



Green Investment in the Context of Sustainable Development and Maqasid al-Shariah: A Scopus-Based Bibliometric Analysis

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ABSTRACT

This study analyzes the global development of green investment as an effort to address environmental challenges and support sustainable economic growth. Using bibliometric analysis methods with Scopus data from 1982 to 2024 and VOSviewer, Microsoft Excel, and R Studio tools, this study traces trends in publications, contributions from authors, institutions, and countries. The results show a significant increase in research on green investment, from 1 publication in 1982 to 503 in 2023, with China as the most productive country. The COVID-19 pandemic slowed down research, but there was a rebound in 2022. Conceptually, green investment has proven to play an important role in achieving sustainable development and is in line with the principles of maqasid al-shariah, which emphasizes the preservation of life, property, offspring, and reason through sustainable and ethical management of natural resources.

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INTRODUCTION

In the era of deep globalization along with the development of this era, there has been an increase in awareness, especially awareness among generation Z regarding the importance of a sustainable environment, which refers to climate change, this is what drives the concept of green investment (Kustina et al., 2024). So green investment or what is known as Green Investment is also becoming a hot topic of discussion throughout the world.

Green Investment itself is a green investment that in making its investment focuses on considering the impact of the natural, social, governance (ESG) and industrial environment (Yesiani et al., 2023a). Basically, Green Investment aims to support environmentally friendly projects and green investment is also an investment. Companies that have and provide a positive impact on society and the surrounding environment (Rosyid & Mulatsih, 2024).

Although the purpose of this green investment provides enormous potential for the environment, there are challenges that need to be faced in various problems contained in this Green Investment, one of which is monetary risk and unclear benchmarks in green investment, therefore it is very necessary to create and understand the arrangement of plans in order to achieve targets that can encourage the growth of green investment (Prasetyo & Hendri Hermawan Adinugraha, 2023). Recently, Green Investment has received support from various parties, companies, various financial institutions and governments have also provided their focus points for developing sustainable investment. Not only that, governments around the world must play an important role in creating environmentally friendly investments, namely through policy frameworks, regulatory mechanisms, and financial incentives (Rany et al., 2020).

Research on the topic of Green Investment is very important to be carried out, one of the reasons being to find out strategies and help understand the contribution of green investment in overcoming problems with climate change. The shift towards environmentally friendly investment is due to the rapid handling of climate change and the need for a transition towards a sustainable and environmentally friendly economy. (Butarbutar et al., 2024). Green Investment is also a form of prevention efforts into good business, knowing the increase in sustainable development so that green investment becomes the mainstay in creating environmentally friendly economic projects, providing a scientific basis for investors in developing policies and regulations to invest in creating a conducive environment and improving the quality of life for the future, one of which is by means of environmental monitoring and waste management (Alfarisy et al., 2023).

This study aims to make the public and investors aware of the importance of green investment to improve the environment, eliminate negative impacts arising from natural damage such as air pollution, climate change and other pollution (Yesiani et al., 2023b). And this study specifically aims to provide insight to researchers on the development of planning plans in environmentally friendly green investments, as well as to encourage the government to support this green investment so that there are policies in sustainable investment.

There have been several journals that have researched the topic of green investment, in Scopus data there are more than 10,000 documents on green investment and from Google Scholar search there are also many journals attached, one of which is in the journal Disclosure of carbon emissions influenced by environmental performance, green investment and media exposure with an audit committee as a moderator which contains an

explanation of the impact or influence of green investment in disclosing carbon emissions (Nurba Marsa Sativa & Sofie, 2024). And an article on alternative financing for green investment that analyzes financing issues in green investment.

Green investment emphasizes an investment approach focused on environmental sustainability by prioritizing environmentally friendly projects and supporting nature conservation. In the context of Maqasid Syariah, which aims to achieve the welfare of the people and protect five main aspects, namely religion, life, intellect, lineage, and wealth, green investment plays an important role as a means of protecting wealth and the environment. By ensuring that investments do not damage ecosystems but rather promote economic sustainability, green investment is very much in line with the principle of maintaining welfare and preventing damage (mafsadah), thereby supporting the broader objectives of Sharia in realizing social balance and justice.

