



Trends and Research Focus of Green Entrepreneurial Intention (Bibliometric Analysis)

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ABSTRACT

In the current era, Green Entrepreneurship is expected to be able to overcome the problems of environmental pollution and global warming. Developing environmentally friendly entrepreneurship aims to improve the economy and pays attention to sustainable development. This research is a bibliometric analysis using the R Package to determine research trends related to green entrepreneurial intention, with metadata from Scopus for 52 documents. The findings of this research are that the most productive journal data comes from China so that country makes quite a lot of contributions and collaborates with other countries in this research trend. This is proven by the most popular or corresponding author from China, with four articles. Still, the number of citations in the first place is the journal Sustainability from Switzerland. This research shows that research trends related to green entrepreneurial intention have yet to be widely carried out or published in the Scopus database. Research with this theme is expected to be continued by future researchers considering the importance of sustaining Green Entrepreneurship.

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1. INTRODUCTION

The green economy concept demands a new generation of entrepreneurs who take advantage of opportunities for environmentally friendly products (Farinelli et al., 2011). This means that entrepreneurs are required to care about the problems that exist in society, especially those related to environmental issues or problems. Anisah (2012) revealed that the concept of green entrepreneurship pays attention to the individual and organizational aspects involved in entrepreneurial activities to create benefits for the environment. The forms of business activities of green entrepreneurs are very diverse. Some of them started their business by targeting environmental issues, for example, those who pay attention to environmental health, such as waste management.

Entrepreneurs are expected to contribute to development, including overcoming employment difficulties, increasing people's income, increasing national resilience, and reducing dependence on foreign nations (Kasmir, 2016). In line with achieving the sustainable development growth (SDGs) agenda in 2030, environmental values are a priority equal to economic and social values, as stated by Elkington as the triple bottom line theory. Akkus and Çaliyurt (2022) stated that entrepreneurs contribute to realizing SDGs so that their roles are diversified towards social and environmental goals. Climate change triggers various natural disasters such as droughts, heat waves, tidal waves, floods, and others that disrupt human welfare.

Balaguera & Quintero et al. (2022), air pollution caused by releasing gases such as CO₂, CH₄, and N₂O forms greenhouse gas emissions that impact ozone depletion and trigger global warming. These conditions increase the earth's temperature, thereby reducing the quality of the global ecosystem, which disrupts people's welfare. Two decades earlier, the World Resource Institute reported threats to the decline in the quality of global ecosystems, including "agriculture, coastal, forest, clean water, and wetlands" (Masjid, 2020).

(Suparta and Yatim, 2019) emphasized the phenomenon of heat waves, which directly impact agricultural productivity, health, and welfare. Environmental sustainability is a concern of the SDGs, including clean water (SDGs-6), affordable energy (SDGs-7), sustainable city (SDGs-11), responsible consumption & production (SDGs-12), climate change (SDGs-13), life below water (SDGs-14) and life on land (SDGs-15) as an effort to overcome no poverty (SDG-1), zero hunger (SDGs-2) and improve good health and well-being (SDGs-3). This target is a common challenge, so stakeholder support is needed to overcome environmental degradation and sustainably ensure social welfare. In achieving the SDGs, a green economy creates low-carbon economic growth, saves resources, and social inclusion by involving the community and stakeholders.

The potential for environmental damage is an essential theme in the Kyoto Protocol to Frameworks Convention on Climate Change (FCCC) in 1997 to reduce greenhouse gas emissions. Along with global warming, the UNFCCC was carried out in Paris in 2015 to curb the increase in global temperatures and adapt to climate change. This convention gave birth to the Paris Agreement, with an agreement to keep global temperature increases this century below 2o Celsius and encourage efforts to limit temperature rises further to 1.5o Celsius

above pre-industrial levels (UNFCCC, 2016). The 1.5o Celsius increase limit is the limit for global temperature rise so that the world is still relatively safe from the worst impacts of climate change.

This agreement is a global collaboration to reduce emissions, strengthen resilience and build partnerships for climate change mitigation, adaptation, and project funding programs, as a basis for building partnerships to realize a green economy and accelerate the 2030 SDGs agenda through market-driven environmentally friendly solutions. Awareness is needed between consumers and business actors to realize sustainable prosperity in the future. In 2018 the first Partnering for Green Growth and the Global Goals (P4G) meeting was held in Denmark to accelerate green growth in 150 developing countries around the world with a period of achieving aligned SDGs in 2030. Five goals were produced at the Copenhagen Summit: "food and agriculture, water, energy, cities, and circular economy."

