

Fraudulent Financial Reporting: How far has it been Researched?

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This study aims to determine the development and trend map of fraudulent financial reporting research that is published by a reputable journal in the theme of economics and finance. The data analyzed were more than 91 publications of indexed research publications. The export data is then processed and analyzed using the R Biblioshiny application program to find out the bibliometric map of the development of the research in this topic. The results showed that the number of publications on the fraudulent financial reporting research experienced a significant increase. The results show that the most popular authors are Groove H and Carcello JV, and the most popular keyword topics are Financial, Reporting, and Fraudulent. Apart from that, there are several trend topics related to fraudulent financial reporting.

Keywords: Fraud, Financial reporting, Biblioshiny, R

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INTRODUCTION

At present the use of financial statements has an increasingly important role in the world economy, especially in Indonesia. The preparation of financial statements has used the same standards using IFRS. Financial reports are very important for every industry and company because financial reports are used as a benchmark for making economic decisions.

Fraud, especially on financial statements, occurs due to motivation and encouragement from various parties, both from within the company, and from outside the company. Encouragement and motivation so that the financial statements presented look good and attract the attention of investors or potential investors, so that managers will try to do various ways to present good financial reports. The fraud techniques that are carried out vary, ranging from circumventing generally accepted accounting principles (Financial Accounting Standards), carrying out aggressive earnings management to carrying out illegal actions which are then hidden, and lead to company bankruptcy. Not infrequently, cases of financial reporting fraud that occur also involve company auditors.

Companies that have good financial reports indicate that the company is in good condition. Of course, every company wants to always try to display the company's condition as well as possible to users of these financial statements amid the development of increasingly rapid business competition. This has led to the emergence of a form of fraud or fraud in the preparation of financial statements.

According to [Tuannakotta \(2007: 287\)](#), financial statement fraud is intentional or carelessness in doing something or not doing something that should be done, which causes financial statements to be materially misleading. According to [Priantara \(2013\)](#), financial reporting fraud is usually carried out due to pressure in the form of expectations of management performance. Therefore, fraud like this is called management fraud or fraud committed for the benefit of management. In addition, this phenomenon is reinforced by the results of research conducted by ACFE (Association of Certified Fraud Examiners) in [Nabila \(2013\)](#), showing that 58% of reported fraud cases were committed by employees at the managerial level, 36% were committed by managers without involving others, and 6% were committed by managers by colluding with employees.

Fraud cases that become a problem in the company are people who have power in the company. The Association of Certified Fraud Examiners shows that every year companies lose 5% of their revenue due to fraud. The potential global loss due to fraud is almost 3.7 trillion USD according to Gross World Product 2013. bibliometric.

According to the Association of Certified Fraud Examiners (ACFE), fraud is an act of fraud or error committed by a person or entity who knows that the error can result in several unfavorable benefits to individuals, entities, and other parties. The factor that distinguishes fraud and error is whether the underlying action, which results in a misstatement in the financial statements, is a deliberate or unintentional action ([IAI, 2001](#)).

The ACFE describes fraud in the form of a fraud tree. Fraud tree has three main branches, namely asset misappropriation, financial statements fraud, and corruption. In these three main branches, several actions can be classified, namely first, asset misappropriation in the form of cash fraud. Second, financial statement fraud which is categorized in the timing difference, namely recording the transaction time differently or earlier than the actual transaction time. Third, corruption, is the most difficult type of fraud to detect because it involves cooperation with other parties in enjoying benefits such as bribery and corruption. Corruption is divided into bribery with the aim of influencing decision makers in making business decisions, giving gifts after an agreement (illegal gratuity), and economic extortion. This paper will try to see the extent to which studies related to fraud in financial reporting have been conducted, with the approach of.

METHODOLOGY

Bibliometric mapping is a research topic in the field of bibliometrics ([Borner et al., 2003](#)). Two distinguishable bibliometric aspects are the construction of bibliometric maps and the graphical representation of these maps. In the bibliometric literature, the most attention has been paid to the construction of bibliometric maps. Research related to the effect of differences on similarity measures ([Ahlgren et al., 2003](#)), and they were tested with different mapping techniques ([Boyack et al., 2005](#)).

The graphical representation of bibliometrics has received less attention. Although there are some researchers seriously studying issues related to graphical representation ([Chen, 2003](#)). Most articles published in the bibliometric literature rely on simple graphical representations provided by computer programs. This study uses publication data in

the form of papers sourced from various scientific journals and other sources with research themes related to fraud. From the Scopus database search results, 91 published articles were obtained.

