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### A Bibliometric Analysis Using Scopus Database of the Literature on Creative Accounting Trends

ABEER AL-KHOURY<sup>1</sup>, HOSSAM HADDAD<sup>2</sup>, MOSTAFA A. ALI<sup>3</sup> (*Corresponding author*),  
NIDAL MAHMOUD AL-RAMAHI<sup>4</sup> and TAREQ HAMMAD ALMUBAYDEEN<sup>5</sup>

<sup>1</sup> Associate professor, Business Faculty, Al-Ahliyya Amman University, Amman, Jordan; e-mail: a.alkhoury@ammanu.edu.jo (A.A.).

<sup>2</sup> Assistant professor, Business Faculty, Zarqa University, Zarqa, Jordan; e-mail: Hhaddad@zu.edu.jo (H.H.);  
Ramahinedal@zu.edu.jo (N.M.A.-R.).

<sup>3</sup> Assistant professor, Azman Hashim International Business School, Universiti Teknologi Malaysia, Kuala Lumpur,  
e-mail: mostafa1988@graduate.utm.my (M.A.A.)

<sup>4</sup> Professor, Faculty of Economics and Administrative Sciences, Zarqa University, Zarqa, Jordan; e-mail: tmbydeen@zu.edu.jo  
(T.H.A.-M.).

<sup>5</sup> Professor, Faculty of Economics and Administrative Sciences, Zarqa University, Zarqa 11831, Jordan;  
e-mail: tmbydeen@zu.edu.jo

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#### ABSTRACT

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*This article aims to provide a bibliometric analysis of creative accounting research published in the Scopus database from 1986 to 2022 to trace the development of scientific activities that can pave the way for future studies by shedding light on the gaps in the field. The analysis focuses on 161 creative accounting-related papers published in the Scopus database over 60 years, drawing upon a bibliometric analysis using VOSviewer. This paper highlights the mainstream of the current research in the creative accounting field, based on the Scopus database, by presenting a detailed bibliometric analysis of the trend and development of creative accounting research in the past two decades, including journals, authors, countries, institutes, co-occurrence, and author's keywords. The findings imply that creative accounting researchers do not use broad relevant theories and findings from studies beyond their clusters. Another result is that developing nations continue to be underexplored in terms of earnings management research due to a lack of trust representation and a lack of appropriate investigators. Finally, the data analysis identifies a number of potential research issues to be investigated regarding creative accounting development, which serve as raw material for future research. Once again, this study provides a framework for firms to build and implement creative accounting development plans.*

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#### INTRODUCTION

Luca Paciolo (1970) pioneered the notion of creative accounting more than five decades ago. However, only in the recent years, the accountants, auditors, scholars, and other experts placed a strong emphasis on the ideas of creativeness (Rackusin, 1976). Such methods began throughout the industrial revolution and have persisted. Nevertheless, creative accounting has grown dramatically since the 1980. According

to Susmus and Demirhan (2013), creative accounting involves changing how revenue is recognized and expenses are accounted for. As a result of such practices, the organisation appears to be more successful on paper than it is in reality. Accounting that is creative does not violate the Generally Accepted Accounting Principles (GAAP). In this regard Goel (2014) stated that the intention of creative accounting is to project more robust financials as one goal. Conversely, these practices are also used to project a weaker financial position depending on how the management wants it.

In addition, the current paper contributes to the current body of knowledge by providing a detailed bibliometric analysis of creative accounting research limited to the papers published in the Scopus database. However, the current analysis is considered to be one of a kind compared to past studies in the same field. Although several studies have been conducted in the field of creative accounting, there are limited papers analyzing the scientific publications from a global perspective exclusively in the Scopus database. Past studies have discussed limited bibliometric analysis in the field of creative accounting, focusing only on the creative accounting aspect without including other factors. There has been a past study on creative accounting which conducted a bibliometric analysis using the Scopus database from 1986–2020 (Safta et al., 2021). Creative accounting was not the central theme, since the authors considered it a part of the discussion alongside earnings management. Likewise, Mutuc et al. (2019) carried out a bibliometric analysis using the Scopus database (1996–2019) while treating creative accounting as a secondary study focus financial reporting. On the other hand, Abed et al. (2022) specifically concentrated on creative accounting; however, the study was limited to the British Accounting Review. At the same time, several other bibliometric studies rely on different sources to Scopus, such as WOS, McMaster World Congress. Even though WoS and Scopus databases have a lot of overlap, Scopus is the most comprehensive abstract and citation database for peer-reviewed literature across a wide variety of fields. They are closely associated with each other (De Jesus et al., 2020; Abed et al., 2022). Hence, the present study uses the Scopus database to cover as many studies as possible that might not be included in WoS or covered by prior research to explore the history and trends of creative accounting by addressing the following research questions:

- What are the distribution patterns of articles in the creative accounting area?
- What are the contributions of well-known scholars, leading nations, and the most active academic institutions?
- What are the frequent terms and research areas?
- What country has dominance based on major applications?

The remainder of this paper is structured as follows. Section 2 describes the literature review. Section 3 describes the research methodology, while Section 4 presents the data analysis. Section 5 highlights the findings and discussions surrounding the key results followed by the last section, Section 6, which provides the conclusion and trends.

## 1. LITERATURE REVIEW

The scholar asserted that financial statements lose the credibility when creative accounting is performed with serious negative intentions (Mudel, 2015). Consequently, the decision-makers relying on these financial statements have comprised ability to make the right decisions because accounting standards and principles are manipulated. These statements may not have objective and reliable information, thereby causing decisions to be made using misleading or wrong information. Despite intensive studies on creative accounting, there is no consensus about its universal definition. Furthermore, (Bhasin, 2015) asserted that the existence of different opinions and insight into the operational aspects of creative accounting makes it challenging to have a universally-accepted definition. Moreover, (Diana and Beatrice, 2010) viewed the creative accounting as a set of actions used by the managers to represent financial reports for misleading the stakeholders about the organisation's financial performance or influencing the contractual outcomes dependent on the number reported by the organisation. Thus, the basic reason for such intention to influence the contractual outcomes or mislead stakeholders remains unclear. However, it is clear from the discussion that executives deliberately practice creative accounting to characterize revenue, profits, assets, and other financials to suit vested interests rather than reflect the business's precise financial

position. Such activities are typically conducted using two ways, thus displaying higher or lower profits in the present period at the expense of previous or future accounting periods.

It is established that creative accounting comprises the manipulation of both performance indicators and the financial position of the business. However, Charfeddine, Riahi and Omri (2013) disagreed with this view and considered the creative accounting as a “deliberate intervention in the external financial reporting process” to benefit specific stakeholders. The disclosed information does not need to be fraudulent. Yet, the facts are twisted in a way that can be considered a violation of the “full disclosure” requirement defined by the International Financial Reporting Standard (IFRS). Manipulation of accounts is the deliberate change and falsification of financial data to meet the management's objectives. Typically, the intention is to work as per the management's expectation or deceive stakeholders by projecting a healthy financial position to the outsiders. Based on these factors, present researcher identified a necessity to mention that businesses may project the desired financial position if they stick to legal accounting practices. It became vital to distinguish between creative accounting and accounting fraud. The former is comprised of the legal activities and the latter is accounted for violating the stipulated rules. It should be noted that although creative manipulations may not violate the laws explicitly, but they flout the spirit of the law. The eventual objective of misrepresenting the financial results of a business is to misguide the investors (Voinea and Dimitriu, 2014). Creative accounting has two sides that are not fundamentally objectionable as an accounting approach wherein the use of unethical practices that distort information to an unfair and misleading form is wrong.

Creative accounting may be understood as describing the half-empty glass as half-full. Although both perspectives are objectively alike, however the perception is different. In the context of accounting, creativity may manifest in at least three different market situations. Therefore, the fundamental question is why to use creative accounting and how the management practices it (Yaseen, Idam and Fashakh, 2019). In addition, Paolone and Magazzino (2014) categorized the manipulation of accounts into two different groups like creative accounting (accounting legitimacy is maintained) and accounting fraud (accounting policies and principles are violated). It was demonstrated that the earnings of various companies can significantly be impacted by creative accounting, thus making such activities critical for the regulators, auditors, researchers, and investors (Zimmerman, 2015). Generally, the accounting profession and the business world have experienced an unimaginable shock occasioned by manipulation of records and financial statement tagged 'creative accounting', 'window dressing', 'earnings management, and 'balance sheet engineering' (Bean and Irvine, 2015). In this view, creative accounting in an unimaginable dimension has led to the fall of several companies worldwide. This is similar to the scandals of Cadbury Nigeria Plc, Nigerian banks failure (2005 and 2009), Enron in the United States of America and World Corn in the United States of America amongst others. Thus, the ethical values of the accounting profession are being tarnished by questionable accounting practices.