RESEARCH METHODS

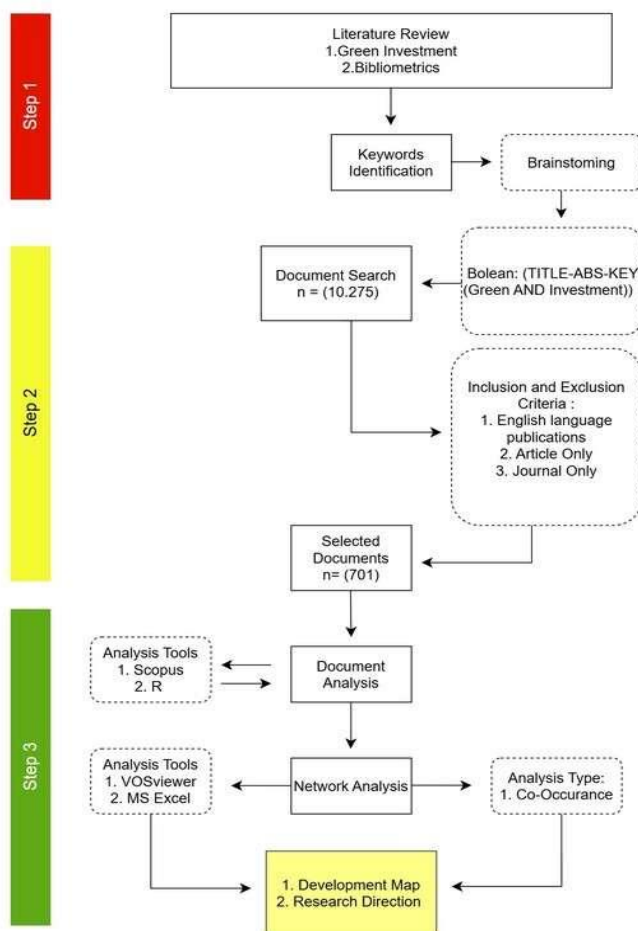


Figure 1: Research Method Diagram

In Figure 1 in writing the research is done using the bibliometric analysis method (Apriantoro, 2025; Apriantoro & Maulana, 2025; Apriantoro & Septianozakia, 2024), the data used is based on the Scopus database from 1982 to 2025 which is assisted in its search using Boolean. This data includes software systems such as VOSviewer, Microsoft Excel and R. The first stage in conducting research is to find a theme chart to be analyzed, if the theme has been selected, analyze the theme related to the keywords of the selected theme and make sure all of it is connected to the bibliometric topic, after the keywords are found this will be used as a reference for writing research journals (Apriantoro, Saifullah, et al., 2025).

The second stage in this study used the Boolean operator and in the Scopus system search (TITLE-ABS-KEY (green investment)) with a total data generated of 10,275 documents after the total data was found, a filter was carried out on the Scopus data, in the filtering process only the type of document, article, journal was selected, select English and LIMIT-TO so that the number of documents was 701. (Apriantoro, El Ashfahany, et al., 2025)

The final stage, the final stage analysis is carried out where all data and documents are processed using Scopus and R to obtain complete documents from the year, author, country and publication. The next step is to analyze the data using VOSviewer, in processing this data a network analysis will be produced then the existing data is processed using Microsoft Excel (Apriantoro & Andriyani, 2024; Apriantoro & Wijayanti, 2022).