RESULT AND DISCUSSION

Three fields Plot

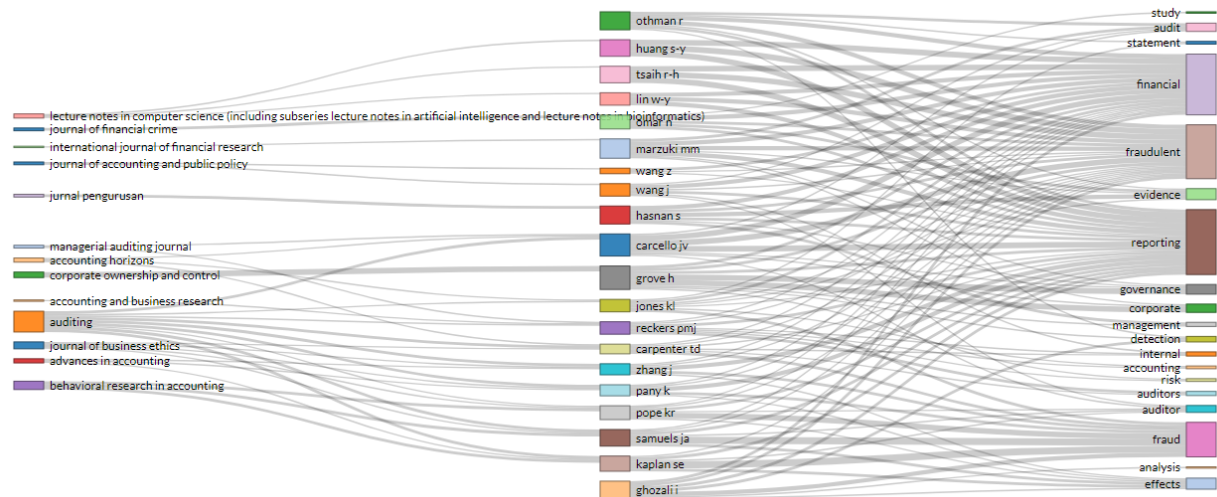


Figure 1. Three Fields-Plot

The *Three Fields Plot* above is a picture that consists of 3 elements in it, namely, the name of the publication journal, the list of author names, and the theme/topic used. The three elements are connected by a gray plot that has a relationship with one another. Starting from the name of the journal, then each journal shows the authors who often contribute to its publication, then each author shows the topics they often use for research conducted on the theme of *Fraud* in Islamic economics and finance research. The size of the rectangle illustrates the quantity of publications related to each of these elements.

From the figure above, it is known that in the first element, there are 8 journals indexed in the *Three Fields Plot* that publish *Fraud* theme papers. The top journal that publishes the highest number of papers with the theme of *Fraud* in Islamic economics and finance research is auditing which is depicted with an orange rectangle.

Furthermore, in the second element in the center of the image, which shows the author's name. Where there are several authors who are connected to previous journals such as Kaplan SE who is connected to *Behavioral Research in Accounting*. In addition, the authors will also be associated with keyword topics that are often used on the right side of the image. In this study, the top 20 researchers are listed in this plot. The size of the rectangle indicates the respective quantity of research publications of each author. As for this

study, the most published authors on the theme of *Fraud* in Islamic economics and finance research are Grove H and Carcello JV which are depicted by the gray and dark blue rectangles.

Finally, the third element depicts the research topics on the right side of the image. Each topic is connected with authors who write a lot on related topics. From the results of the image there are 20 keyword topics listed. Of all the topics that appear, the words *Reporting*, *Fraudulent*, and *Financial* are words that often appear marked with rectangles of dark brown, light brown, and light purple colors. This illustrates that the theme of *Fraud* is closely related to research on the theme of *Reporting*, *Fraudulent*, and *Financial* in economic and financial research.

SOURCES ANALYSIS

Furthermore, bibliometric results will be displayed based on sub-themes, namely sources, authors, density and centrality of topics, co-word analysis.

Most Relevant Sources

The figure below shows the number of research documents published by each journal based on their relevance to the theme of *Fraud* in economics and finance research. The data shows a list of the top journals that publish and the interval of the number of documents published with a blue bar chart. The darker the blue color

indicates the greater quantity and relevance to the research theme, the number of documents published by all journals ranges from 0 to more than 15 documents.

