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Confirmation Bias in Investment Decisions: A Bibliometric Analysis

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Abstract

This study aims to analyze the extent of development regarding research on the relationship between confirmation bias and investment decisions based on google scholar data base using bibliometric analysis, so as to see further research opportunities. The method used in this research is descriptive bibliometric analysis. There are 500 articles from the search results through Publish or Perish indexed by Google Scholar in 2000-2020 which are then stored in RIS format and processed through VOSviewer. The results of the co-authorship analysis show that Mikalef, P., Barber, B.M., and Grili, L. have the highest publication rate on this topic, both producing 5 documents. In addition, this analysis also shows a relationship that is divided into 3 clusters. While the results of co-occurrence analysis show that there are 8 clusters based on terms that become keywords in the article. Based on the results of bibliometric analysis, the topic of investment and confirmation bias has the brightest color than other keywords. This indicates that the topic has been widely used. Then based on overlay visualization on co-occurrence, the topic of investment and confirmation bias has a blue color. This indicates that research on these topics was widely conducted from 2000 to 2010. The keywords investment and confirmation bias have the brightest color than other keywords. This shows that many of the 500 articles analyzed through VosViewer have used these keywords.

Keywords: Behavioral Finance; Bibliometric; Confirmation Bias; Investment Decision; VOSviewer

INTRODUCTION

Investment decisions are a representation of a series of processes where investors, companies or individuals make and make decisions based on capital or resources and information obtained. One of the goals of investors in making investments is to increase returns and asset value in the future (Addinpujoartanto & Darmawan, 2020). Investment decisions according to (Purnama, 2018) delay the use of funds for the future in the hope of getting benefits in the future. Investment decision is a form of a person's behavior in choosing an investment based on certain considerations and carried out with the aim of

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obtaining certain benefits. Considerations in choosing an investment can come from inside and outside the individual concerned (Sriatun & Indarto, 2017). According to Tandelilin, (2010) in research Ady, (2017) there are several reasons someone invests including: 1) To improve a decent life in the future, 2) Reduce inflationary pressure, and 3) There is an urge to make tax savings.

One of the factors that can influence investors in decision-making is confirmation bias. According to research conducted by Nurvitasari et al., (2021), confirmation bias affects financial and investment decisions related to various asset classes, including stocks, mutual funds, bonds, gold, real estate, deposits, and foreign exchange. This bias can lead investors to favor information that supports their pre-existing beliefs while disregarding any evidence that contradicts them, ultimately impacting their financial choices and risk assessments. Confirmation bias is a cognitive tendency where individuals seek, interpret, and recall information in a way that reinforces their existing viewpoints. Cheng, (2018) defines confirmation bias as the unwillingness of individuals to change their initial beliefs once they have been established. This psychological inclination can prevent investors from making objective decisions, as they may selectively absorb data that aligns with their expectations while neglecting critical insights that could challenge or refine their strategies. Sulphey, (2014) explains that confirmation bias manifests when investors perceive information that aligns with their understanding as supportive of their beliefs, while simultaneously dismissing opposing viewpoints. This bias can be particularly detrimental in financial markets, where adapting to new information is crucial for success. For instance, an investor who strongly believes in the long-term growth of a particular stock may ignore warning signs of financial instability or declining market conditions, thereby increasing the risk of making suboptimal investment choices.

In an era of financial information that is available in large quantities and spread quickly on various platforms, investors are often faced with challenges in receiving and processing the information obtained for objective decision-making. The rapid development of technology and the increasing accessibility of financial news, market analysis, and expert opinions through digital media have significantly influenced investor behavior. The vast availability of information can be beneficial, but it also presents risks, particularly when investors fail to filter or objectively analyze the data they receive. Investment decision-making can be influenced by individual and psychological factors that cause biased behavior in investors, and this behavior ultimately impacts the investment decisions they take (Mufidah et al., 2023). According to Siratan & Setiawan, (2021), investment decision-making is a crucial element in determining an investor's success. Therefore, it is necessary to identify the various factors that can influence investment decisions so that investors can optimize their financial strategies and maximize returns. One of the psychological factors that significantly affects investment decisions is confirmation bias. Confirmation bias occurs when an individual selectively seeks, interprets, and recalls information in a way that reinforces their pre-existing beliefs while disregarding contradictory evidence. This cognitive bias can lead to irrational decision-making, as investors may become overly confident in their chosen investment strategies without considering alternative perspectives or potential risks. Before making investment decisions, investors must formulate a model that aligns with their investment

goals and risk tolerance, allowing them to make informed choices that enhance their financial outcomes (Rose & Armansyah, 2022). Investors who are affected by confirmation bias tend to make suboptimal investment decisions, which may result in financial losses or missed opportunities. They may hold onto losing investments longer than necessary or disregard valuable insights that could improve portfolio performance. Thus, research related to the influence of confirmation bias in investment decision-making is essential to study in order to provide deeper insight into the factors that shape investor behavior. Understanding how confirmation bias operates and its implications on financial decision-making can help investors, financial advisors, and policymakers develop strategies to mitigate its negative effects. Additionally, a more comprehensive understanding of cognitive biases can contribute positively to investment management practices, enhancing investor success and promoting more rational financial decision-making processes. In the long run, addressing behavioral biases can lead to a more stable and efficient financial market, benefiting both individual investors and the broader economy.

Investment itself is an activity of investing capital in the form of assets, money, or other forms in the hope that it will benefit in the future. There are several reasons behind the investment. Rose & Armansyah, (2022) reveal that investment is carried out as a financial planning activity and a form of social security in the future, reducing inflationary pressures, and a form of tax savings. Reporting on CNBC Indonesia (2024), investment interest and the number of domestic investors experienced a 5-fold growth compared to December 2018. This is supported by the following data from KSEI.