Simultaneously with Earth Day in October 2021, the World Green Economy Summit was held in Dubai with the theme: "Youth, innovation and smart technologies, green economy and policies, and green finance." This momentum resulted in the "Dubai Declaration," emphasizing the threat of climate change, pandemic recovery, energy, inclusive partnerships, and several climate changes handling agendas through a green economy. In line with these events, young people are the target of socialization, so students become targets of green education. Various events show a joint commitment to address global problems so that the acceleration of the 2030 SDGs is supported through a green economy. The implication of this development model is the private sector/business world so that it has relevance to entrepreneurship. Therefore, the role of higher education or universities is significant in providing educational solutions for environmental sustainability and synergizing with the green economy as an acceleration of sustainable development in 2030.

Based on the opinions that have been explained, the spirit of a green entrepreneur is an individual who has many ideas, the courage to take advantage of all available opportunities and is determined to start a business with an environmentally friendly concept. Someone who has an entrepreneurial spirit with green business principles does not only prioritize profits but is very concerned about how his business does not damage the environment. It can also be interpreted as a collection of activities that aim to solve social and environmental problems through creative, innovative ideas and positively impact the environment and social life of the community, as well as providing benefits for business organizations. This explanation can be interpreted as a green entrepreneurial spirit: Wanting to create a business that can help minimize environmental pollution—the attitude of caring for the environment and loving cleanliness. The level of social concern is high so that the business created can be successful in the future.

Sustainable Development Goals. SDGs is a fifteen-year United Nations program with the agenda to be achieved in 2030 as a continuation of the Millennium Development Goals (MDGs), which were previously implemented from 2000 to 2015 with an emphasis on eight targets. The SDGs have seventeen targets with a vision of realizing sustainability in the future (Filho et al., 2022), as in Figure 1. The SDGs are designed as a comprehensive agenda for human welfare and the sustainability of the entire planet.



Figure 1. Sustainable Development Goals

Based on Figure 1. Shows all SDGs targets, including "No poverty, zero hunger, good health. and well-being, quality education, gender equality, clean water, and sanitation, efficient and clean energy, decent work and economic growth, industry, innovation, and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption and production, climate changes, life below water, life on land, peace, justice, and strong institutions, and partnership for the goals". The target is divided into three domains: social, economic, and environmental, or what Elkington calls the triple bottom line. The acceleration of SDG achievement is supported through a green economy to realize SDG targets by 2030.

Strategic collaboration between stakeholders in various countries is needed to achieve all targets with a global community orientation. (Alvarez-Risco et al., 2021) Proves that supporting systems, including education development support, conceptual development support, and country support, significantly impact green entrepreneurship intention. The study (Quiroz-Niño & Murga-Menoyo, 2017) concludes the importance of training to form competencies regarding the SDGs where these goals are achieved through education. This argument increasingly shows the important role of educational institutions in building a learning framework based on the SDGs.

2. METHODS

Based on some of the facts presented, this study certainly attracted the attention of researchers because of the urgency that is so fundamental in increasing the expected interest in environmentally friendly entrepreneurship (Anghel et al.; M. A., 2022). In the Bibliometric Analysis of Green Entrepreneurial Intention Using the R Package - Ashari Gunawan, Amir Machmud, Hari Mulyadi, and Imas Purnamasari from the Scopus database, this study only totaled 52 documents. In essence, bibliometric analysis has the principle that a study must be connected or related to other research (Ayatullah & Maika, 2022). So, to find out research trends related to green entrepreneurial intention and how opportunities for further research on this topic can be studied using bibliometrics. This is supported by the explanation of

Nobanee et al. (2021) regarding several reasons for using the bibliometric method in research: First, research using data is considered more relevant. Second, reviews of subjective and critical scientific articles or works can be obtained easily. Thirdly, this method helps in obtaining a scientific review.

In addition, using bibliometric analysis can help find out from the year the highest domain of the article and how big it is (Hufiah et al., 2021). Find out the increase and the country of origin with the most publications (Ajinegara & Soebagyo, 2022). It helps find data from a journal house with writing criteria dominated by individuals or collaborations, the most productive authors, and the most popular research topics (Rahayu & Sobari, 2021). Furthermore, using bibliometrics can review future research trends and opportunities (Pratiwi & Soebagyo, 2022), as well as become references and preferences on specific topics in the field of science (Ismail, 2022). Bibliometric analysis is a statistical tool that is much needed in mapping the state of scientific knowledge because its role can assist in identifying critical information needed starting from research objectives and research opportunities, and in strengthening research or scientific publications (Oliveira et al., 2019). The use of bibliometrics in this study is expected to find trends in a study so that researchers can relate research results to other studies. As expected in the Bibliometric Analysis of Green Entrepreneurial Intention Using the R Package – Ashari Gunawan, Amir Machmud, and Imas Purnamasari, Hari Mulyadi, research is creating progress and developing knowledge in a particular field of knowledge (Mubarrok & Rahmawati, 2020). Specifically, this study aims to determine developments (1). The development of the literature "Green Entrepreneurial Intention." (2). Classification of leading journals, authors, countries, and documents "Green Entrepreneurial Intention." (3). Topic trends and. (4). Keywords related to this study.