Creative accounting is characterized by excessive manipulation, complications and the use of 'novel' ways of reporting income, assets and liabilities. According to Matica et al. (2014), creative accounting is the manipulation of normal accounting and financial statements by moving accounts around, changing their locations and subheads, redefining accounts and even inflating accounts. All these are actions are performed in order to present an attractive picture of the state of health of an organisation or a rosier one depending on the objectives being pursued. However, Yaseen et al. (2019) perceived creative accounting as "using the flexibility within the accounting process to present a preferred picture of the firm at a point in time". Over the years, studies are conducted to determine causes and possible future impact of creative accounting on the organisation (Mutuc et al., 2019). A case study on Nigeria was conducted (Osazevbaru, 2012) to find out the impacts or implications of creative accounting. A little or no effort was used to determine whether some of the factors so identified as the causes of creative accounting impact creative accounting appreciably.

Considering the recent trends in this area, the objective of this study is to determine empirically whether some hitherto identified factors such as employees and top management compensation package tied to performance, loophole in GAAP, flexibility in accounting standard, agency rating, shareholders' demand for regular dividend and improved earnings are the root causes of creative accounting and in GAAP. In addition, the factors like flexibility in accounting standard, agency rating, shareholders' demand for regular dividend and improved earnings were explored to identify the root causes of creative accounting and

how best to make them a thing of the past. It is affirmed that such actions have strong implications for regulators and policy makers who wish to encourage transparent reporting practices in the organisation, especially the banking sector.

### 3. METHODOLOGY

Research trends in a certain topic can be determined by utilizing the output of a scholarly articles' repository through a bibliometric analysis study. An article that conducts bibliometric analysis, as distinguished from a review paper, has the primary goal of bringing attention to the most recent advancements, challenges, and potential future orientations of a certain issue. This study aims to provide a broader overview of several journals in the creative accounting field from 1986 to 2022. To this end, this paper is an effort to trace the development of scientific activities as identified by authors who have published in the journals under the Scopus database to identify new research gaps. Prior studies state that the quantitative approach is concerned with analysis based on researchers' interpretations, which often suffer from cognitive bias and rely on researchers' interpretations and expertise (Gaur and Kumar, 2018).

To address our research area, we use bibliometric methodologies to take a quantitative approach. A bibliometric analysis collects and assesses quantitative bibliographic data produced from scientific publications (Quintero-Quintero, Blanco-Ariza and Garzón-Castrillón, 2021). Moreover, a bibliometric analysis provides a descriptive measurement of the primary authors published in a particular journal, the number of citations from that journal and others, and the most crucial topic. In addition, it includes a co-citation analysis (Fahimnia et al., 2015). The significance of this analysis is explained by the fact that the assessment of the citation trend enables us to understand the connection of the area of interest with other research disciplines (Ratten et al., 2020).

#### 3.1 Data Source and Search Strategy

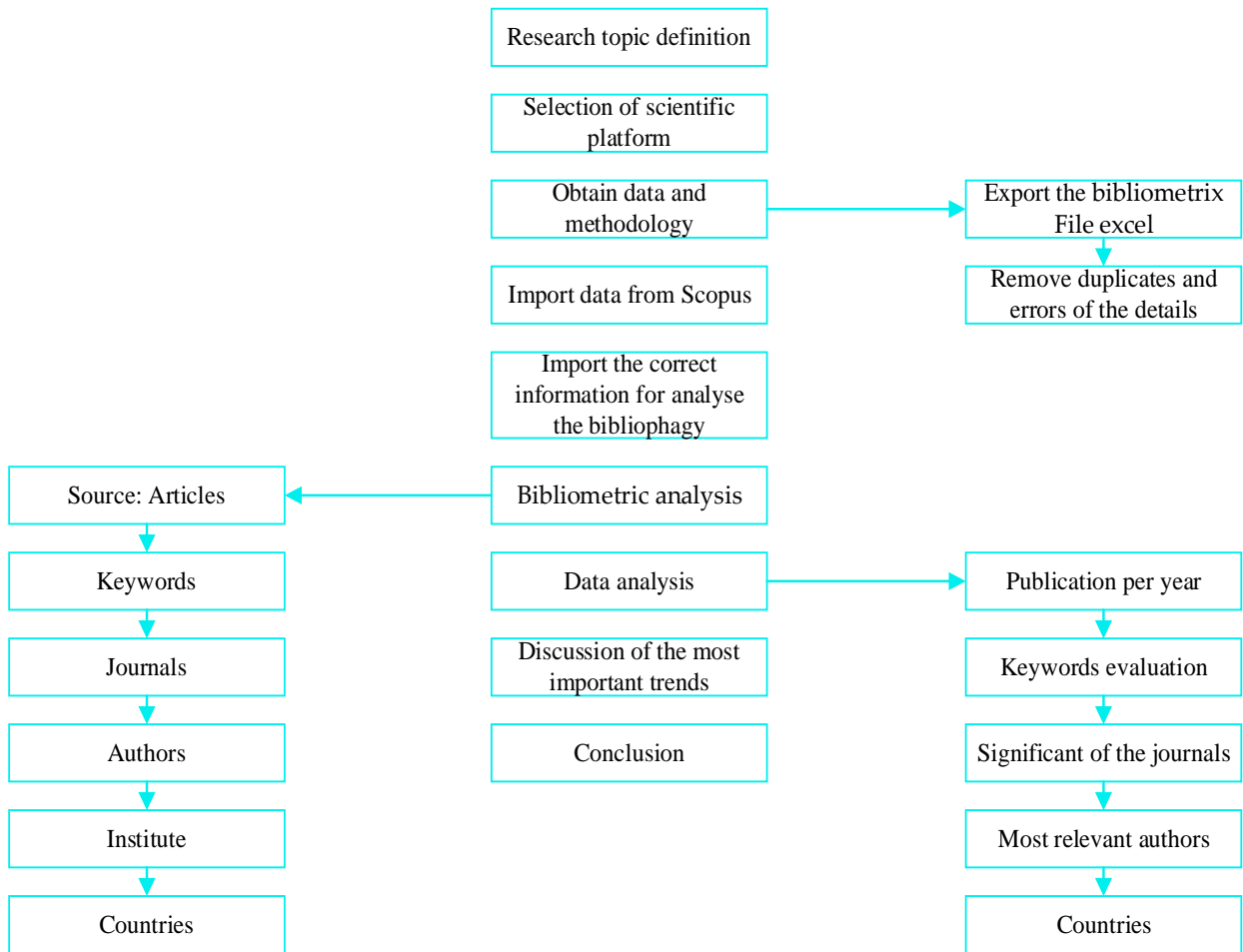
Journal articles on creative accounting in higher education firms were retrieved on 20 October 2022, primarily from the Scopus database using the following search equation in a generic approach: TITLE-ABS ("*creative accounting*") AND (TITLE ("recent" OR progress OR review OR critical OR revisit OR advance \* OR highlight OR perspective OR prospect OR trends OR bibliometric OR scientometric OR insights OR overview OR "state of the art" OR challenges OR updates) OR ABS (progress OR review OR bibliometric OR scientometric)) AND (LIMIT-TO (SRCTYPE, "j") OR LIMIT-TO (SRCTYPE, "p")) AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "cp")) AND (LIMIT-TO (LANGUAGE, "English")). As indicated in [16], it is a significant data source for obtaining scientific articles in the modern era utilizing particular keywords and quantitative data from publications and journals. The Bibliometric study revealed the most important subjects throughout time. Figure 1 displays the roadmap of the bibliometric analysis.

#### 3.2 Bibliometric Maps

VOSviewer has been used to explore the bibliographical and author keywords in forming 161 articles. Moreover, researchers develop maps for the study items using VOSviewer as well. An item of interest to the study is a country or author's keywords. A strong connection can occur between any two items. Each link has a strength, represented by a positive numerical value—the higher this value, the stronger the association. The total link strength represents the full strength of a particular country's co-authorship linkages with other nations. In contrast, the number of papers co-authored by two nations related with each other is reflected in the strength of the relationship between them. An author's keyword link strength reveals how often articles contain two keywords that appear together in a co-occurrence analysis.

##### 3.2.1 Co-Authorship Assessment

Among the 657 researchers, 47 nations were included in the study of co-authorship. Africa, America, Asia, Europe, and Oceania were the five continents to which the member nations belonged.



**Figure 1.** Workflow of the bibliometric analysis.

Sources: (Page *et al.*, 2021).

### 3.2.2 Co-Occurrence Assessment

The assessment of author keyword co-occurrence (not Scopus-indexed terms) included 456 keywords from 161 articles published in 35 journals. Synonymic single words and congeneric phrases were examined prior to loading the list of author keywords into VOS viewer. The minimum number of occurrences of a term to be examined in VOS viewer was set to five. To display the average publication year, number of occurrences, and link strength of the keywords, the overlay viewing method was selected. The hue of a term represents the average publication year of the texts in which it appears.