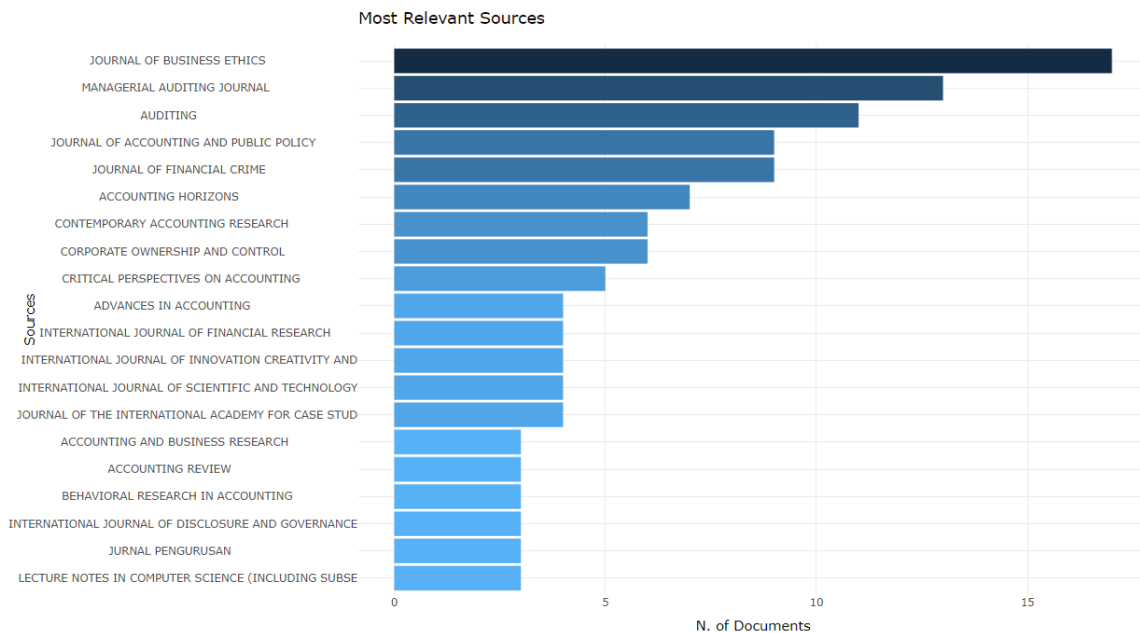


Figure 2. Most relevant sources

Journal of Business Ethics is a journal that is in the top position with more than 15 documents shown in the top bar chart in dark blue compared to other journal bars. This indicates that the journal is very relevant to the theme discussed. In the second position, there are *Managerial Auditing Journal* and *Auditing* in third place with the number

of document publications less than 15 documents. As for journals that are in the lowest position with the number of publications below 5, there are 6 journals marked in bright blue. This means that the quantity and relevance to the theme of *Fraud* is still less relevant. When viewed as a whole, there are 20 journals listed in the *most relevant sources* data.

Top-Authors' Production over the Time

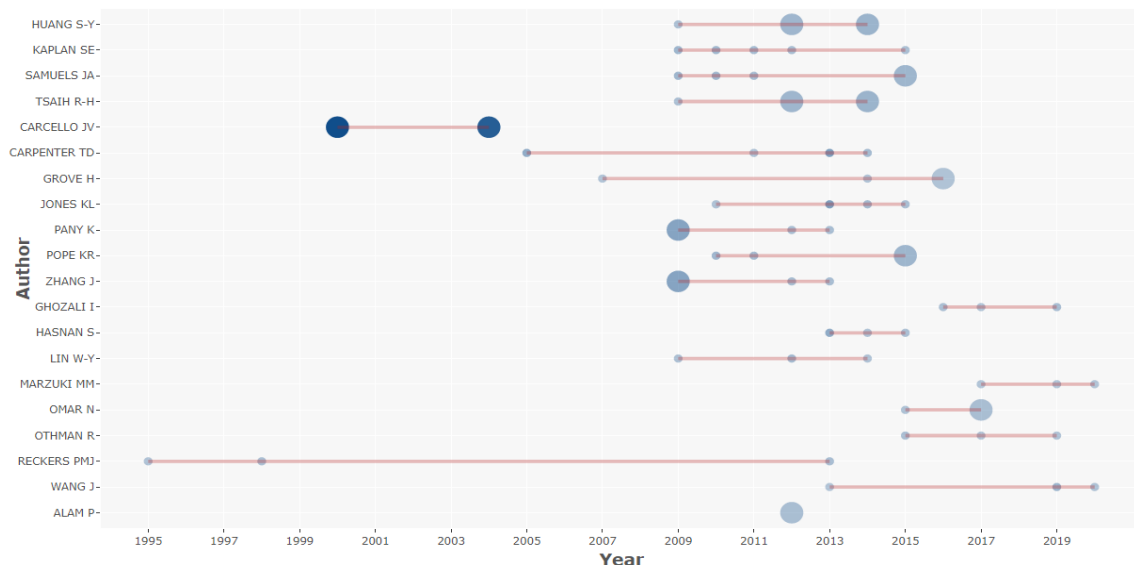


Figure 3. Author production over time

In addition, productivity can be measured not only on journals, but on authors in particular. The figure above shows the productivity of some of the top authors in the research period from 1995 to 2019. The productivity is shown by the red line from the beginning of the author publishing his research until the last year the author was recorded publishing his research. In addition, the blue circle in the red line shows the quantity of papers published according to the applicable year.

The figure above illustrates research related to *fraud* in economic and financial research for a long time or who have just written in recent years. Authors who have long published research related to *fraud* in economic and financial research are Reckers PMJ who has been writing since 1995 to 2003. In addition, the author who has long written on this theme is Carcello JV. Meanwhile, other authors on average only started writing in 2009.