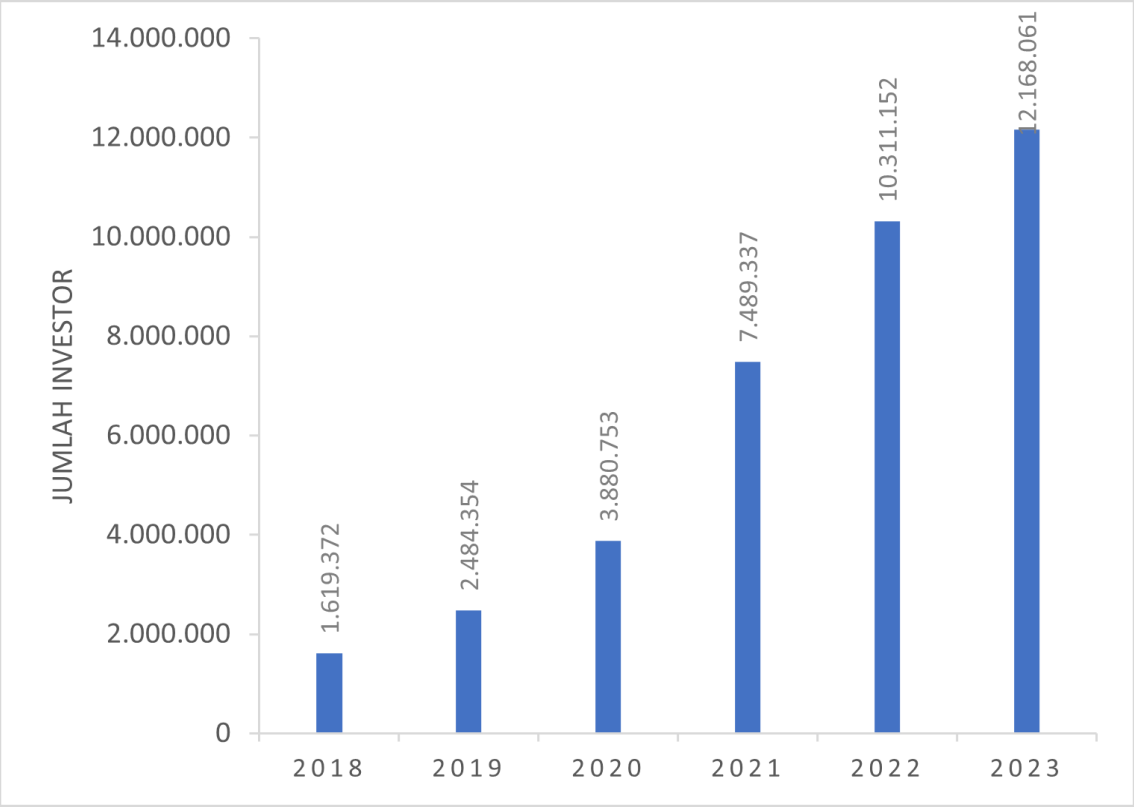

Figure 1. Increase in the number of investors
Source: KSEI data (2024)

The figure shows that there is a significant increase from year to year until December 2023. KSEI data shows that the number of investors increased from 1,619,372 in 2018 to 12,632,117 at the end of 2023 or an increase of 86.69%. However, this increase was not supported by an increase in the financial literacy of the Indonesian people. This was revealed on CNBC Indonesia (2023) where the level of capital market literacy fell from 4.92% to 4.11%. This indicates that the increase in the number of investors has not been followed by a good understanding of the capital market. Lack of literacy in making investment decisions, sometimes makes an investor easily consumed by information circulating. If unable to filter information appropriately, an investor may experience biased behavior. Biased behavior that can occur to investors who lack capital market literacy is confirmation bias. Where an investor is only armed with beliefs and information which can then form initial beliefs. This initial belief will have an impact on the selection of investment models in accordance with initial beliefs and in line with the direction of investor goals.

Several studies on bibliometric mapping have been conducted in various fields of study. Research using bibliometric analysis is used to assist researchers in developing new theoretical frameworks on behavioral bias. According to Rahmah & Siregar, (2022), the topic of research on behavioral biases has become an interesting topic and is widely carried out by researchers in developed countries, but still little done in developing countries. One of the behavioral biases that has undergone development over time is confirmation bias. Costa et al., (2017) conducted a bibliometric analysis to determine research trends regarding financial decision making influenced by behavioral biases, one of which is confirmation bias. This study uses the Web of Sciense database as reference management software and CiteSpace as bibliometric analysis software. By analyzing 889 articles published between 1990 and 2016, this study found that research on behavioral biases towards financial decisions has grown over time, especially starting from 2008. Other results show that research on confirmation bias presents the smallest number of publications and little connection to the field, opening up a promising area of research.

Based on the phenomena and problems supported by previous research, the purpose of this study is to analyze the extent of development regarding research on the relationship between confirmation bias and investment decisions. Based on the google scholar data base, researchers try to map previous studies, visualize the direction of development, and the level of research collaboration networks in scientific publications so that they can see opportunities for future research.

LITERATURE REVIEW

Behavioral Finance Theory

According to Sabilla & Pertiwi, (2021) one of the branches of economics that explains investor behavior in financial markets due to the influence of psychological factors is behavioral finance or behavioral finance. In addition, this theory explores the impact of psychological factors on investors' sell and buy decisions. The theory argues that in

investing not all investors are driven by risk and return considerations. Psychological factors also play an important role in decision-making, and this may hinder investors from achieving expected returns. This behavioral finance theory challenges traditional finance theory. Kumar & Sujit, (2024) argue that in traditional finance theory, an investor is driven by assumptions of rationality and market efficiency without considering psychological factors. So in short, this behavioral finance theory incorporates psychological theories, especially behavioral psychology into the study of finance. By analyzing the psychology and behavior of individual investors during investment, it can be seen how the irrational behavior of investors in making investment decisions (Ma, 2023).