### 3.2.3 Creative Accounting Application

Search output patterns were compared between the major topic (keyword co-occurrences) and the sub-theme (total publication). Keywords like “creative accounting,” was counted and displayed in VOSviewer software when it came to assessing the deployment of creative accounting. In addition, we evaluated the five nations with the most publications for every creative accounting usage.

## 4. DATA ANALYSIS

As shown in Table 1, which demonstrates that the vast majority of articles published in the social sciences were analysed, whereas only a small number of articles were reviewed in the biological and physical sciences, such as computer science, chemical engineering, materials science, medicine, psychology, earth and planetary sciences, mathematics and nursing. To the best of our knowledge, this is the first time that

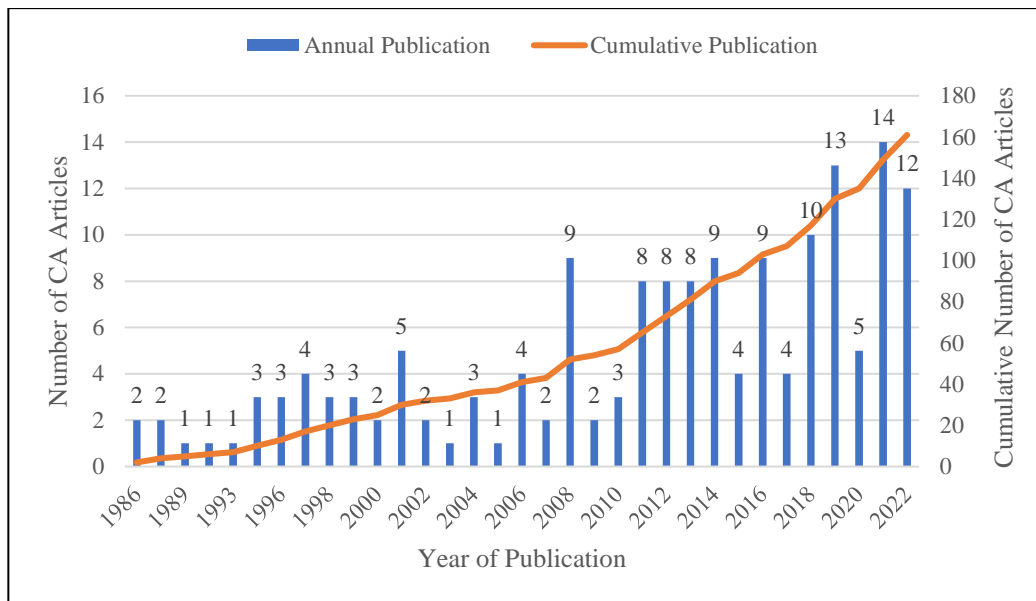
a high portion of researchers in the physical and life sciences have been taken into account. For example, the lowest number of publications was 1 in the earth and planetary sciences, mathematics and nursing, while 2 articles were in chemical engineering, materials science, medicine and psychology. In addition, 3 was in computer science. There was a total of 96 articles in business, management, and accounting, for example, that were published in the social sciences. A total of 88 publications in the field of economics, econometrics and finance, social sciences, arts and humanities, decision sciences, agricultural and biological sciences, environmental science, energy and engineering had a combined 104. Once it comes to discussing an organisation's increase in creative accounting, there is a lack of reliance on theories from other fields. Several articles have been assigned to more than one category and, therefore, the overall number of papers did not add up to the subject categories.

**Table 1.** Distribution of scientific literature by subject category.

<i>Subject Area</i>	<i>Number of Articles</i>
Business, Management and Accounting	96
Economics, Econometrics and Finance	88
Social Sciences	54
Arts and Humanities	12
Decision Sciences	11
Agricultural and Biological Sciences	8
Environmental Science	8
Energy	6
Engineering	5
Computer Science	3
Chemical Engineering	2
Materials Science	2
Medicine	2
Psychology	2
Earth and Planetary Sciences	1
Mathematics	1
Nursing	1

#### 4.1 Publication Output and Growth of Research Interest

For 36 years, a total of 161 research articles were published (see Figure 2). As of 1986, the first known publishing date. From 2006 to 2008, it is believed that creative accounting research became a hot topic. The overall number of publications increased from four in 2006 to nine in 2008, as did public interest. Although the annual growth rate (AGR) climbed by 90% in 2021, it more than doubled between 2019 and 2021. The results show that the number of publications in the creative accounting field have fluctuated between 10 and 14 publications over the past ten years while increasing from 10 to 14 in 2018 and 2022, respectively. Therefore, it is anticipated that the annual publication will continue to rise. However, most publications were closed access and not available to anyone in the Scopus database. As of 2022, only 7% (12 articles) were published as open-type. Thus, the citation score will automatically increase once access to journals opens. Results also showed that the articles used in this study were published in 5 different languages. The present research limited its search to the articles published in English, which is the most commonly used language. Nonetheless, the Spanish language is considered the second most common language used in the creative accounting field but with a minimal number of publications (2 articles). When a publisher submits an article in a foreign language to be indexed in Scopus, the article should have a title and abstract in English. Figure 2 displays the annual and a cumulative number of research articles in creative accounting indexed in Scopus from 1986 to 2022.



**Figure 2.** The annual and a cumulative number of research articles in creative accounting indexed in Scopus from 1986 to 2020.

## 4.2 Preferred Journals

Questionnaire survey-based study was coded by assigning specific numerical values for the current bibliometric paper to illustrate the eight (8) most productive journals in Scopus data for the creative accounting field (see Figure 3), owned by eight (6) different publishers (see Appendix A). Emerald and Elsevier the first three productive journals. In contrast, the rest were published under Cambridge University Press, Taylor & Francis, American Accounting Association, and Wiley-Blackwell. The journal with the highest total publication was the managerial finance with 6 articles, followed by the *acta universitatis agriculturae et silviculturae mendelianae brunensis* and *critical perspectives on accounting* with 5 articles respectively, the *accounting and business research* with 3 total publications. *World development* had the highest cited score with 9.4 and a total publication of 5 articles. However, the *journal of development economics* has the most cited paper with 774 citations. Moreover, Appendix A has been provided for the more productive journal in the creative accounting area, ranking the journals for the top fifteen (15) productive journals.

On the other hand, based on the cited score in the 2022 report, eight (8) out of fifteen (15) journals had a CiteScore of 5 and above. Journals with the highest and lowest CiteScore were the *world development* (9.4), and the *Scottish journal of political economy* (1.6), respectively. Despite the rank of two in number of total publications, the *International Journal of Learning and Intellectual Capital* was significantly lower than other journals, scoring only 2.2 CiteScore. According to the Scopus-Elsevier Cite Score, the Clarivate publisher's impact factor may be calculated using citation data from the Scopus database. Recently, researchers considered CiteScore one of the main factors influencing their publication choice. The current study provided the most-cited journal in creative accounting, with 8 journals (Appendix B). The researchers noted that the highest journals in terms of CiteScore were under Elsevier, Cambridge University Press and Taylor & Francis publishers (Appendix B). Figure 3 presents the top 8 most productive journals in creative accounting research.