DOCUMENT ANALYSIS

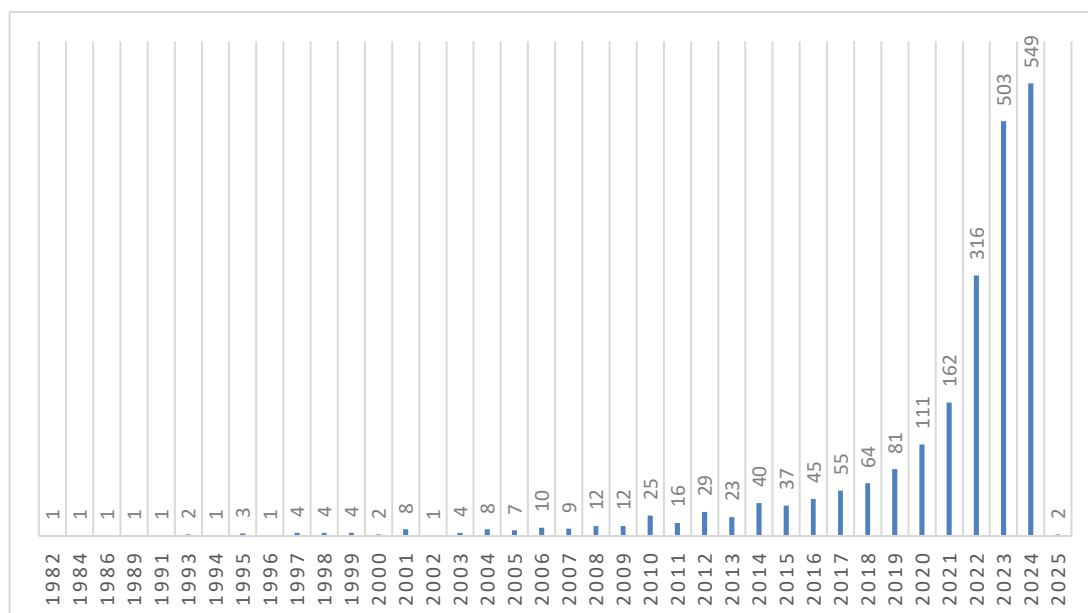


Figure 2 : Graphical representation of publications from 1982 to 2024

The year graph data in Figure 2 shows the development and increase that has skyrocketed every year, overall it can be seen from 1982 to 2023 there has

been a very drastic increase in the number of publications. In 1982 there was only 1 publication and while in 2023 the number reached 503 in its publications. It feels significant starting to be seen in 2000 which was only 2 publications until 2010 which increased to 25, and became a comparison in 2010 to 2023 where the number of publications almost increased tenfold in 13 years.

In 2020 to 2021, the topic of green investment experienced an insignificant increase because in that year the world was experiencing a global problem, namely the Covid-19 pandemic, this was an obstacle and barrier to research, while if seen in 2022 when the pandemic problem began to subside, the level of research in 2022 increased greatly and soared. 2022 to 2023 recorded the highest number of 316 increasing to 503. That this progress shows several specific factors that drive increased publications. Because the peak of publications was very high in 2024, which amounted to 549 publications, as an author you can refer to publications in 2024, the most references you can find in Scopus data in 2024.