According to Rahmah & Siregar, (2022), behavioral finance is an approach that explains how an individual in making financial decisions is influenced by psychological factors so that financial decision making is prone to bias. Behavioral bias is the tendency of individuals to make mistakes in making financial decisions. There are various kinds of behavioral biases such as overconfidence bias, confirmation bias, anchoring bias, cognitive dissonance, regret aversion, disposition effect, availability bias, and herding bias (Samal et al., 2021). So that an investor can avoid behavioral bias as much as possible because it will have an impact on investment valuation.

Prospect Theory

Prospect theory is a theory proposed in 1979 by Kahneman and Tversky, is one of the important theories in behavioral finance. This theory challenges the traditional view of rational decision-making and explains that people tend to fear losses more than gains, and become less sensitive to changes in value as the amount of gain or loss increases. According to Khan et al., (2023), this theory combines the perspectives of economists and psychologists to explain how investors feel when they make decisions. Unlike behavioral finance theory, which discusses the influence of various biases on decisions, prospect theory is more about an individual's decision-making under uncertain circumstances. Prospect theory explains how individuals evaluate the potential gains and losses that investors may experience, and can examine investment bias behavior, such as loss aversion (Khan et al., 2023). According to Costa et al., (2017), an investor will be more sensitive to losses. They will be risk-averse in profit situations and subject to risk in loss situations.

Molz & Giessen, (1997), conducted confirmation bias research in relation to prospect theory, where information that is considered useful will be rated more negatively than information that confirms one's own assumptions. As a result, individuals will undervalue relevant information over information that is irrelevant but in line with their own prejudices. Psychologically, confirmation bias can affect investors' investment decisions. Investors who exhibit confirmation bias will make investment decisions in accordance with their initial beliefs. This happens because people who experience confirmation bias have strong beliefs and will selectively obtain information that allows them to strengthen these beliefs (Cheng, 2018). The application of Prospect Theory in stock investment decision making can help investors understand and manage behavioral biases that often influence their decisions. By recognizing the natural tendency to avoid

losses and understanding how the information received can shape perceptions of an investment, investors can make more rational and profitable decisions. Various studies have shown that understanding Prospect Theory can improve investors' ability to deal with market uncertainty and minimize the risk of regret due to suboptimal investment decisions. In this context, Prospect Theory plays a very important role in improving the quality of decision making in the midst of dynamic market conditions, so that it can help investors develop more effective strategies and reduce the emotional impact on the investment process (Pratama et al., 2024).

Confirmation Bias

Confirmation bias refers to a person's tendency to overconfidence in information that supports their beliefs and ignore information that contradicts them. According to Cheng, (2018), confirmation bias is a term where a person is reluctant to change their initial beliefs. They will tend to filter new information that is acceptable and in line with their thinking. This phenomenon is described as the capacity that individuals want to have in believing about everything, they want to achieve (Costa et al., 2017). Hence, they will emphasize their beliefs and underestimate information that contradicts their position and will ultimately interfere with decision making. Confirmation bias can also be detrimental to investors when they believe in false information. The more information that is in line with one's views, the stronger one's belief in their opinions (Kurniawan, 2017).

Confirmation bias is a psychological factor that can influence an investor's investment decision. Confirmation bias behavior can make investors take information related to stock products that are in accordance with their beliefs. According to Rose & Armansyah, (2022), the greater the confirmation bias behavior of an investor will make investment decisions easier to form. This happens because the investor's beliefs are strong so that it will be easy to make investment decisions that are in accordance with his beliefs.

Investment Decision

Investment is the activity of investing in the form of assets, money, or other objects with the aim of obtaining future profits. Success in investing is determined by the right investment decision. Investors are individuals or entities who invest capital in the hope of obtaining profits in the future. Although each investor has varying investment goals, in general, their main goal is to maximize profits in accordance with predetermined expectations and strategies. However, the world of investment does not always run smoothly, because there are various factors that cause disruption, such as market decline, economic conditions, government policies, and other external factors. Therefore, to achieve optimal investment results, investors need to carry out careful analysis and make the right decisions (Fitra, 2023).

According to Rose & Armansyah, (2022), Investment decisions are individual actions in placing a certain amount of funds in a certain type of investment. This decision can be measured through the percentage of funds allocated by individuals in the capital market and money market. According to Nurvitasari et al., (2021), an investment decision is a decision to invest assets or funds over a long period of time. Meanwhile, according

to Rose & Armansyah, (2022), investment decision is an investor's decision to place his funds in an alternative investment place that is considered to be profitable.

According to Tandelilin, (2010), an investment decision is a commitment to a number of funds or other resources made with the aim of obtaining a number of benefits in the future. In making investment choices, several basic investment decisions are needed. According to Tandelilin, (2010), there are 3 things that must be considered, including: a) Return or the level of profit obtained by investors when investing; b) Risk or the possibility that the return that occurs is different from the expected return; c) The relationship between the level of return and the expected risk is a unidirectional relationship, if the higher the level of return, the higher the level of risk that occurs, and vice versa. In making investment decisions, an investor will be faced with uncertain situations and is required to be able to think rationally or irrationally (Kurniawan, 2017).

In reality, not all investors are fully rational and able to consider all relevant information related to investment. This is due to psychological factors that can influence an investor's investment decisions. Investor psychological factors refer to the inability to understand and rationally process information in the market, making it difficult to make the right investment decisions and increase profits (Ma, 2023). This is supported by Cheng, (2018) statement which reveals that market information is very valuable to investors because it can lead to better decisions, prevent mistakes, and increase benefits. However, sometimes the deviant behavior of investors who already have strong initial beliefs, will tend to sort out information that supports their beliefs and avoid information that contradicts their beliefs. This deviant behavior of investors is known as confirmation bias behavior which can affect investment decisions.