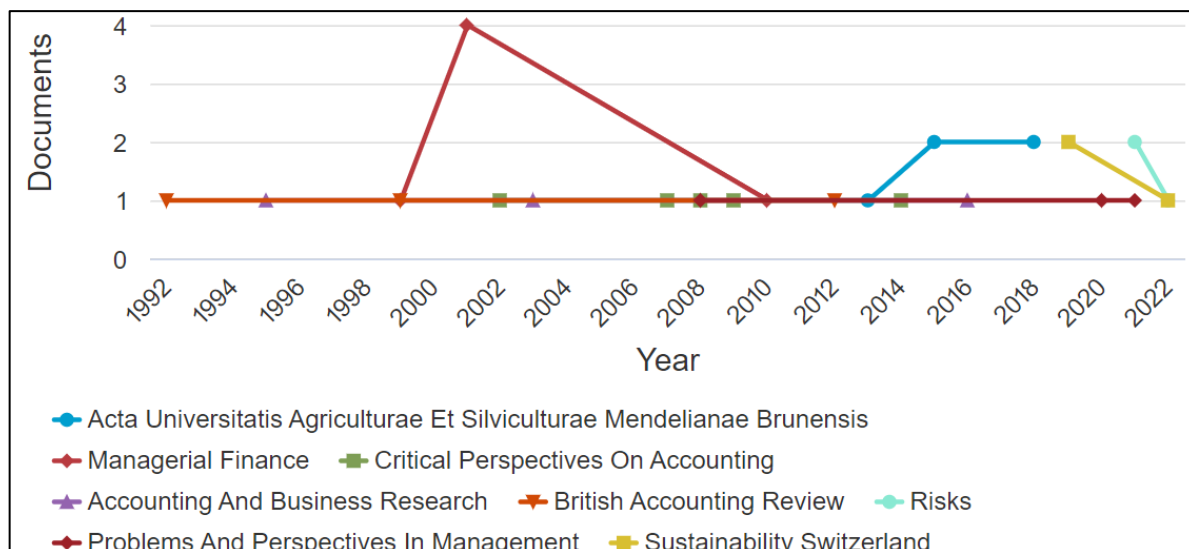
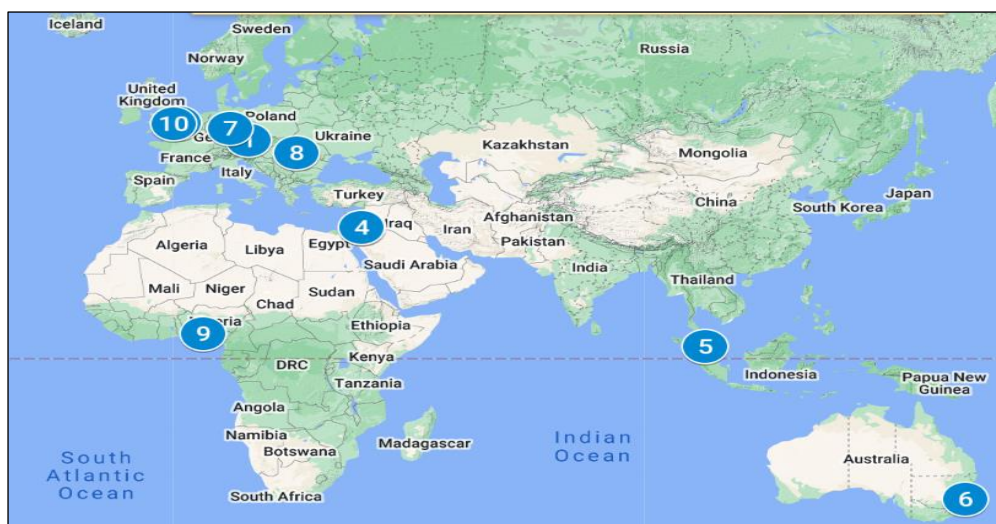


Figure 3. The top five most productive journals in creative accounting research

### 4.3 Partnerships, Top Nations, and Elite Institutes

The present study showed that the top 15 countries contributed to the growth of intellectual capital studies globally. About 23% of global publications were contributed by the United Kingdom and Italy, indicating these two countries are key players in the progress of intellectual capital research. With 45 publications, the UK was the most productive country. Italy was the second most fruitful country. However, the total publications (TPI) from Universiti Degli Studi di Napoli Federico II were slightly lower than that of Cranfield School of Management in the United Kingdom, with 7 and 4 publications, respectively. Figure 4 lists the most productive institutes in each country, based on the number of publications in the intellectual capital area; the present study also illustrates the most productive institutes in the area of intellectual capital ranked from 1 to 20, with the total number of publications shown in Appendix C. Figure 3 shows that only Romania (90.5%), Finland (89.5%), Taiwan (81.1%), India (77.3%), Poland (76.5%), Portugal (75.9%), the United States (73.7%), and Malaysia (70.3%) had more than 2/3 single-country publications (SCPs). This indicates that these countries have a high level of intra-country cooperation. However, the United Kingdom was the nation with the lowest SCP with 53.6 percent, where 39 out of 84 articles were related to numerous connections. That signifies that United Kingdom publications were internationally collaborative papers, linked with more than 20 nations, and it was rated the first most active country in international collaborative studies. Figure 4 shows the top fifteen most productive countries and academic institutions in intellectual capital publications.





Country	TPc	SCP (%)	The Most Productive Institutions	TPi
Czech Republic	12	58.3	Jihočeská Univerzita v Českých Budějovicích	7
United Kingdom	26	11.5	University of Essex	3
Jordan	8	37.5	Zarqa University	3
Jordan	8	37.5	Middle East University	3
Malaysia	7	42.9	Azman Hashim International Business School	3
Australia	11	27.3	University of Sydney	3
Germany	7	28.6	Universität Erfurt	2
Romania	6	33.3	Universitatea Babeş-Bolyai	2
Nigeria	5	40.0	University of Benin	2
USA	16	12.5	London School of Economics and Political Science	2

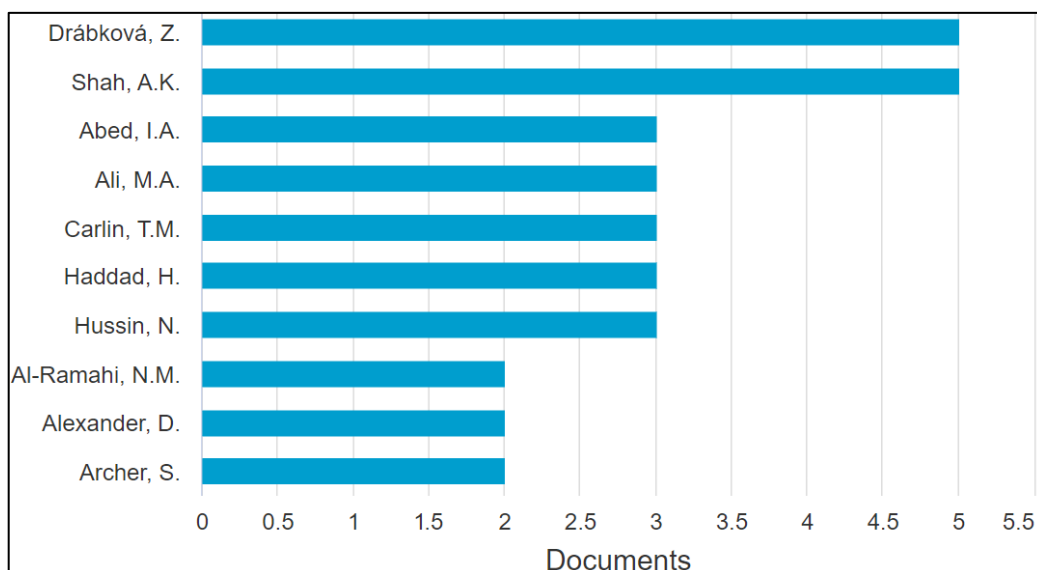
**Figure 4.** The top ten nations and academic institutions in terms of creative accounting publishing output.

Note: TPc: Total Publications of a given Country; TPi: Total Publications of a given academic institution; SCP: Single-Country Publications.

Therefore, the most productive institution worldwide in creative accounting research was University of South Bohemia in Ceské Budějovice, ranked as the top institution with (7) publications. The following two institutes were assigned to two universities in Jordan: Middle East University and the Zarqa University, as the second and third most productive institutes with (3) publications, respectively. Moreover, this was followed by Azman Hashim International Business School in the Malaysia with (3) publications, ranking fourth. University of Sydney in Australia scored fifth ranking with a total publication of (3), followed by Universität Erfurt in Germany with (3) publications. However, the remaining detailed information regarding the most productive institutes in the creative accounting field are explained in Appendix D.

#### 4.4 Influential Writers

Figure 5 outlines the 10 most prolific creative accounting authors from nine nations, including United Kingdom (3 authors), Malaysia (3 authors), Jordan (3 authors), Portugal (2 authors), Australia and Czech Republic (1 author). The most prolific publisher has published works between 1986 and 2022. The authors' affiliations show that creative accounting research has been within fields related to earnings management, financial reporting, and corporate governance. Shah, Atul K from United Kingdom has the highest publication in the creative accounting field with 5 total publications from 1995 to 2022, 4 h-index, and 103 citation times.