Most Relevant Affiliations

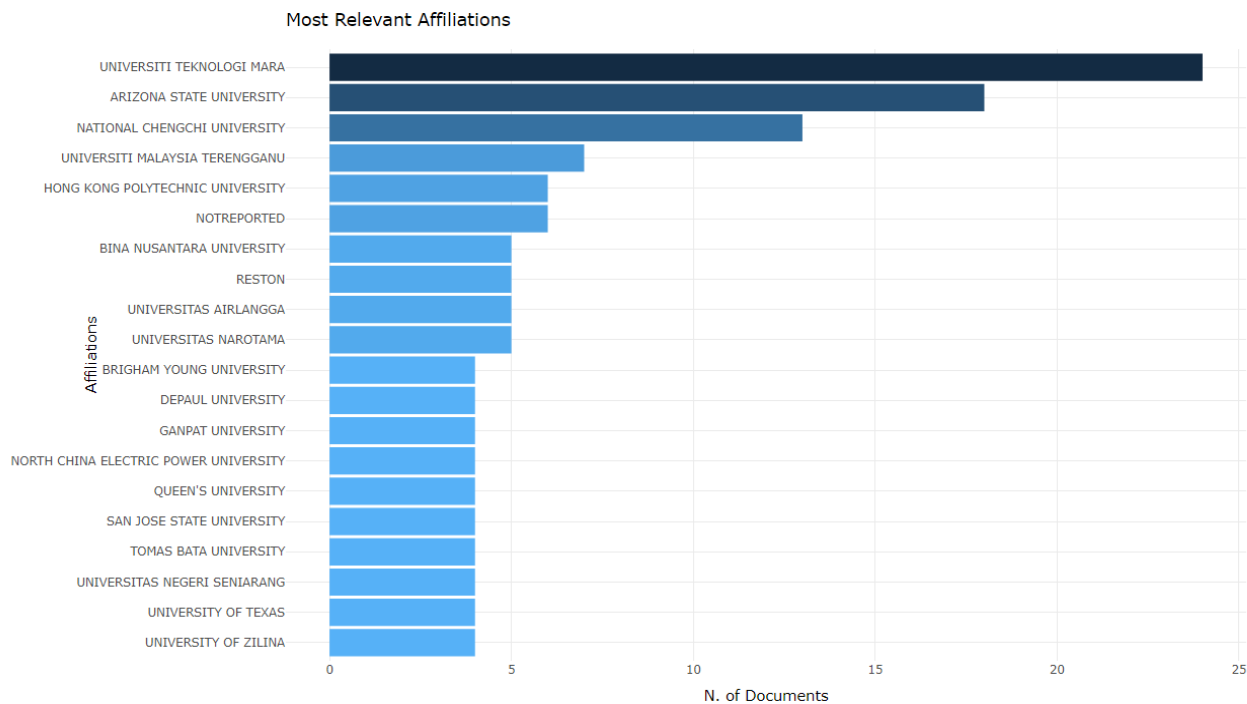


Figure 4. Most relevant affiliations

The figure above shows the number of research documents on the theme of *Fraud* in economic and financial research based on the author's affiliation. The figure displays the top 20 affiliations and the interval of the number of published documents with a blue bar chart with the number of published documents ranging from 0 to 25 documents. The darker the blue color on the chart indicates the greater number of documents authored.

Universiti Teknologi Mara is the highest affiliation with 24 publications. Next is Arizona State University with less than 20 documents and in third place is National Chengchi University with less than 15 documents. Meanwhile, 17 other affiliates have less than 10 publications where 10 affiliates are at the bottom with less than 5 documents.

Corresponding Author's Country

Furthermore, the figure below shows the countries of correspondence of the authors contained in each article with the calculation of the form of collaboration entirely SCP (single country collaboration) or collaboration of one country, not MCP (multiple country collaboration) or collaboration between several countries. Here are the top 20 countries included in this data and the document quantity interval between 0 to more than 60 published papers on the theme of Fraud.

Based on the results obtained, the United States of America (USA) ranks first as the country with the highest quantity of author correspondence with 60 published papers. Furthermore, the second rank is China with the number of published papers as many as 20 papers. The third and fourth

rank is obtained by Malaysia and Indonesia with the number of documents less than 20 papers.

This data shows that there is a need to increase the number of paper publications on the theme of Fraud in other

countries, especially Indonesia, in order to research and make innovations in overcoming Fraud that often occurs.