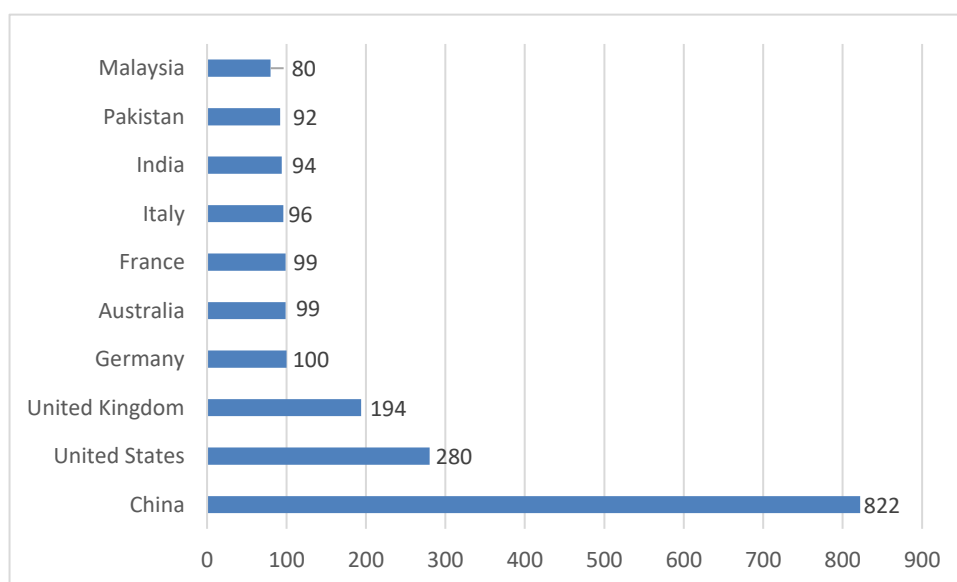


Figure 3 : Document representation by country

In Figure 3, the data graph analysis shows that China is in the top position with 822 publications. This data reflects a global trend where countries with high investment in education and research, especially China, dominate scientific publications. Showing that even though China is an Asian country, China actually has the potential for innovation and strength in research that is developing much higher compared to European countries. Comparisons can be seen such as the United States in second place with 280 publications, followed by England 194, Germany 100, France and Italy with almost the same publication figures, namely 99 and 96, which are European countries are countries with a high

reputation in the academic field, but in publications in this field, European countries are still far behind compared to China.

Developing countries such as India with a publication rate of 94, Pakistan 92 and Malaysia 80, this shows that Asian countries are starting to be active in research publications, but there is still room for growth. This could be an opportunity for the government to increase support for Asian countries to develop from a financial and infrastructure perspective to strengthen research and publications, in the number of publications in countries with lower numbers can also open up opportunities for mutually beneficial international collaboration. Although other countries with lower numbers are also trying to increase their contributions in the field of research.

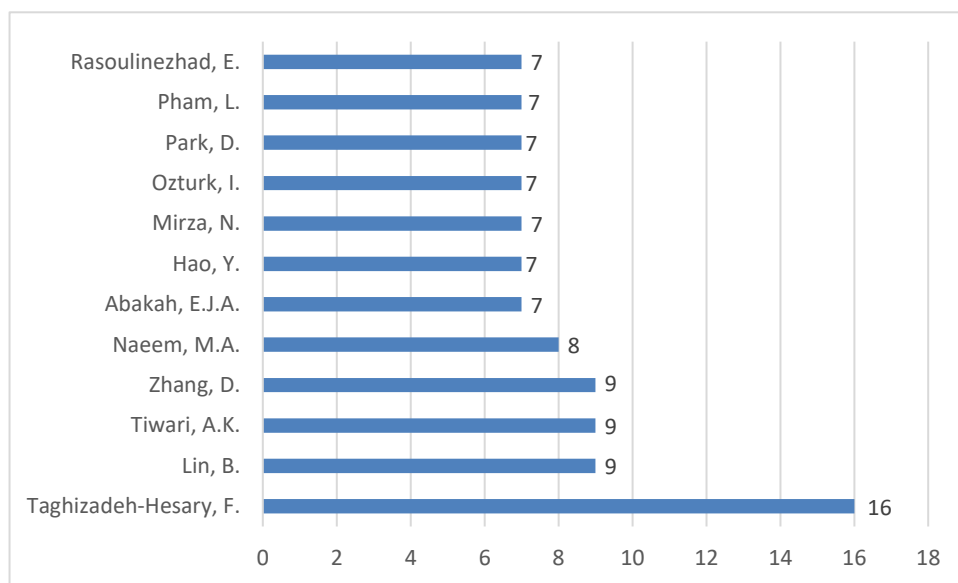


Figure 4 : Documents by author

The data in Figure 4 shows the productivity in writing research, until now still led by Taghizadeh-Hesary, F, by leading 16 publications, this shows that he is a very active author and may have significant contributions in his field. And there are several authors with the same number of publications, such as Lin, B., Tiwari, AK and Zhang, D., each with 9 publications, this number shows that they are active and may have a focus on relevant research.