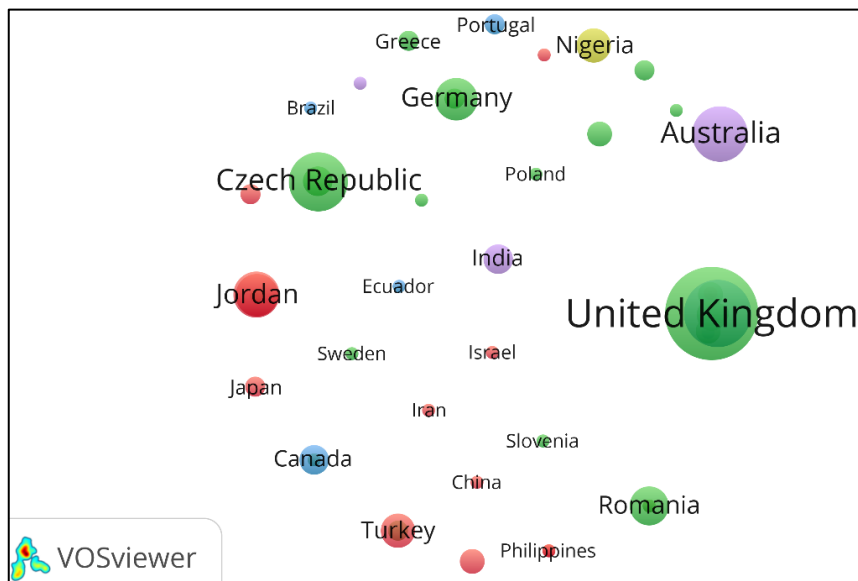


**Figure 5.** The top fifteen most productive authors on creative accounting research.

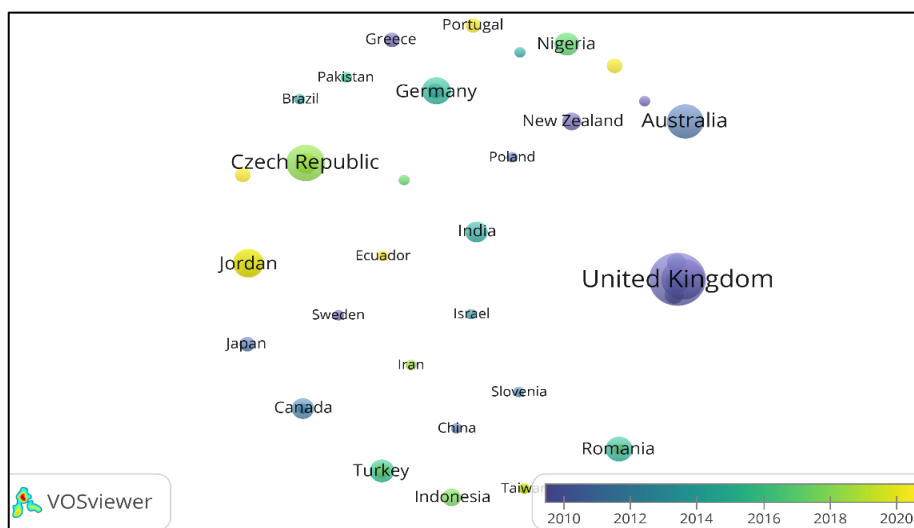
Moreover, the second-highest author was Drábková, Zita from Czech Republic, affiliated with metropolitan university Prague, Prague, Czech Republic, with total publications of 5 and 12 citation times. The third and fourth authors were from Malaysia and affiliated with the same university with citations of 8, respectively. See Appendix C for more details about the top ten most productive authors in creative accounting research.

#### 4.5 Co-authorship

Five cooperation networks were observed (green, red, purple, blue, and green), and the associated countries/territories were aggregated into five continents being the most important (Czech Republic, United Kingdom, Jordan, Australia, and Malaysia). This demonstrates that creative accounting has been investigated by significant nations, highlighting the significance of researching the subject's facets in institutions and colleges throughout the world. Figure 6 depicts collaborative networks by country of publishing.



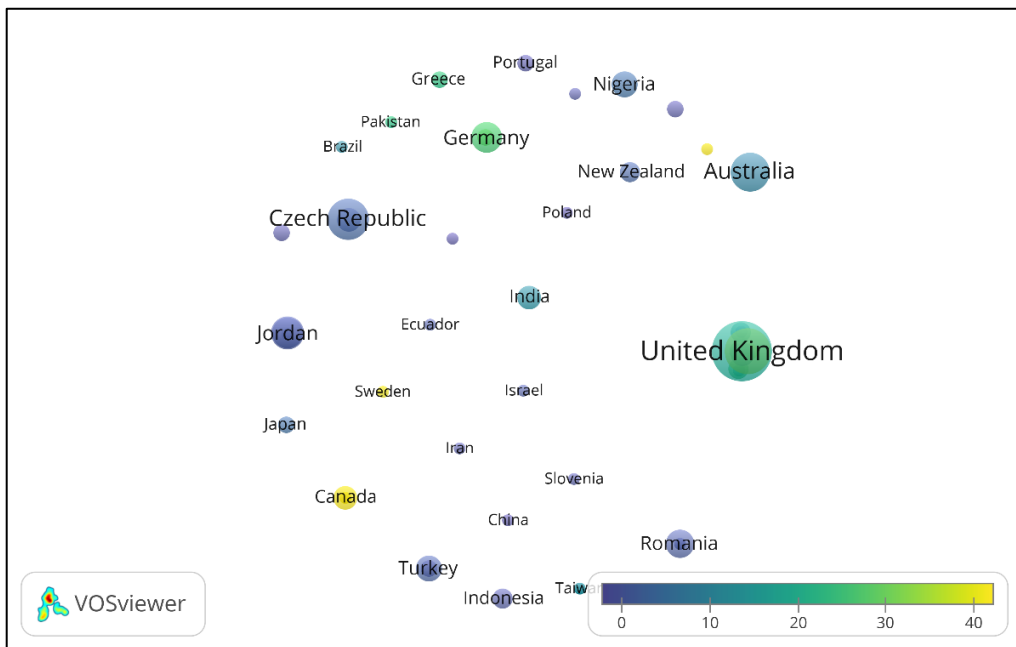
**Figure 6.** The screenshot of the bibliometric map created based on countries' publications with network visualization mode. as shown in Figure 5 and the following link: <http://bit.ly/3gdhs58>.



**Figure 7.** An example of the bibliometric map built in network visualisation mode based on the year of publication of nations, as shown in Figure 6 and the following link <http://bit.ly/3gdhs58>.

Figure 7 illustrates the collaboration networks between countries' year of publication from 2010 to 2020. Five collaboration networks were observed (purple, green, and yellow), the most important being the UK, Italy, Australia, and the USA. This shows that the subject of intellectual capital has been studied by relevant countries, which reveals the importance of analyzing the subject's aspects in institutions and universities worldwide.

Additionally, Figure 8 validates that there were six collaboration networks (yellow, red, purple; blue; light blue; and green) between nations' citations (the most important being the United States, the United Kingdom, Spain, and Italy). Intellectual capital was examined by relevant countries, demonstrating the relevance of investigating its many elements in educational institutions and universities all over the world

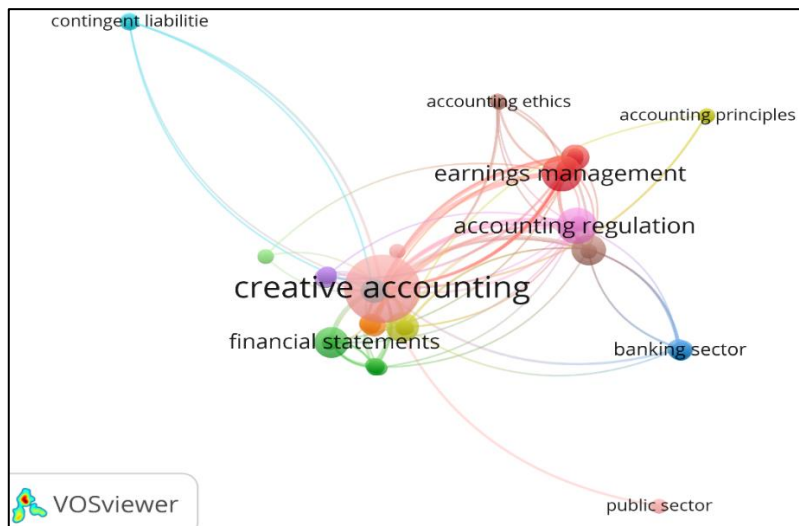


**Figure 8.** A screenshot of the bibliometric map created based on countries' citations with network visualization mode. The following URL can be used to open Figure 7 in VOSviewer: <http://bit.ly/3gdhs58>.