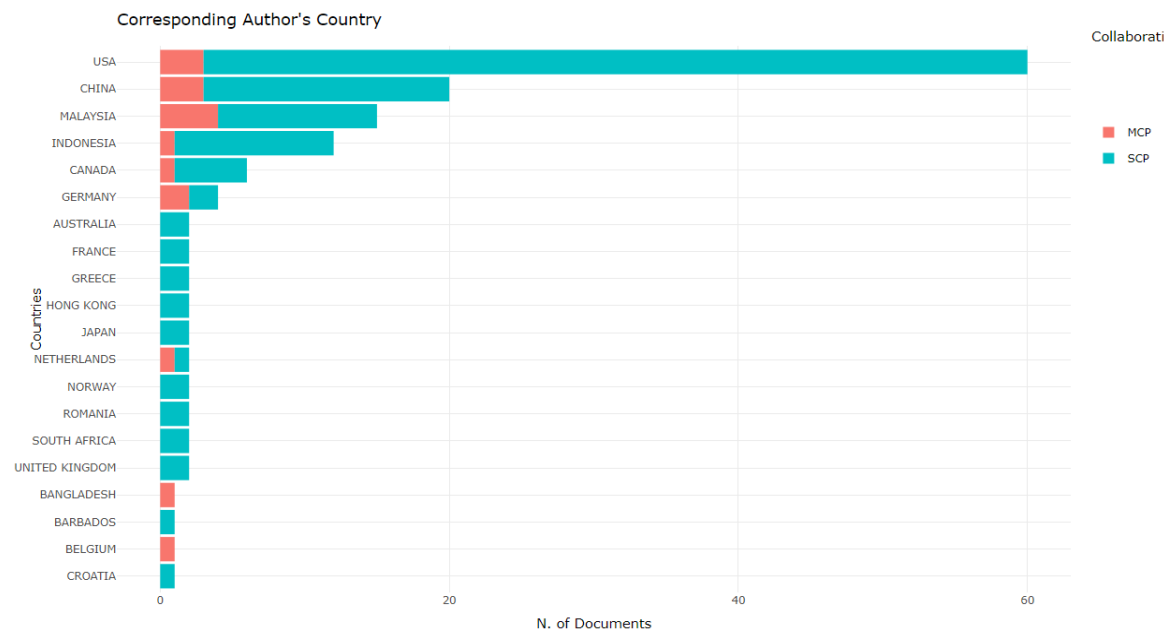


Figure 5. Corresponding authors

Furthermore, the words that frequently appear in the data collection of the papers studied in the theme of *Fraud* in economic and financial research will be displayed in the form of a *Bar graph Most Relevant word* and *Word Tree Map*.

Most Relevant Words

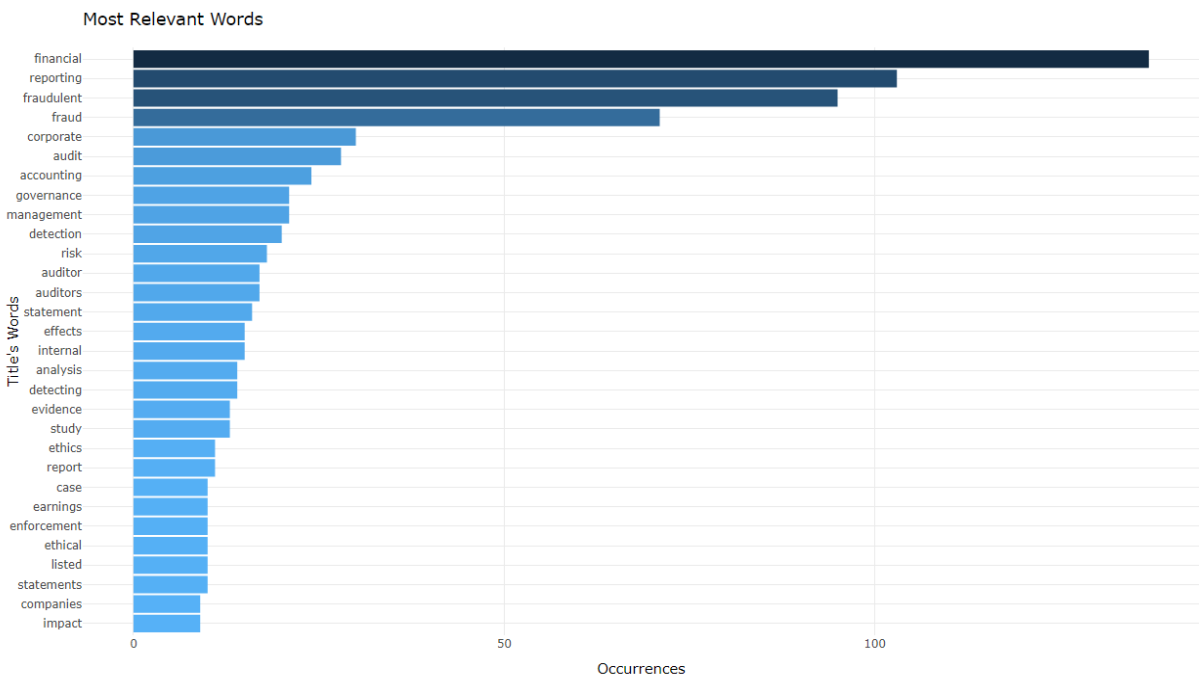


Figure 6. Most relevant words

Word Tree Map



Figure 7. Word tree map

The *bar graph Most Relevant word* and *Word Tree Map* above illustrate the words that frequently appear in the data collection of papers studied in the theme of *Fraud* in economics and finance research in different forms but similar results are obtained.