Authors like Naeem, MA, Abakah, EJA etc. have 8 and 7 publications respectively, which shows that although not as productive as Taghizadeh-Hesary, but this shows the existence of a group of authors who may collaborate on the same research or on similar themes, they also contribute and distribute the mastery of the material quite significantly in writing topics in this field. Authors with fewer publications can also help to expand experience and share resources in research to encourage future publications, this can also be used to

improve the quality of research, such as active authors can provide guidance to new authors in conducting research to get quality publications.

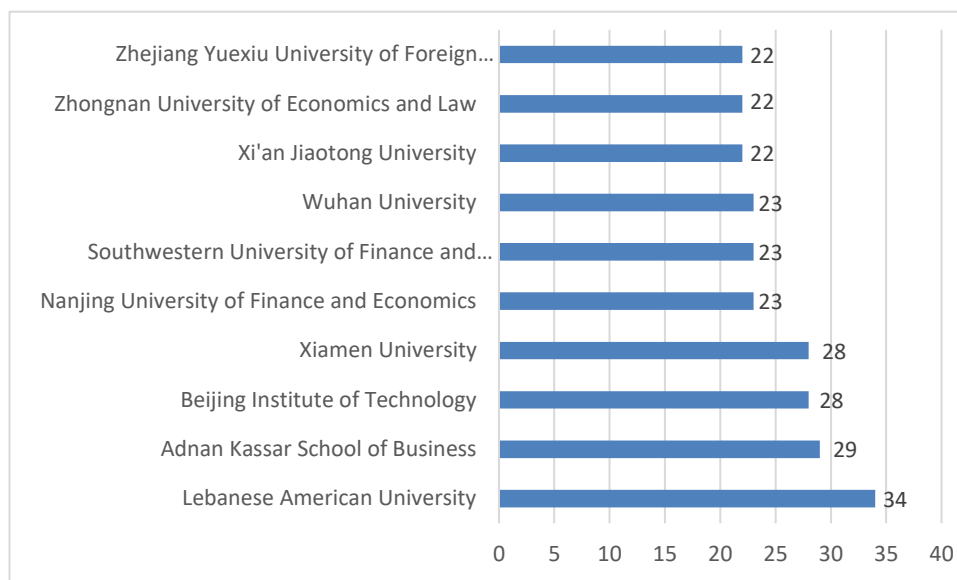


Figure 5 : Documents by affiliation

The data in Figure 5 shows that the Lebanese American University is the first position that stands out in the most influential institutions in different regions, showing the distribution by having the highest number of publications (34), having strength and contribution in the academic field. The second position is occupied by the Adnan Kassar School of Business also showing good performance with 29 publications, indicating that this business school is active in research and publication.

Although both universities rank the highest among the top 10 universities in this research publication, the average concentration of significant publications is held by Chinese universities, they dominate in terms of publication quantity such as Wuhan University, Xi'an Jiaotong University, Zhongnan University of Economics and Law, Beijing Institute of Technology, Xiamen University, Zhejiang Yuexiu university of foreign languages, southwestern university of finance and economics and Nanjing University of Finance and Economics. This shows that universities in China have a very close number of publications to each other (between 22 and 28), indicating that there is a strong collaboration network between them. This can be an opportunity for us to increase research resources and focus on this field so that students can be interested and do more research.