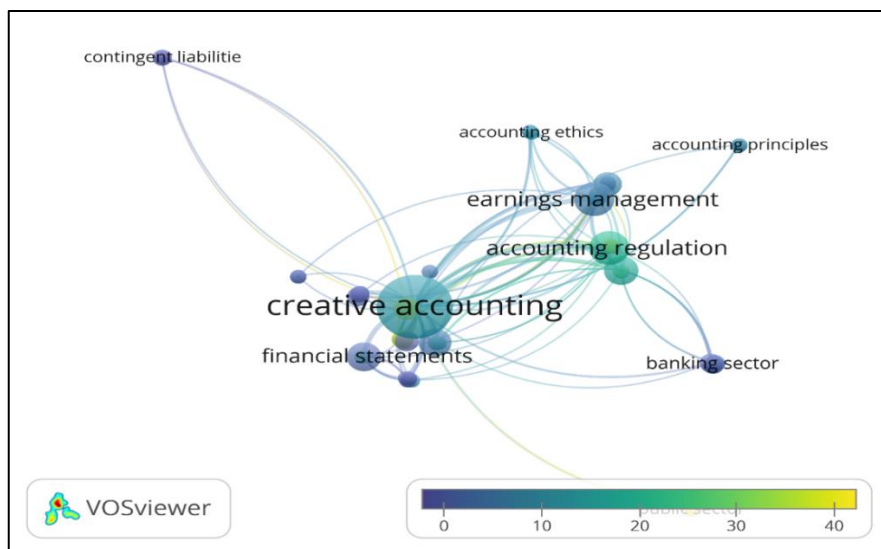
## 4.6 Co-occurrence

It was found that 371(81.0%) of the 460 author keywords were used just once, while 56 (12.0%) were used twice, and 24 (5.0%) were used three times. Nine keywords fulfilled the threshold of at least five appearances in the VOSviewer after being relabeled as synonymic single words and congeneric phrases. Furthermore, the term occurring most often in our research was 'creative accounting,' with 56 occurrences and 161 linkages to other keywords (see Figure 9). Additionally, we noticed the use of 'Earnings Management' (17 occurrences, 28 links) and 'financial reporting' (11 occurrences, 31 links). financial statements co-occurred with conceptual keywords, including 'corporate governance,' 'fraud,' and 'accounting regulation'.

With 56 occurrences and 273 connections to other keywords, 'creative accounting' is the most often used key-word (see Figure 10). There was also a lot of discussion about "earnings management," "financial reporting," and "financial statements," which we found to be common phrases (81 occurrences, 115 links). In addition, we found that the creative accounting name had references to various aspects, including substrate, fraud, and income smoothing. Some examples of creative accounting connected with the substrate/mechanism include "ethical issues," "disclosure quality," "ownership structure," and "internal control" (3 occurrences, 14 links).

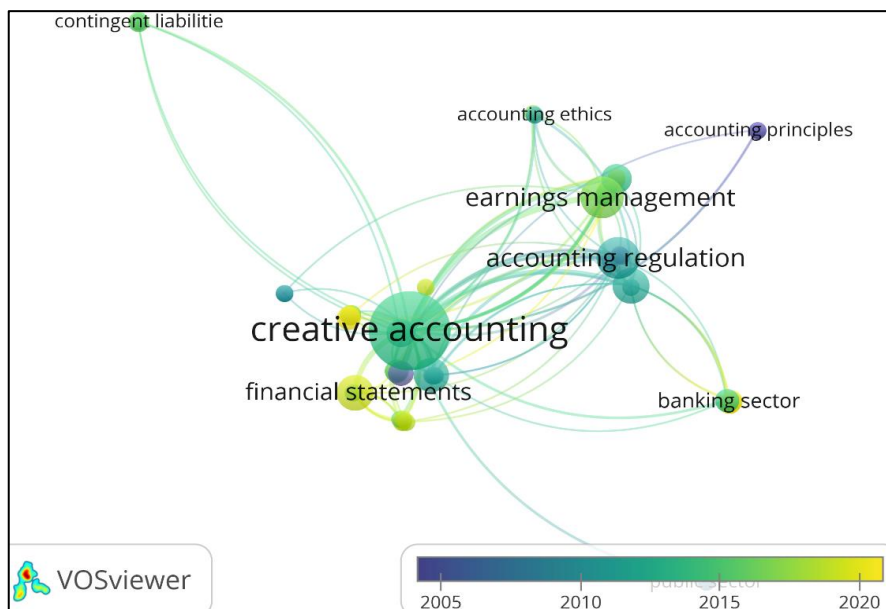


**Figure 9.** A screen capture of the bibliometric map that was made with the network visualisation mode and based on how often the same author keywords were used. It can be accessed through the following link <http://bit.ly/3tx4L8A>.



**Figure 10.** A screenshot of the bibliometric map created based on author keywords co-occurrence of total publication with network visualization mode VOS viewer: <http://bit.ly/3tx4L8A>.

Figure 11 illustrates the networks of author keywords for the years between 2005 to 2020. Three cooperation networks were found (purple, green, and yellow). This shows the issue of creative accounting has been explored intensively over the past two decades, which reveals the relevance of examining the characteristics of this subject and the authors' keywords.



**Figure 11.** A screenshot of the bibliometric map created based on author keywords co-occurrence per year publication with network visualization mode: <http://bit.ly/3tx4L8A>.

## 5. DISCUSSION

Using a bibliometric approach, this study examined the available literature on creative accounting, identifying research trends and outlining a research agenda for upcoming decades. With the use of a comprehensive quantitative research approach, it expands our knowledge and contributes to earlier literature in creative accounting. According to the findings, published field research on countermeasures to creative accounting began in the mid-1980s and continued until the mid-2020s. A steady growth in the number of publications has occurred over the past four years, although it cannot be claimed to be at its pinnacle. If there is no compromise on the financial sector, therefore, this lack of study relating to creative accounting may be due to the dominant perspective of businesses in accounting and business research that the goal of finance is to generate value (Ibrahim, Abdul Hussain and Abdullah, 2017).

Firms that actually admit creative accounting qualifications are perceived by the public as not engaging in competitive advantage, an allegation that is contradictory to what really occurs (De Jesus *et al.*, 2020). According to the Global Reporting Initiative (GRI), more organisations are disclosing information in order to gain credibility (Erkut, 2020). Research on creative accounting will continue to gain traction in the coming years as a result of this growth. Over 89% of these articles originate from developed countries, leaving developing countries, particularly those in Africa and elsewhere, under-researched. It is clear that the United States, the United Kingdom, Spain, and Italy are the most prominent countries in terms of publications based on national co-authorship findings. However, a reference (author) co-citation analysis shows that overseas cooperation with other rising nations is non-existent in the period studied.

Since creative accounting disclosures are increasing, these findings imply that the conversation around it has not spread beyond national borders and that it may be used to help develop solutions. In addition, this study looked at the link between leading creative accounting researchers and the nations that fund their work. Some, if not all, of the leading researcher avoiding creative accounting appear to operate in isolation, as evidenced by the small number of overall link strengths in the country and document co-citation analyses. Research partnerships are critical if the negative consequences of tax evasion are to be revealed. Increasing numbers of academics have demonstrated a connection between creative accounting and financial reporting quality (Al-Olimat, 2019).

Mixed journal co-citation clusters, on the other hand, show the underlying pluralistic research tendencies and multidisciplinary character of creative accounting research. Scholars in a wide range of fields, such as the social sciences, decision sciences and psychology, have documented the importance of

creative accounting in their work. Creative accounting research is not restricted to the “economic, legal, ethical, and discretionary” ambitions of society, as this evidence demonstrates (Kovalová and Frajtová Michalíková, 2020). Analyzing creative accounting may be useful in a variety of journals, each with its own style and audience. Even though there are just a few publications in this field, this research shows that creative accounting is becoming more prevalent with time. An investigation of authors’ co-authorship networks reveals that researchers at the centre of clusters play an important role in knowledge production by attempting to link business income taxes with creative accounting activities.

International collaborations are bolstered by well-known and well-respected researchers, as well (Eugene Burgos Mutuc et al., 2019). Some ideas have been used to explain creative accounting based on a keyword analysis of text data from subjects and abstracts. A few examples of these ideas are: organisational hypocrisy (also known as an “organisational façade”), the legitimacy of corporations, corporate culture and ethics, and strategic trade-offs, to name just a few. Researchers can use the results to expand their understanding of creative accounting by looking into areas like earning management and the influence of gender diversity on creative accounting. They can also look into other theories or perspectives not previously considered in creative accounting research.

There were several sub-topics revealed through the cluster analysis of the text data using VOSviewer: creative accounting, sustainability and manipulation, fraud and corporate governance. It is important to note that the corporate governance mechanism and control samples, such as creative accounting entities and non-creative accounting entities. Consequently, the discrepancies between creative accounting can be credited to the firm’s creative accounting strategic plan, and not to the firm’s attribute perspectives to integrated reporting with creative accounting, empirical assessment of early policy initiative and governance on creative accounting disclosure and organisations, ethics and society. Analysis of publication channels shows that creative accounting is seen as a problem of both long-term sustainability as well as ethics (Miran, Oudah and Abed, 2020).