The *Most Relevant word bar graph* shows the most frequent words in *Fraud-themed* research. The darker the color of the bar indicates the more frequently the word is used. Based on the results obtained, the words *Financial*, *Reporting* and *Fraudulent* occupy the top three positions in *Fraud-themed* research.

Meanwhile, the Word Tree Map displays frequently occurring words in boxes similar to regions on a map, where the more the word appears, the larger the square region. Based on the figure above, the word *Fraudulent financial reporting* is the most used and followed by the word *Fraud*. Based on the three figures above, the words *Financial*, *Reporting*, and *Fraudulent* are the most frequently occurring

words in *Fraud-themed* research in economics and finance research.

Trend Topics

Topic trends are also part of this research, where the image displays an overview of the development of topics over time with a division per year. So that it is known which topics have been used for a long time and which topics have been used recently. The occurrence of the topic is also adjusted to the frequency of the quantity of the appearance of the topic in research on the theme of *Fraud* in economic and financial research. The higher the position of the topic indicates the more the word is used and the more towards the right indicates the more recent the word is used. Based on the results, the development of topics began to experience a significant increase since 2009. Analysis of trend topics is one of the important things in bibliometrics (Antonio, 2023; Puspita, 2022; Antonio et al., 2020; Maulida & Rusydiana, 2022).

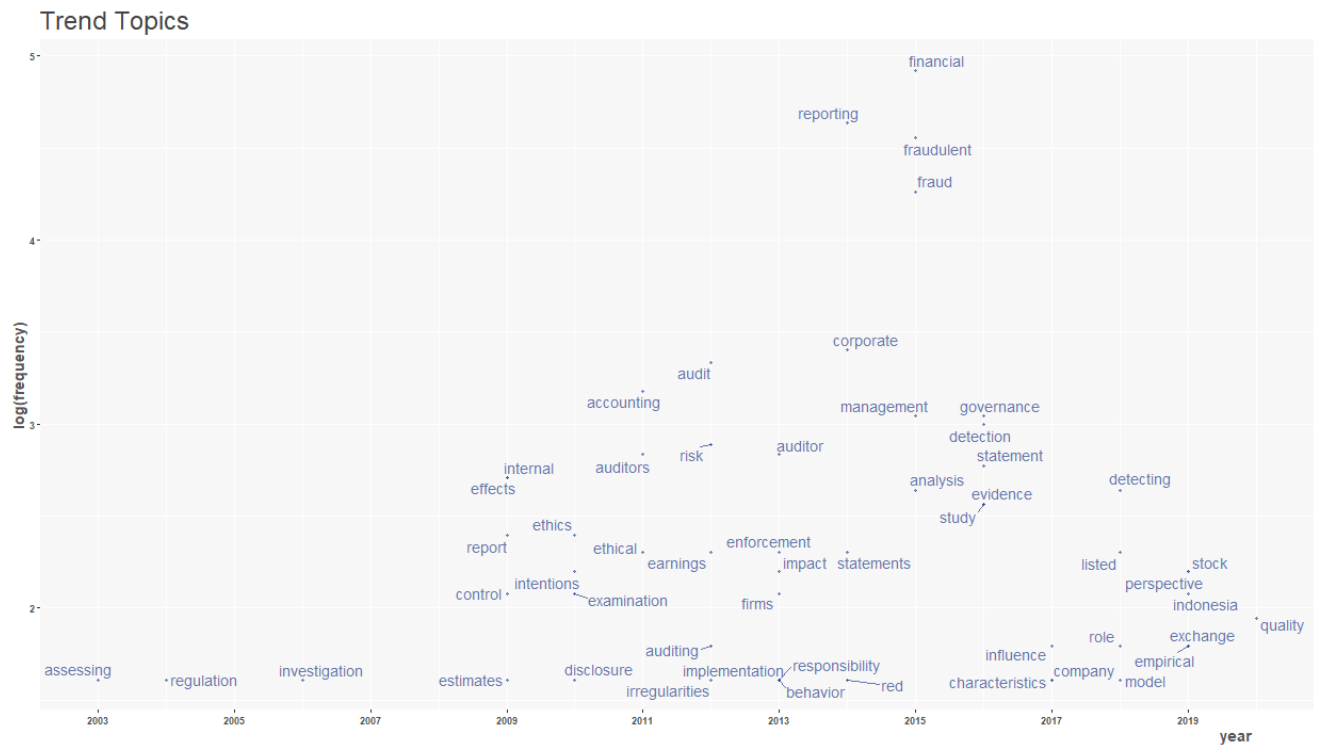


Figure 8. Trend topics

Based on the data above, topics that have been used since 2009 are *internal*, *effects*, *reports*, *controls*, and *estimates*, especially those related to the theme of *Fraud* in economic and financial research. Furthermore, in 2016 the topics *Financial*, *fraudulent* and *fraud* began to appear with a higher frequency than other topics. While in 2019 there are only a