METHODOLOGY

Population and Sample

This study uses a population of scientific journals on confirmation bias indexed in Google Scholar. The sampling process was carried out purposively with a focus on articles that discuss the relationship between confirmation bias and investment decisions. Article searches were conducted using Publish or Perish software, which allows systematic data retrieval from the Google Scholar database. The selected articles were then stored in RIS (Research Information Systems) format to facilitate data processing.

Furthermore, bibliometric data was processed using VOSviewer software to analyze research patterns and trends, including co-citation analysis, bibliographic coupling, and research network visualization. This method allows for the identification of intellectual structures and research developments in the field of confirmation bias and investment decisions comprehensively. The selection of this sample is based on several logical justifications as shown below.

(1) The use of Publish or Perish in sampling offers a comprehensive approach to identifying relevant articles. This tool allows a systematic search of the Google Scholar database with adjustable time parameters, thus covering the entire

development of research in the field of confirmation bias and investment decisions. This method also ensures that no important articles are missed within the specified time frame, providing an accurate representation of the field of study under study.

(2) The comprehensive approach in sampling results in a larger sample size, which statistically provides a higher level of confidence in the bibliometric analysis. This large sample allows for more accurate identification of patterns and trends, and provides a more representative picture of the development of research in this field. This increases the validity of the results of the analysis and strengthens the conclusions that can be drawn from the study.

Bibliometric Analysis

Bibliometric analysis is a statistical method used to analyze bibliographic data on articles/journals. According to Akhira et al., (2023) bibliometric analysis is a research method that analyzes scientific works, measures the impact of these publications, and analyzes the relationship between authors and institutions in certain scientific publications. Another advantage of this analysis method is that it provides an overview of research which is then used to identify trends over time and the most influential previous research (Lubis et al., 2023). Research methods are commonly used in the fields of sociology, communication, marketing, and other social groups.

This study aims to analyze the impact of confirmation bias behavior on investment decisions through a bibliometric approach. The phenomenon of increasing investment interest in Indonesia that is not balanced with increasing capital market literacy raises concerns about the quality of investment decision making by investors. Confirmation bias, as the tendency of investors to seek information that supports their beliefs while ignoring conflicting information, is an important factor that needs to be studied in this context. Bibliometric analysis was chosen as a research methodology because of its ability to systematically map the development of scientific literature, identify emerging research trends, and find unexplored research gaps. Through bibliometric analysis, this study can reveal publication patterns, research collaborations, and conceptual evolution in studies on the relationship between confirmation bias and investment decisions. The results of this mapping are expected to provide a foundation for the development of future research and a deeper understanding of the role of confirmation bias in investment decision making.

This research uses descriptive bibliometric analysis method by using Publish or Perish to collect data and VOSViewer to analyze the data. The VOSViewer analysis consists of two types of analysis, namely co-authorship and co-occurrence. Co-authorship is the result of analysis of network mapping based on authors, while co-occurrence is based on keywords. The advantage of using VOSViewer compared to other analysis tools is that the visualization offers interactive options and functions that are easy to access and explore the bibliometric data network (Effendy et al., 2021).

Research Flow

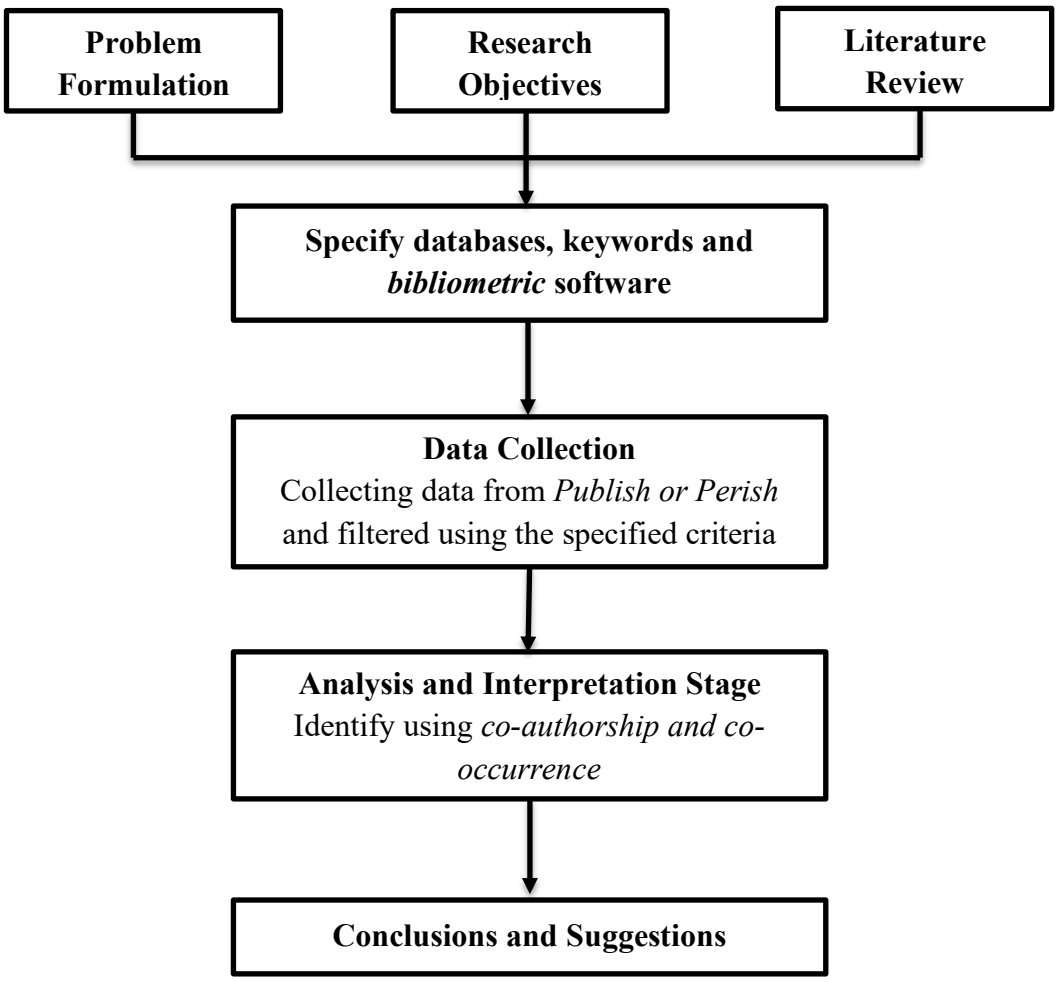

Figure 2. Research flow
Source: Usra & Hanoum (2023)