## CONCLUSIONS AND TRENDS

The current paper provided a summary of the trend and development of creative accounting studies based on 161 articles under the Scopus database. The study presented an overview of the most productive countries/institutes with strong international collaboration (the United States and the United Kingdom) and the most active authors (Shah, Atul K and Drábková, Zita). The current paper also discussed several aspects, such as co-authorship, co-occurrence analysis, and author keywords. This study utilised bibliometric analysis to examine the scientific publications linked to creative accounting through time, utilising extensive analysis of data and visualisations. Since 2015, research on this topic has been increasing at a rapid rate, according to this report. The statistical findings of the datasets show that the United States, the United Kingdom, Spain, and many other nations have made major contributions to this study area. Creative accounting has been studied and has grown in many ways during the past 36 years, as evidenced by an examination of the keywords. Keyword study shows that creative accounting has not diminished over time. Published studies have a direct impact on creative accounting. As a result, it may be said that the more authors there are, the more publications there will be, and vice versa.

Using a bibliometric approach that relies on the Scopus database, this study contributes to existing literature by reviewing the history and evolution of creative accounting research. This could lead to the identification of the aspects of the core principle, models, and trends in creative accounting. Moreover, this study offers insight into the amount of progress the studies have undertaken chronologically, the congruence of keywords through clusters, significant journals, institutions, nations, and scientific partnerships in this field. In the same vein, from a practical outlook, this paper offers a guideline for companies in formulating and executing strategies in favor of creative accounting development. Knowledge about the trends and historical development of creative accounting research is instrumental for organisations, executives, and practitioners in identifying the areas they can rely on to achieve a competitive advantage, the bottom line for all managers. From a theoretical viewpoint, this paper has made a noticeable contribution to the field of creative accounting where a bibliometric analysis has been addressed to overcome the past studies’ gaps in the same area.

In this research, only Scopus was used as the major database. Scientific output, knowledge creation, and innovation can all be studied in relation to creative accounting in future studies. Most present studies only consider the four primary determinants of creative accounting: ethical issues, disclosure quality, ownership structure, and internal control. Moreover, the present study is limited to the “creative accounting” field within titles and abstracts. The results of this paper might not cover all creative accounting studies under the Scopus database since a few researchers did not mention, or refer to, the creative accounting term in their studies, using different words instead, such as intangible resources or assets. The present study suggests that future research consider other databases, such as WOS. Further, future studies could conduct a comparative study between two databases, like Scopus and WOS. Further recommendation for future research is to narrow down the scope of this study by focusing on the trend of creative accounting in the last two decades or analysing a particular journal, such as journal of development economics.

## AUTHOR CONTRIBUTIONS

Conceptualization, A.A. and M.A.A.; methodology, M.A.A. and H.H.; formal analysis H.H., A.A., N.M.R., T.H.-M. and M.A.A.; investigation, A.A., M.A.A. and H.H.; resources, A.A. and M.M.A.; writing—original draft preparation, M.A.A. and A.A.; writing—review and editing, A.A., M.A.A. and H.H. The final draft of the article has been reviewed and approved by all of the writers. All authors have read and agreed to the published version of the manuscript.

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## Appendix A

**Table A1.** The top 15 most productive journals on creative accounting research with their most cited article

Rank	Journal	CiteScore 2021	SJR	SNIP	Percentile	Quartile	Title of the Most Cited Article	Times Cited	FWCI	PlumX (Social Media)	Publisher
1	Journal of Development Economics	6.4	3.26	12.79	91th	Q1	Creative accounting or creative destruction? Firm- level productivity growth in Chinese manufacturing	774	17.57	483	Elsevier
2	Managerial Finance	2.0	0.31	6.72	55th	Q3	Earnings management: A perspective	148	3.43	584	Emerald
3	Journal of Public Economics	7.1	5.08	93.56	93th	Q1	Good, bad or ugly? On the effects of fiscal rules with creative accounting	141	4.56	137	Elsevier
4	Journal of Banking and Finance	5.2	1.46	62.21	87th	Q1	What do deficits tell us about debt? Empirical evidence on creative accounting with fiscal rules in the EU	105	1.91	102	Elsevier



Rank	Journal	CiteScore 2021	SJR	SNIP	Percentile	Quartile	Title of the Most Cited Article	Times Cited	FWCI	PlumX (Social Media)	Publisher
5	World Development	9.4	2.2973	0.031	98th	Q1	Citizens, Legislators, and Executive Disclosure: The Political Determinants of Fiscal Transparency	89	3.69	406	Elsevier
6	British Accounting Review	7.3	1.3162	0.525	96th	Q1	The value- relevance of UK dirty surplus accounting flows	87	1.99	62	Elsevier
7	British Accounting Review	7.3	1.3162	0.525	96th	Q1	The transition to IFRS and the value relevance of financial statements in Greece	69	2.55	166	Elsevier
8	Accounting, Organizations and Society	6.4	2.2042	0.505	96th	Q1	Creative compliance in financial reporting	67	3.65	89	Elsevier
9	British Journal of Political Science	7.6	2.9183	0.230	98th	Q1	It isn't just about Greece: Domestic politics, transparency and fiscal gimmickry in Europe	60	2.49	84	Cambridge University Press
10	Financial Accountability and Management	3.6	0.7301	0.559	87th	Q1	Creative Accrual Accounting in the Public Sector: 'Milking' Water Utilities to Balance Municipal Budgets and Accounts	56	4.04	127	Wiley- Blackwell
11	Scottish Journal of Political Economy	1.6	0.3180	0.620	63th	Q2	Fool the markets? creative accounting, fiscal transparency and sovereign risk premia	52	1.15	72	Wiley- Blackwell
12	Accounting and Business Research	4.4	0.8571	0.473	84th	Q1	Creative Accounting and Investment Analyst Response	50	-	56	Taylor & Francis
13	Accounting Horizons	3.4	1.4541	0.700	72th	Q2	Bridging the credibility of GAAP: Individual donors and the new accounting standards for nonprofit organizations	49	0.33	38	American Accounting Association
14	Managerial Auditing Journal	3.5	0.4491	0.052	86th	Q1	On economic reality, representational faithfulness and	48	1.78	30	Emerald

Rank	Journal	CiteScore 2021	SJR	SNIP	Percentile	Quartile	Title of the Most Cited Article	Times Cited	FWCI	PlumX (Social Media)	Publisher
15	Accounting and Business Research	4.4	0.857	1.473	84th	Q1	the 'true and fair override' Creative accounting in small advancing countries: The Greek case	44	0.5	108	Taylor & Francis

## Appendix B

**Table A2.** The top 8 CiteScore journals publishing creative accounting research with minimum 3 research articles

Rank	Journal	CiteScore 2021	Journal's Homepage	Publisher	No. of Publications
1	British Accounting Review	7.3	<a href="https://bafa.ac.uk/">https://bafa.ac.uk/</a>	Elsevier	3
2	Critical Perspectives on Accounting	6.5	<a href="https://journal/critical-perspectives-on-accounting">https://journal/critical-perspectives-on-accounting</a>	Elsevier	5
3	Sustainability	5.0	<a href="https://www.mdpi.com/journal/sustainability">https://www.mdpi.com/journal/sustainability</a>	Multidisciplinary Digital Publishing Institute (MDPI)	3
4	Accounting and Business Research	4.4	<a href="https://journals/rabr20">https://journals/rabr20</a>	Taylor & Francis	3
5	Risks	2.2	<a href="https://www.mdpi.com/journal/risks">https://www.mdpi.com/journal/risks</a>	Multidisciplinary Digital Publishing Institute (MDPI)	3
6	Problems and Perspectives in Management	2.2	<a href="https://www.businessperspectives.org/journals/problems-and-perspectives-in-management">https://www.businessperspectives.org/journals/problems-and-perspectives-in-management</a>	Business Perspectives	3
7	Managerial Finance	2.0	<a href="https://www.emeraldgroupublishing.com/journal/mf">https://www.emeraldgroupublishing.com/journal/mf</a>	Emerald	6
8	Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis	1.1	<a href="https://acta.mendelu.cz/">https://acta.mendelu.cz/</a>	Mendelova Zemedelska a Lesnicka Univerzita v Brne	5

## Appendix C

**Table A3.** The top 10 most prolific authors in the creative accounting research area

Rank	Author	Scopus Author ID	Year of 1st Publication	Total Publication	Document H-Index	Total Citation	Current Affiliation	Country
1	Shah, Atul K.	7403209301	1995	5	4	103	University of Suffolk, Ipswich, United Kingdom	United Kingdom
2	Drábková, Zita	56021981400	2015	5	1	12	Metropolitan University Prague,	Czech Republic