few topics used with a low number of frequencies, namely, *stock*, *perspective*, *Indonesia*, *exchange*, and *empirical* which indicates that there is a lack of connection with the theme of *Fraud* in economic and financial research.

Thematic map

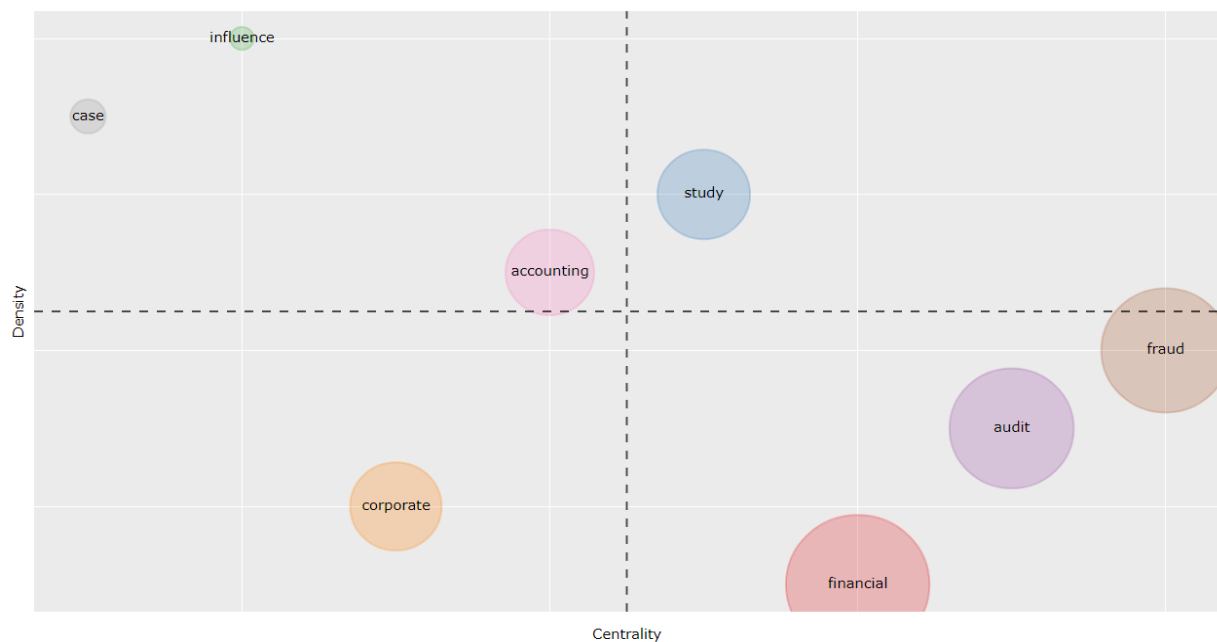


Figure 9. Thematic map

This research also analyzes *thematic maps* that appear based on *density* and *centrality* which are divided into 4 theme quadrants as in the figure above. These results are obtained from a *semi-automatic algorithm* by reviewing the titles of all references to the object of research with additional relevant *keywords* in addition to the author's *keywords* so that the results are able to capture deeper variations.

The upper right quadrant is a driving theme characterized by high *density* and *centrality*, so it needs to be developed and is important to be studied in further research. In this quadrant there is the word *study*. Furthermore, the upper left quadrant shows themes that are specific and rare but experiencing high development, indicated by high

density but low centrality. The themes in this quadrant are *accounting*, *case*, and *influence*.

Furthermore, the lower left quadrant is themes that have been used for a long time but have experienced a downward trend characterized by low *centrality*. In this quadrant, it is detected that the word *corporate* is experiencing a downward trend. While the lower right quadrant is a basic theme characterized by high centrality but low *density*. These themes are important to be included in the research because they are common topics that are commonly used, including *financial*, *audit* and *fraud* themes.

