the 2.560 terms, the software retrieved 40 terms that met the threshold of at least 10 occurrences.

From the 40 list of terms, 13 of them have been eliminated in the step of verifying terms as they were common words such as research, study, author, article, paper, year, data, etc.



**Figure no. 1:** VOSviewer visualization map – co-occurrence network of terms when searching for “creative accounting” on WOS platform. *Source: own generation.*

The co-occurrence map of terms when searching for creative accounting on the WOS platform, timespan: 1975 – 2020, revealed the studied field as being connected with terms such as creativity (88 occurrences), accounting (45 occurrences), process (37 occurrences), company (30 occurrences), practice (29 occurrences), creative accounting practice (28 occurrences), management (26 occurrences) and others. The generated map contains 4 clusters and it groups the 27 terms as follows (Table no. 2).

**Table no. 2: Summary of the co-occurrence network of terms in VOSviewer – creative accounting research on WOS platform**

No	Term	Cluster number	No. of occurrences
1	creative accounting	1	152
2	practice	1	29
3	creative accounting practice	1	28
4	information	1	24
5	way	1	21
6	factor	1	16
7	financial statement	1	15

8	order	1	15
9	possibility	1	12
10	creativity	2	88
11	process	2	37
12	analysis	2	23
13	system	2	23
14	role	2	21
15	case	2	20
16	development	2	19
17	work	2	18
18	type	2	14
19	accounting	3	45
20	company	3	30
21	management	3	26
22	model	3	26
23	fraud	3	17
24	manager	3	17
25	effect	4	24
26	fiscal rule	4	18
27	advantage	4	10

\* *Source: own generation*

Thus, by means of network analysis there can be found structure. The creative accounting research as per the WOS platform, timespan 1975 – 2020, retrieved a co-occurrence network of 27 terms grouped into 4 clusters by their relevance. Each cluster may be seen as a topic (van Eck & Waltman, 2011). In this case, the first cluster can be considered to be on the topic of creative accounting practices; the second one on the topic of the creativity process; the third one on the management of the company and fraud; and the fourth one on the effects that creative accounting practices have, both on accounting (on the true and fair image) as well as on taxation (their fiscal consequences).

### Conclusions

Creative accounting practices imply manipulating the accounting information as far as laws and regulations allow it, by using certain options, alternative accounting treatments or estimates in order to achieve the desired result. It is a discretionary policy of the management and its results are misleading for the stakeholders, as they reflect a biased image of the economic and financial reality of a company's financial position and/or performance. Moreover, creative accounting can be considered an unethical use of the flexibility allowed by laws and regulations or as an aggressive interpretation of the generally accepted accounting principles. Its use is controversial as it could easily lead to fraud.

The research on creative accounting as per the WOS platform increased during 2011 – 2012, as well as around 2016 and 2019. By countries, most research on this subject appears to have been conducted in the US, followed by England and Romania. It has been noticed that the WOS platform does not have a dedicated research area on Accounting, the retrieved results being mainly from the Business Economics research area.

After performing a bibliometric analysis on the material retrieved from the WOS platform (150 records) on the most frequently used terms in creative accounting research, the co-occurrences

map of terms generated in VOSviewer revealed that there are four main topics of research (clusters). The first one centers around terms such as creative accounting practice, information and financial statement, the second one on creativity, process, analysis, system, the third one on company, management and fraud and the last one on effect, fiscal rule and advantage.

Thus creative accounting is researched mainly in what concerns the creative practices used, it appears to be a process that involves the accounting professional's judgement (creativity), it involves participation from the management of the company and is studied in close relationship with taxation and with accounting fraud.

As a limitation of our research we can mention the fact that only a small number of bibliographic material was analysed (150 records) as per the results retrieved by the search performed on the Web of Science platform. Thus, a significant part of the relevant research literature as well as other contributions to this field are not included.

We believe that this research's results could have significant implications for scholars, academics and students as they reveal the research gap in this field indicating the areas that could be researched in the future.

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