RESULTS AND DISCUSSION

Mapping the Development of Research Publications on The Relationship between Confirmation Bias and Investment Decisions Based on Co-Authorship

The results of the analysis displayed in Figure 3 show that the researchers with the highest publication rate with the research topic of the relationship between confirmation bias and investment decisions are Mikalef, P., Barber, B.M., and Grili, L. Both of them produced 5 publications indexed on Google Scholar. In addition, there are many researchers who produce 3 publications including Krogstie, J., Kumar, A., Bertoni, F., Fan, S., Lovallo, D., Bauer, R., Harrison, R.T., Mason, C. M. While other researchers still produce less than or equal to 2 publication documents.

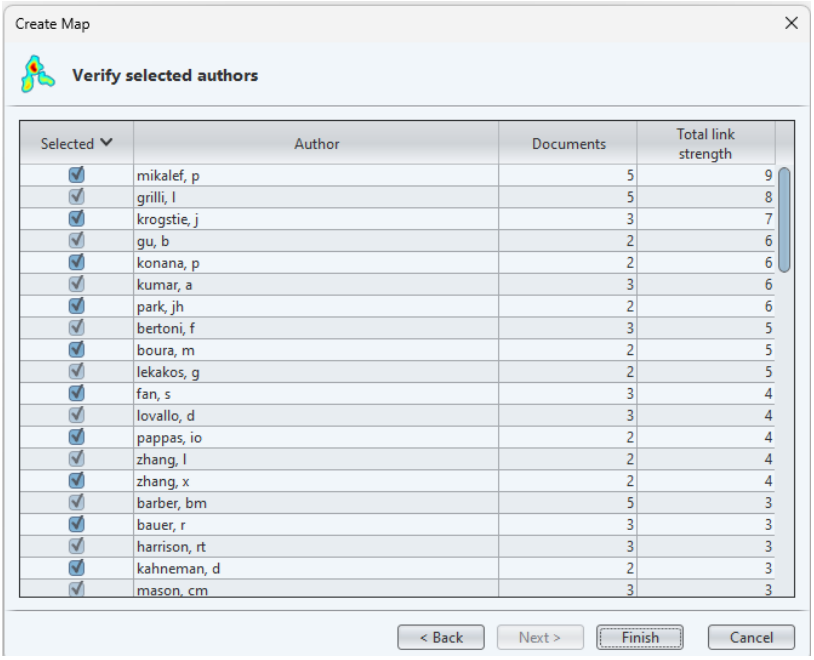

Figure 3. List of tourism destination development research authors on VOSviewer
Source: VOSviewer (2024)

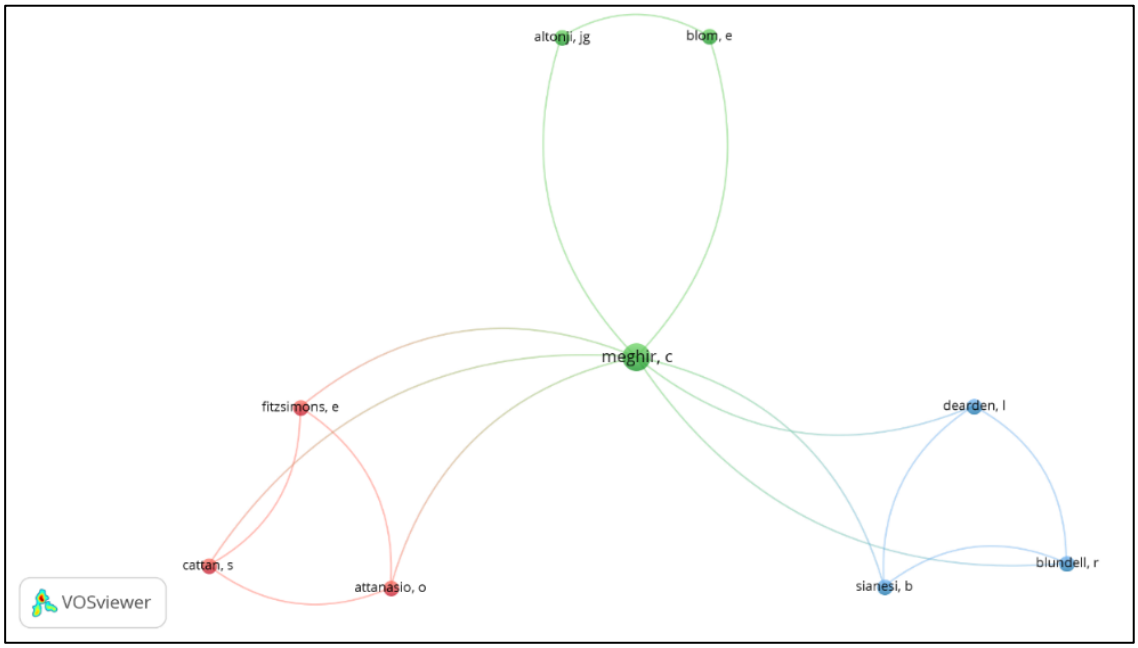

Figure 4. Network visualization on co-authorship
Source: VOSviewer (2024)

Based on the picture above (see Figure 4), it explains that the results of the network visualization co-authorship analysis or describe the relationship between researchers regarding research on the topic of the relationship between confirmation bias and investment decisions. Nodes or spheres that have different colors are authors or researchers, while edges are networks that connect nodes or researchers. Based on the results of the bibliometric analysis above, it shows that there are 3 clusters divided into this research topic. The first cluster has a red color which indicates a correlation between

authors including Cattan, S., Fitzsimons, E., and Attanasio, O. The second cluster has a green color which indicates a correlation between authors including Meghir, C., Altonji, J.G., and Blom, E. Then the last cluster has a blue color which indicates a correlation between authors including Dearden, I., Sianesi, B., and Blundell, R..