Rank	Author	Scopus Author ID	Year of 1st Publication	Total Publication	Document H-Index	Total Citation	Current Affiliation	Country
							Prague, Czech Republic	
3	Ali, Mostafa A.	57211253684	2022	3	2	8	Azman Hashim International Business School, Kuala Lumpur, Malaysia	Malaysia
4	Abed, Ibtihal A.	57211256672	2022	3	2	8	Azman Hashim International Business School, Kuala Lumpur, Malaysia	Malaysia
5	Hussin, Nazimah	55539341900	2022	3	2	8	Azman Hashim International Business School, Kuala Lumpur, Malaysia	Malaysia
6	Haddad, Hossam	57205222306	2022	3	2	8	Zarqa University, Zarqa, Jordan	Jordan
7	Carlin, Tyrone M.	6602565194	2010	3	3	85	The University of Sydney, Sydney, Australia	Australia
8	Al-Ramahi, Nidal Mahmoud	57035658100	2022	2	1	5	Zarqa University, Zarqa, Jordan	Jordan
9	Archer, Simon	33867465700	1996	2	2	55	Henley Business School, Reading, United Kingdom	United Kingdom
10	Alexander, David R.	56372753300	1997	2	1	48	University of Birmingham, Birmingham, United Kingdom	United Kingdom

## Appendix D

**Table A4.** The top 10 most productive institutions in creative accounting research

Rank	Institute	Country	No of Publication
1	Jihočeská Univerzita v Českých Budějovicích	Czech Republic	7
2	University of Essex	United Kingdom	3
3	Zarqa University	Jordan	3
4	Middle East University	Jordan	3
5	Azman Hashim International Business School	Malaysia	3
6	University of Sydney	Australia	3
7	Universität Erfurt	Germany	2
8	Universitatea Babeş-Bolyai	Romania	2
9	University of Benin	Nigeria	2
10	London School of Economics and Political Science	USA	2

## REFERENCES

- Abed, I.A. et al. (2022), "The Moderating Effects of Corporate Social Responsibility on the Relationship between Creative Accounting Determinants and Financial Reporting Quality", *Sustainability*, Vol. 14, No. 3, 1195, doi: 10.3390/su14031195.
- Al-Olimat, D.N.H. (2019), "The Impact of Cognitive Creativity in Accounting among Jordanian Internal Auditors on Detecting Creative Accounting Practices, A Field Study", *International Journal of Business and Social Science*, Vol. 10, No. 2, pp. 170–178. doi: 10.30845/ijbss.v10n2p19.
- Bean, A., Irvine, H. (2015), "Derivatives disclosure in corporate annual reports: Bank analysts' perceptions of usefulness", *Accounting and Business Research*, Vol. 45, No. 5, pp. 602–619. doi: 10.1080/00014788.2015.1059312.
- Bhasin, M.L. (2015), "Creative Accounting Practices in the Indian Corporate Sector: An Empirical Study", *International Journal of Management Sciences and Business Research ISSN*, Vol. 4, No. 10, pp. 35–52, <http://ssrn.com/abstract=2703643><http://www.ijmsbr.com><http://www.ijmsbr.com>.
- Charfeddine, L., Riahi, R., Omri, A. (2013), "The Determinants of Earnings Management in Developing Countries : A Study in the Tunisian Context", *Journal of Corporate Governance*, Vol. 7, No. 1, pp. 35–50.
- Diana, B., Beatrice, V.A. (2010), "Creative accounting–players and their gains and loses", *Annals of Faculty of Economics*, Vol. 1, No. 2, pp. 813–819.
- Erkut, B. (2020), "From digital government to digital governance: Are we there yet?", *Sustainability*, Vol. 12, No. 3, pp. 1–13, doi: 10.3390/su12030860.
- Fahimnia, B., Sarkis, J., Davarzani, H. (2015), "Green supply chain management: A review and bibliometric analysis", *International Journal of Production Economics*, Vol. 162, pp. 101–114.
- Fallon-Byrne, L., Harney, B. (2017), "Microfoundations of dynamic capabilities for innovation: a review and research agenda", *The Irish Journal of Management*, Vol. 36, No. 1, pp. 21–31. doi: 10.1515/ijm-2017-0004.
- García-Léon, R.A., Martínez-Trinidad, J., Campos-Silva, I. (2021), "Historical review on the bordering process using bibliometric analysis", *Transactions of the Indian Institute of Metals*, Vol. 74, No. 3, pp. 541–557.
- Gaur, A., Kumar, M. (2018), "A systematic approach to conducting review studies: An assessment of content analysis in 25 years of IB research", *Journal of World Business*, Vol. 53, No. 2, pp. 280–289.
- Goel, S. (2014), "The quality of reported numbers by the management: A case testing of earnings management of corporate India", *Journal of Financial Crime*, Vol. 21, No. 3, pp. 355–376. doi: 10.1108/JFC-02-2013-0011.
- Ibrahim, H.A.M., Abdul Hussain, M., Abdullah, Q.M. (2017), "The Impact of Creative Accounting Methods on the Quality of Accounting Information: A Field Study on the Financial Reports of Companies Listed in the Iraq Stock Exchange", *Journal of Management Sciences*, Vol. 10, 14.

- De Jesus, T.A. et al. (2020), "Creative Accounting or Fraud? Ethical Perceptions Among Accountants", *International Review of Management and Business Research*, Vol. 9, No. 1, pp. 58–78. doi: 10.30543/9-1(2020)-5.
- Kovalová, E., Frajtovej Michalíková, K. (2020), "The creative accounting in determining the bankruptcy of Business Corporation", *SHS Web of Conferences*, Vol. 74, 1017. doi: 10.1051/shsconf/20207401017.
- Matica, D.E. et al. (2014), "Colorful" Approach Regarding Creative Accounting. An Introspective Study Based On the Association Technique", *Journal of Accounting and Management Information Systems*, Vol. 13, No. 4, pp. 643–664.
- Miran, A., Oudah, H., Abed, R. (2020), "Factors Affecting Creative Accounting Practices and Means Used to Limit their Effect on the Credibility of Financial Statements", *International journal of innovation, creativity and change*, Vol. 13, No. 6, pp. 1082–1100.
- Mudel, S. (2015), "Creative Accounting and Corporate Governance: - A Literature Review", *SSRN Electronic Journal*. doi: 10.2139/ssrn.2708464.
- Mutuc, E.B et al. (2019), "Avoiding creative accounting: corporate governance and leadership skills", *SSRN Electronic Journal*, Vol. 10, No. 1, pp. 221–246. doi: 10.14419/ijaes.v3i1.4549.
- Mutuc, Eugene Burgos et al. (2019) 'Doing Good with Creative Accounting? Linking Corporate Social Responsibility to Earnings Management in Market Economy, Country and Business Sector Contexts', *Sustainability*, 11(1), p. 4568. doi: 10.15722/jds.17.6.201906.33.
- Osazevaru, H.O. (2012), "Creative accounting and firm's market value in Nigeria", *Kuwait Chapter of the Arabian Journal of Business and Management Review*, Vol. 2, No. 3, pp. 38-50.
- Page, M.J. et al. (2021), "The PRISMA 2020 statement: An updated guideline for reporting systematic reviews", *The BMJ*, 372, No. 1, doi: 10.1136/bmj.n71.
- Paolone, F., Magazzino, C. (2014), "Earnings manipulation among the main industrial sectors. evidence from Italy", *Evidence from Italy*, Vol. 5, No. 4, pp. 253–261.
- Quintero-Quintero, W., Blanco-Ariza, A.B., Garzón-Castrillón, M.A. (2021), "Intellectual Capital: A Review and Bibliometric Analysis", *Publications*, Vol. 9, No. 4, 46.
- Rackusin, B.A. (1976), *Record of Creative Work in the Field of Art: Luca Pacioli on Architecture: the Model and the Method*, University of California, Los Angeles–Art.
- Ratten, V. et al. (2020) 'The journal of family business management: a bibliometric analysis', *Journal of Family Business Management*, [https://www.researchgate.net/publication/340946541\\_...](https://www.researchgate.net/publication/340946541_...) DOI:10.1108/JFBM-02-2020-0013
- Safta, I.L., Sabău, A.I., Muntean, N. (2021), "Bibliometric analysis of the literature on measuring techniques for manipulating financial statements", *Risks*, Vol. 9, No. 7. 123, doi: 10.3390/risks9070123.
- Susmus, T., Demirhan, D. (2013), "Creative Accounting: A Brief History and Conceptual Framework", *Proceedings of 3rd Balkans and Middle East Countries Conference on Accounting and Accounting History*, June 19-22'.
- Voinea, M.-M., Dimitriu, O. (2014), "Manipulating User Behavior through Accounting Information", *Procedia Economics and Finance*, Vol. 15, No. 14, pp. 886–893. doi: 10.1016/S2212-5671(14)00552-8.
- Yaseen, A.T., Idam, A.K., Fashakh, M.J. (2019), "Creative Accounting Standards and its Techniques", *Opcción*, Vol. 34, No. 86, pp. 1611-1642.
- Zimmerman, J.L. (2015) "'The Role of Accounting in the 21', *Accounting and Business Research*, Vol. 45, No. 4, pp. 485–509. doi: 10.2139/ssrn.2544697.