Thematic evolution

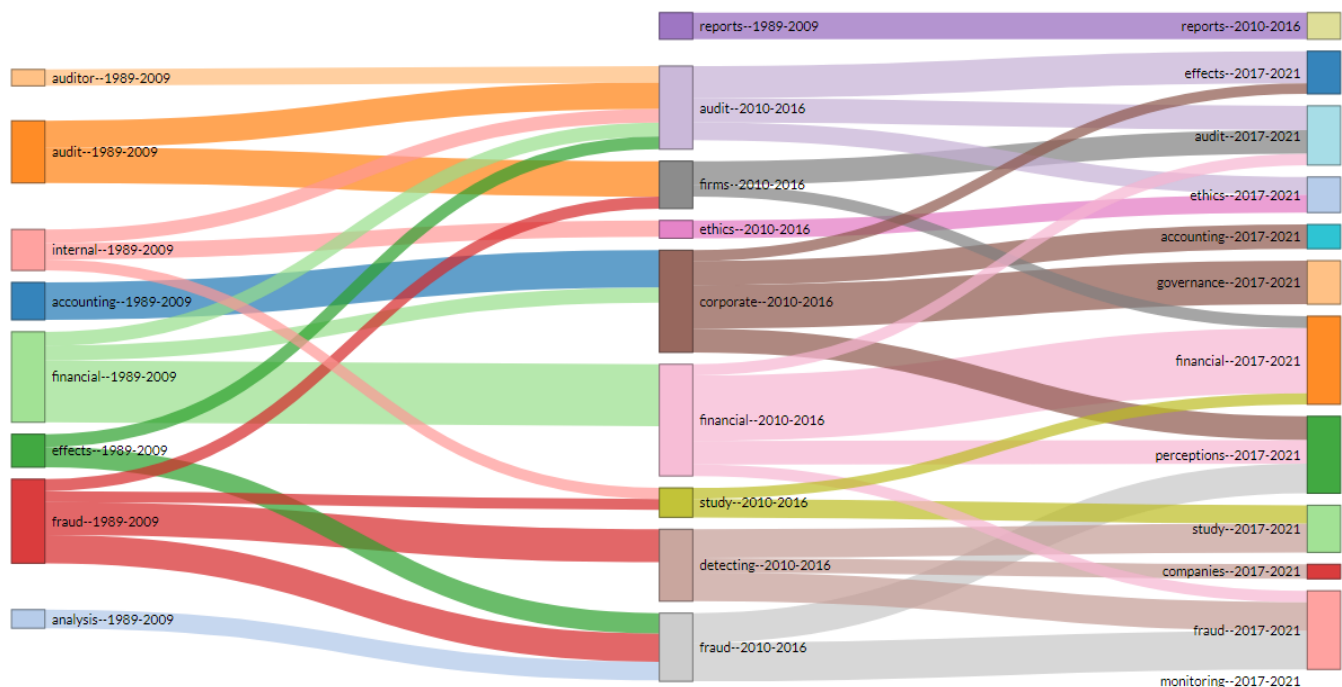


Figure 10. Thematic evolution

The themes used in *fraud-themed* papers continue to change in the object of research, especially recently published papers when compared to papers that have been published for a long time. The evolution of the theme is shown in the figure above. Although the theme of this research is *fraud*, the figure shows several sub-themes that are widely used. The left part shows some of the most widely used themes from 1989 to 2009, there are 8 themes listed with different sizes depending on the quantity of use of the theme. The size of the square indicates the quantity of theme usage in the study. *Financial* theme is the theme with the highest quantity and followed by *Fraud* and *audit* theme which is the most used theme in 1989-2009.

The second or middle section shows some of the themes that were widely used from 2010 to 2016. Some of the themes that emerged in this timeframe are evolutions of previously used themes and are related in content, for example, the *detecting* theme emerged as a revolutionary form of the *fraud* theme. This shows that research using the *detecting* theme is an extension of *fraud* theme research in previous studies. In this period, the *development* theme was most widely used. In the range 2010-2016, *corporate* and *financial* themes are the most widely used themes. Where the *corporate* theme is an extension of *accounting* and *finance*.

The third or right section shows the newly used themes in the period between 2017 and 2021. There are 11

Rachmawati and Marsono (2014) in their research concluded that what affects fraudulent financial reporting is the multiple positions of the board of directors and auditor changes. Other variables, namely foreign ownership, the company's ability to fulfill its obligations, financial targets, supervisory effectiveness, and special party transactions, have no effect on fraudulent financial reporting. Some other relatively recent studies related to fraudulent financial reporting can be seen in Maulidi et al. (2023), Kang et al. (2023), Naldo & Widuri (2023), Li (2023), and also Achmad et al. (2023).

CONCLUSION

Fraud and negligence are two different things and this has been clarified in existing audit standards. For the detection of fraud (Fraud) in financial statements, there have been many studies with non-uniform results, where there are studies that support previous research, and there are also studies that do not support previous research. Financial Statement Fraud Detection is influenced by the characteristics of fraud, auditing standards regarding fraud detection, and the audit work environment that reduces audit quality, namely, competitive pressure on fees, time pressure, and reliance on the auditor-auditee relationship.

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