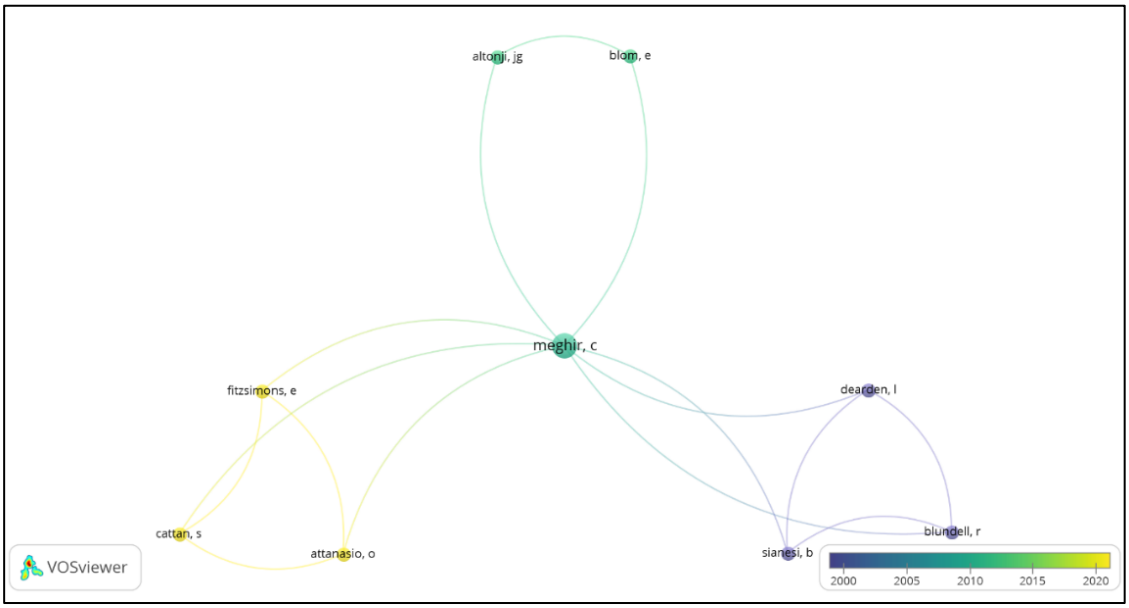

Figure 5. Overlay visualization on co-authorship
Source: VOSviewer (2024)

The analysis results in the figure above are data mapping in the form of Overlay Visualization. This analysis shows the results of mapping article publications according to the year of publication of the article according to the topic discussed, namely the relationship between researchers regarding research on the topic of the relationship between confirmation bias and investment decisions. Through the results of the Overlay Visualization analysis, it is able to provide an overview of the author's historical footprint from 2000 to 2020. It can be concluded that the darker the color on the node, the longer the year the article was published, and vice versa (Komarudin et al., 2023). The purple color in the figure above shows the darkest color, illustrating the year 2000 the article was published. While the yellow color is the lightest color which shows the year 2020 the article was published. So based on the results of the above analysis it can be concluded that:

(1) The research conducted by Dearden, I., Sianesi, B., and Blundell, R. was cited by Meghir, C. in his research. This is because the visualization colors in the research conducted by Dearden, I., Sianesi, B., and Blundell, R. are darker than the visualization colors in the research conducted by Meghir, C.
(2) The research conducted by Meghir, C. was cited by Altonji, J.G. and Blom, E. in their research. This is because the color of the visualization in the research conducted by Meghir, C. is darker than the color of the visualization in the research conducted by Altonji, J.G. and Blom, E.

(3) The research conducted by Meghir, C. was cited by Cattan, S., Fitzsimons, E., and Attanasio, O. in their research. This is because the color of the visualization in the research conducted by Meghir, C. is darker than the color of the visualization in the research conducted by Cattan, S., Fitzsimons, E., and Attanasio, O.

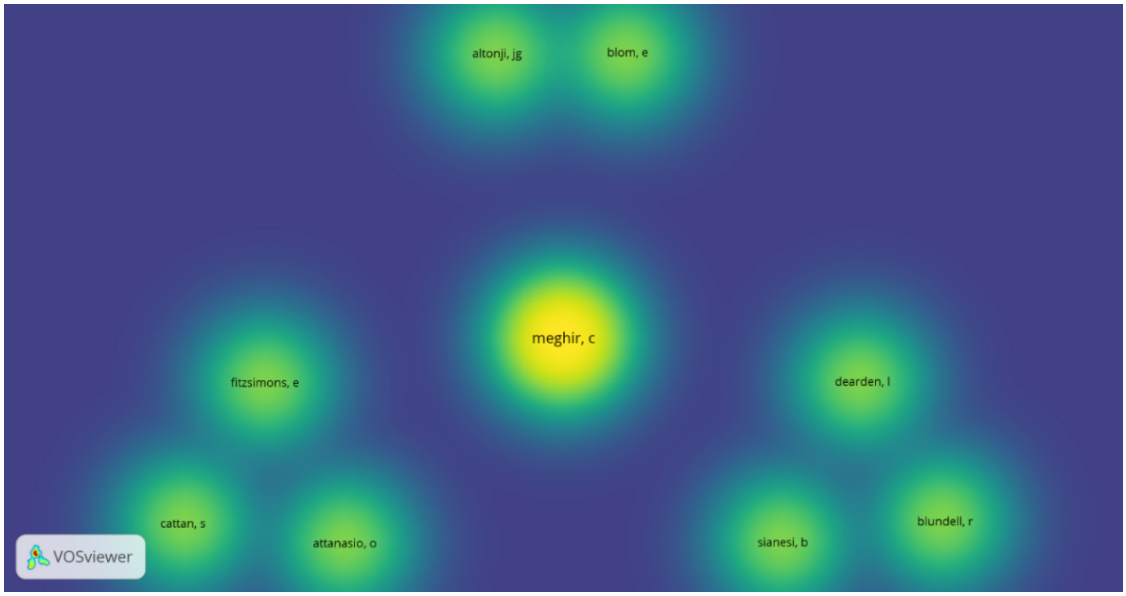

Figure 6. Density visualization on co-authorship
Source: Vosviewer (2024)