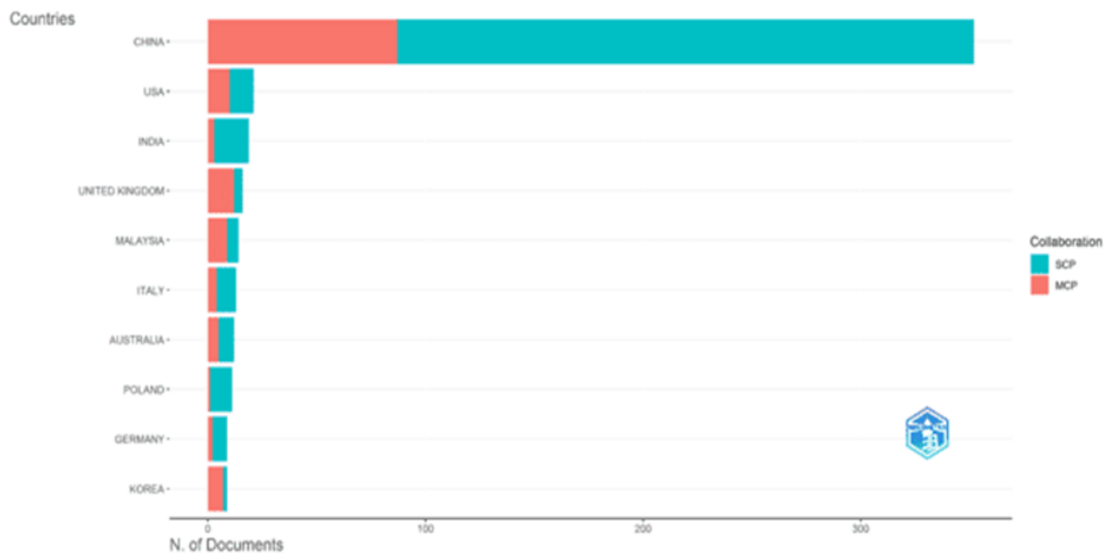


Figure 6 : Corresponding Author's Countries

Note:

SCP: Single Country Publications

MCP: Multiple Country Publications

In Figure 6 there is a diagram with the order of the names of countries that have the most SCPs and MCPs. From the sequence of data attached, there are three countries that have the highest publications, namely in first place is China with 87 MPC documents and 265 SCP documents, in second place is two, namely the United Kingdom with a total of 12 MPC documents and 4 SCP documents, in the last order is the USA with a total of 10 MPC documents and 11 SCP documents. From the data in Figure 6, it can be concluded that currently China is part of the Asian continent that dominates the publication level.

Table 1, Most cited documents globally

Paper	Total Citations	TC per Year
(Zhao, Zhang, et al., 2023)	129	64.50
(Phung et al., 2023)	95	47.50
(Wang et al., 2023)	50	25.00
(X. Liu et al., 2024)	43	43.00
(Yahya & Lee, 2023)	43	21.50
(Tang et al., 2023)	40	20.00
(Zhao, Wang, et al., 2023)	39	19.50
(Qing et al., 2024)	35	35.00
(Lu et al., 2023)	35	17.50
(Patel et al., 2023)	34	17.00

Table 1 shows the order of article authors with the largest number of citations, in first place is Zhao L, 2023, Econ Change Restruct with a total of 129 citations and TC per year of 64.50. The second sequence is Phung Tq, 2023, Econ Change Restruct with a total of 95 citations and TC per year of 47.50. The last sequence is Wang A, 2023, Energy Econ with a total of 50 citations with TC per year of 25.00. From this data, it can be concluded that the number of total citations does not always have an effect on the increase in TC per year, for example Wang A, 2023, Energy Econ with a total of 50 citations and TC per year only reaching 25.00 while Liu X, 2024, Res Int Bus Financ with a total of only 43 citations but the number of TC per year can reach 43.00. However, if you look at the year of writing, 2023 is the year with the most citations used.

Table 2, Most cited documents locally

Document	Local Citations	Global Citations	LC/GC Ratio (%)
(Patel et al., 2023)	5	34	14.71
(Lin & Su, 2023)	4	12	33.33
(Qin et al., 2024)	3	29	10.34
(Farooq et al., 2024)	3	33	9.09
(Adekoya et al., 2023)	3	13	23.08
(Xu et al., 2024)	2	20	10.00
(Zhang et al., 2023)	2	21	9.52
(F. Liu et al., 2023)	2	14	14.29
(Sheng & Gao, 2023)	2	8	25.00
(Zhao, Wang, et al., 2023)	2	39	5.13

Table 2 shows the order of the most Local Citations with the first order held by Patel R, 2023, Int Rev Econ Financ with a total of 5 Local Citations, in second place is Lin B, 2023, Int J Financ Econ with 4 Local Citations and in last place is Qin L, 2024, Int Rev Econ Financ with a total of 3 Local Citations. In the documents listed in the table, it can be concluded that the number of LCs does not mean that GC can also halve or increase.

NETWORK ANALYSIS

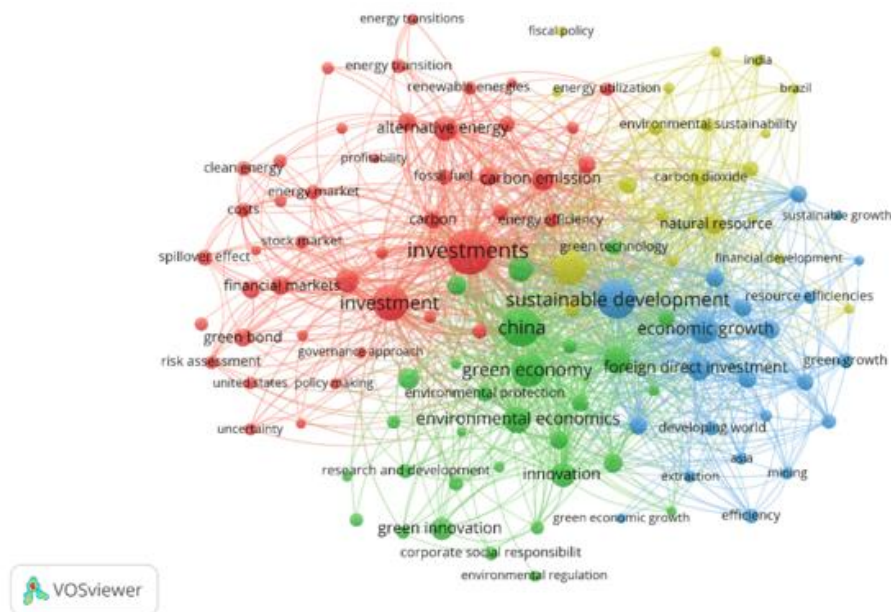


Figure 7 : network visualization

In Figure 7 in this network visualization research, it is processed in the VOSviewer application using the Co-occurrence analysis type and all keywords for its analysis unit, in the analysis that appears there are 4 clusters, each cluster has a different color, cluster 1 is green, cluster 2 is blue, cluster 3 is yellow and the last cluster 4 is red, in selecting the cluster, the number of keywords is selected with the most dominant and interrelated keywords, this cluster is useful for analyzing the relationship between topics using 116 items and a minimum cluster size of 11

Cluster 1 (green): Green economy with a total link strength of 990 and total occurrences of 102, environmental economics with a total link strength of 705 and total occurrences of 68, and finally there is green innovation with a total link strength of 160 and occurrences of 46, from the three keywords above, the dominant one shows the theme of innovation and development that is friendly to the green environment. Cluster 2 (blue): sustainable development with a total strength of 1472 and total occurrences of 143, economic growth with a total link strength of 681 and total occurrences of 72, finally there is mineral resource with a total link strength of 386 and total occurrences of 31, from the three dominant keywords, it shows the theme of economic balance in the utilization of mineral wealth that protects the environment.

Cluster 3 (yellow): Sustainable with a total link strength of 982 with occurrences of 105, natural resource with a total link strength of 608 and occurrences of 44, and carbon dioxide with a total link strength of 342 and occurrences of 27, from the three keywords above, the dominant one shows the

theme of sustainability of natural resources in carbon dioxide. Cluster 4 (red): investments with a total link strength of 1920 and occurrences of 194, commerce with a total link strength of 519 and occurrences of 52, and alternative energy with a total link strength of 532 and occurrences of 56, from the three keywords in the red cluster, it shows the theme of trade investment in developing alternative energy.