Based on the figure above, the visualization results based on co-authorship density show that the bigger and brighter the cluster color, this indicates that the relationship between authors who examine the topic of the relationship is getting stronger and more numerous. Vice versa, the dimmer the color on the map, the less or lower the strength of the relationship between authors (Soesanto & Handalani, 2023). Based on the picture above, it can be concluded that the cluster of authors Meghir, C has the brightest color so that the relationship between authors in the cluster is the strongest or in the sense that the number of authors involving other authors by citing their research in the cluster is high.

Mapping the Development of Research Publications on the Relationship between Confirmation Bias and Investment Decisions Based on Keywords (Co-Occurrence)

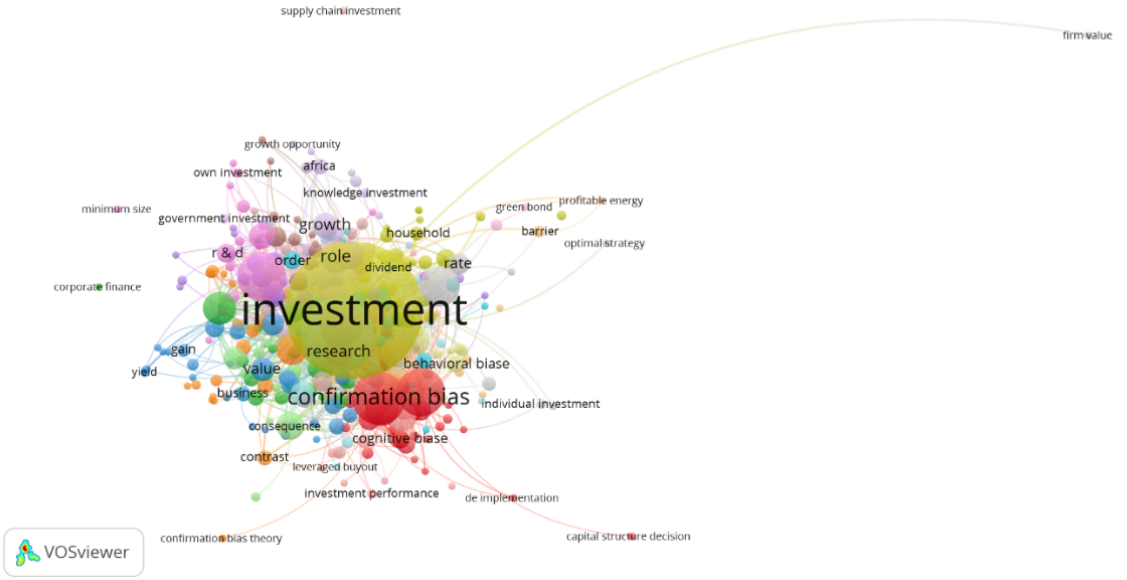

Figure 7. Network visualization on co-accurrence
Source: Vosviewer (2024)

The figure above represents the main areas in the field of investment where data has been taken from 500 articles collected from the Publish or Perish 8 software. The data was then analyzed using Vosviewer to obtain the main research areas including investment, confirmation bias, bias, return, company, performance, capital investment, decision, and others. Blobs with the same colors represent groups of closely related topics or what is called a cluster.

The first cluster contained in this study has a red color, including several terms related to the topic of discussion that has been researched before, namely confirmation bias, investment performance, cognitive bias, confirmation bias theory, de implementation, capital structure decision, risk perception, behavioral finance. The second cluster with purple blobs includes the following terms firm, R&D investment, potential selection bias, government investment, productivity growth, variable bias, concern, firm investment decision, knowledge investment. The third orange cluster includes market, home bias, behavioral bias, investing, financial performance, contrast, impact. The fourth cluster is brown which includes productivity, system, effectiveness, response bias, hrm investment. The fifth cluster has a blue color capital investment, confirmation bias, accounting conservatism, company, measurement, stock return. The sixth cluster in green includes performance, cost, hedge fund, decision, foreign investment, responsible investment. The seventh cluster is yellow which includes investment, incentive, human capital investment, income, education, parental investment, saving, cognitive dissonance, sample selection bias, statistical theory, economy, social interaction. The eighth cluster is gray which includes return, dynamic, individual investment, training investment, optimal strategy.