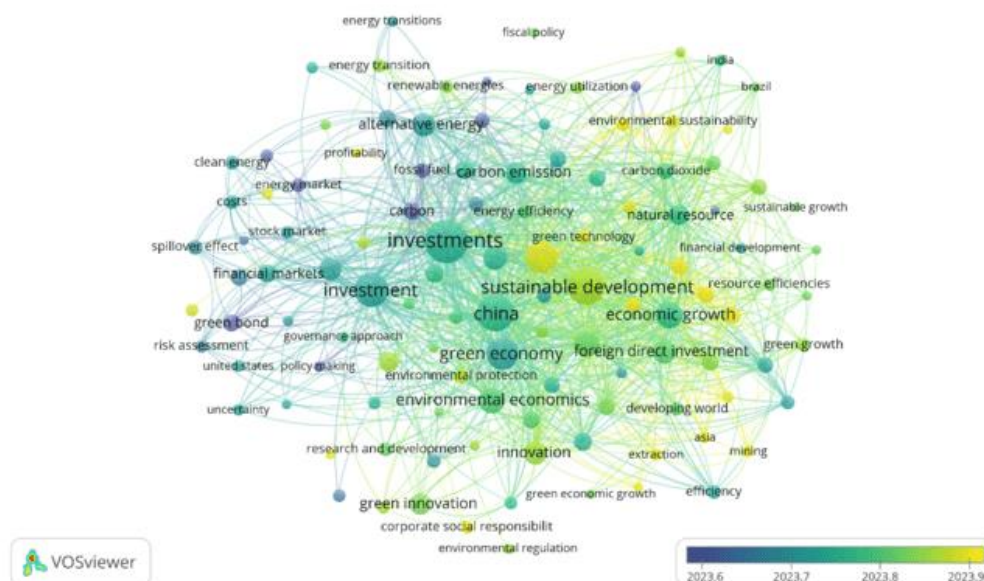


Figure 8 : overlay visualization

In Figure 8, data in one year contains topics and keywords based on different timelines every 1 month, and in this 1 year the monthly development is marked by different color classifications, in the old period with dark blue indicating relevant keywords, the middle period with green indicating related topics and keywords, and the new period is marked with yellow which contains keywords and topics that dominate. This green investment research covers several keywords used in the range of 2023 in June, August and September.

The old period (June 2023 in dark blue) related to green bonds, fossil fuels and policy making from the three keywords above produced the theme of policy making on fossil fuels related to green bonds. The middle period (August 2023 in green) with the keywords environmental economic, economic analysis and foreign direct investment refers to the theme of the Role of Foreign Investment in Sustainable Natural Resource Management Projects. The new period (September 2023 in yellow) produced relevant keywords namely sustainability, green technology and mineral resources, these three show themes related to Green Technology Innovation in Sustainable Mineral Resource Mining, where this green technology can be applied to reduce the environmental impact of mining activities.

sustainable investment. The implementation of green investment based on maqasid al-shari'ah can encourage comprehensive policies for the sustainable welfare of society and the environment (Subli et al., 2025).

CONCLUSION

This analysis was conducted to determine the extent of the development and significance of the theme of green investment analysis, as well as to observe the development of awareness about environmentally friendly investment in line with increasing environmental awareness. The method used in this analysis is bibliometric, where data obtained from the Scopus database shows a clear increase in the number of publications related to environmentally friendly investment from 1982 to 2023. China ranks first in global publications with a total of 822 documents, reflecting a strong commitment to sustainable research.

Through network analysis, it was found that there is close collaboration between authors and institutions, such as the American University of Lebanon and several universities in China that are most productive in terms of publications. The data shows that although there are many active authors, only a few dominate the number of publications, meaning that this could open up opportunities for further collaboration that could improve the quality of research in this field. Overall, this analysis confirms that green investment is an important component in efforts to achieve sustainable development. Further research is needed to explore strategies that can increase the contribution of green investment in addressing climate change challenges and promoting policies that support sustainable investment.

The results of the study also confirm that the concept of green investment is in line with the values of maqasid al-shariah, as both emphasize the sustainable preservation of life, property, and the environment. Therefore, the implementation of green investment not only supports economic goals but also reflects efforts to achieve social welfare and justice in accordance with sharia principles.

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