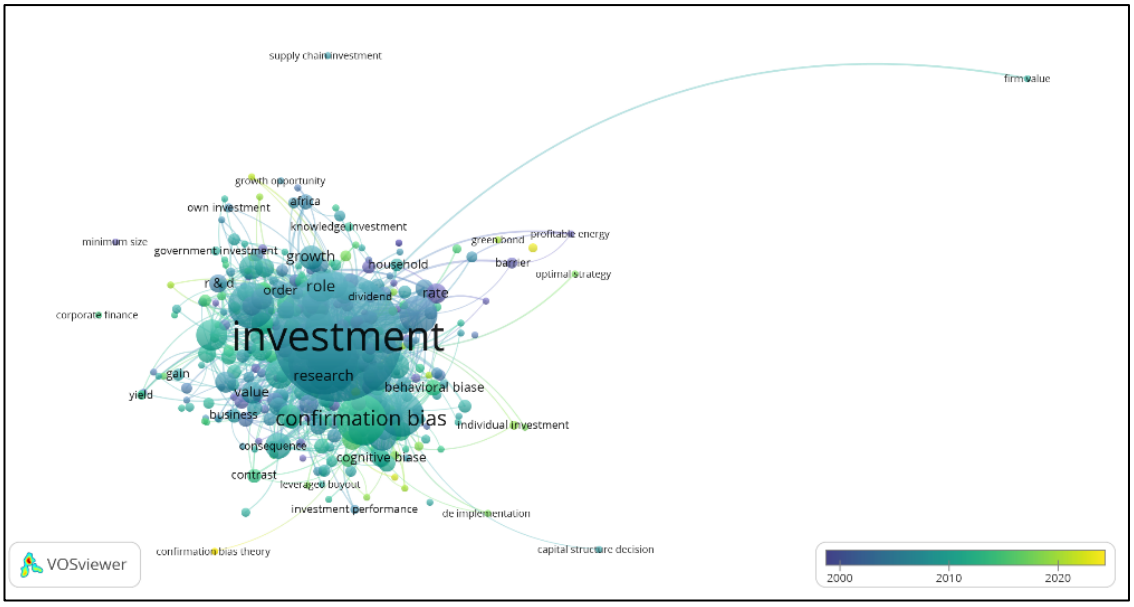

Figure 8. Overlay visualization on co-occurrence
Source: Vosviewer (2024)

The figure illustrates the research development map of Research Publications on the Relationship between Confirmation Bias and Investment Decisions which aims to provide an analysis of the distribution of the year of publication of articles based on research keywords. The figure displays the distribution of research based on keywords regarding the relationship between confirmation bias and investment decisions based on the year of publication. This stage is called overlay visualization, where this analysis will show the distribution of the year of publication of articles based on the color of each keyword node. In the figure there is a color description in the lower right corner which shows the year of publication from the beginning of 2000 which is symbolized by dark blue to 2020 which is indicated by a bright color. So the darker the color of the node indicates the oldest year of publication of the article. While the brighter the color of the node indicates the latest year of the research article.

The figure above shows that confirmation bias theory has yellow nodes. This shows that the term confirmation bias theory in research on the relationship between confirmation bias and investment decisions has a research vulnerability after 2020. In addition, it can be seen that the topic of investment has blue nodes which indicate that research with this term has been widely published from 2000 to 2010.

Figure 9. Density visualization on co-occurrence
Source: Vosviewer (2024)

The figure above is a density visualization that displays the density of patterns between one term and another symbolized through color differences. The results of the analysis can be known from the color differences displayed. The lighter the color of the keyword, the more likely it is that the published research matches the keyword. It can be seen that the keywords investment and confirmation bias have the brightest color than other keywords. This shows that of the 500 articles analyzed through VosViewer, many have used these keywords. So that the results of this analysis are in line with our research topic, namely regarding the relationship between the relationship between confirmation bias and investment decisions. The image above is the result of bibliometric visualization using VosViewer which shows the density visualization of keyword co-occurrence in research related to investment and confirmation bias. Lighter colors indicate keywords that appear more frequently together in the literature described. It can be seen that the keywords investment and confirmation bias have the lightest colors, indicating that these two terms are often used in research discussing the influence of cognitive bias on investment decisions. In addition, several other keywords such as cognitive bias, investment performance, and behavioral bias also appear in this visualization map, indicating that studies related to many psychological factors in investment. By analyzing 500 articles using VosViewer, it can be concluded that the relationship between confirmation bias and investment decisions is a major focus in academic literature, strengthening the urgency of research in the fields of finance and investor behavior.

Discussion

The analysis shows that research on the relationship between confirmation bias and investment decisions has developed significantly. This can be seen from the number of publications that continue to increase, as well as authorship networks that show collaboration between researchers. There are several key researchers who have major

contributions to this topic, such as Mikalef, P., Barber, B.M., and Grili, L., who are the main references in further research.

From a co-authorship perspective, the analysis shows that the research evolves in three main clusters, each of which is interconnected. The red cluster focuses on the relationship of confirmation bias in investment decision-making, the green cluster covers the analysis of the impact of bias in corporate investment decisions, and the blue cluster further highlights the impact of bias in previous academic literature.

In addition, the keyword analysis shows that the research has several main foci that evolve within the various clusters. The terms “confirmation bias” and “investment” are the most frequently used terms in related studies. Publication trends from 2000 to 2020 show that this topic is still relevant today, especially in relation to the influence of cognitive biases on investment decisions.

CONCLUSION

Based on the results and discussion, this research shows that the development of studies on the relationship between confirmation bias and investment decisions has experienced a significant increase. This is evident from the growing number of publications, patterns of collaboration between researchers, and the relevance of keywords used in various academic studies. Co-authorship analysis revealed three main clusters in the research network, reflecting different approaches to understanding confirmation bias in investment decisions. In addition, keyword analysis shows that the terms “confirmation bias” and “investment” are the dominant keywords that frequently appear in related research.

However, this study has several limitations. First, the data used is only sourced from Google Scholar, so other studies indexed in different databases may not be accommodated. Second, this study only uses bibliometric analysis methods without conducting a more in-depth qualitative analysis of the content of the publications analyzed. Thirdly, the scope of the study is limited to a certain time span, so research trends outside of that period are not part of the analysis.

Nonetheless, this study provides empirical and practical contributions. Empirically, the results of this study can serve as a basis for future research that wants to explore more deeply the relationship between confirmation bias and investment decisions. Practically, the findings can help investors and financial practitioners to better understand how cognitive biases affect investment decision-making, so that they can develop more rational strategies in managing their portfolios. As such, this research is not only relevant in the academic realm, but also has practical implications for the world of investment and financial decision-making more broadly.

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