3. RESULTS AND DISCUSSION

Bibliometric analysis related to Green Entrepreneurial Intention was conducted with only one screening. In the initial screening, a limitation was made on the year of search, namely Scopus database articles from 2013 to 2023. Based on the screening, 52 documents were found.

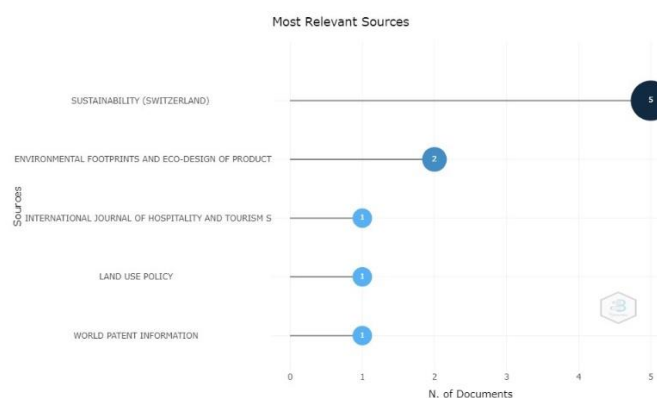


Figure 2. Most Relevant Sources

From the data in Figure 2 above, it can be seen that the journal houses with the publication of articles related to Green Entrepreneurial Intention, the most relevant with the

most citations, are Sustainability (Switzerland), with a total of 5 articles. Next, followed by Environmental Footprints and Eco-Design of Product with two articles. The International Journal of Hospitality and Tourist S, Land Use Policy, and World Patent Information occupy the third to fifth ranks, with 1 article each.



Figure 3. Keywords on topics

Figure 3. The following is an explanation related to keywords or topics that are suitable for research on green entrepreneurial intention; the more significant the keyword, the more keywords or variables are, the most suitable for conducting research collaborations with green entrepreneurial intentions such as Sustainability, Perception, Pakistan, Green Economy, Knowledge, etc.



Figure 4. Variables Known

Figure 4. The following is a tree image related to the variables known to be the keywords most used in this Green Entrepreneurial Intention study, namely entrepreneur with 5 (8%) articles, the following keywords Pakistan with 3 (5%) articles, Sustainability 3 (5%) articles, and Perception 3 (5%) articles.

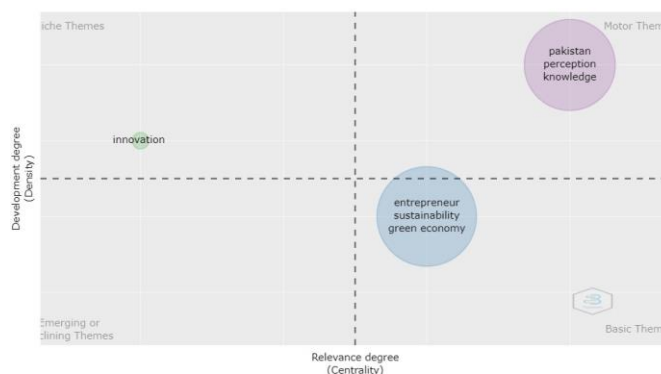


Figure 5. Thematic Map

Figure 5. Thematic Map can provide information based on the density and centrality quadrants. Based on the thematic Map in Figure 4 below, it can be understood that the topic of Pakistan Perception Knowledge in the Motor Themes quadrant has been widely researched. As for the Emerging or Declining Themes quadrant, this research is experiencing a decline, but because the topic of green entrepreneurial intention has yet to be widely studied, no variables have experienced a decline in research. The research still being studied little is Entrepreneur Sustainability green economy because the density is still low and the centrality is high.

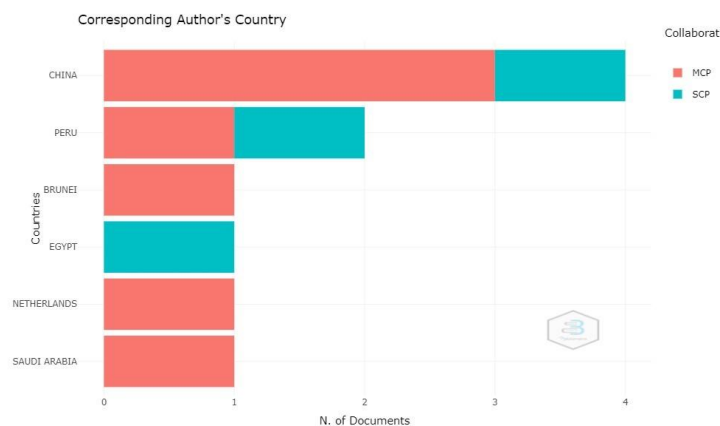


Figure 6. Corresponding Author's Country

Figure 6. The following explains the countries with the most corresponding authors or writers responsible for research with Green Entrepreneurial Intention, namely writers from China, Peru, Brunei, Egypt, the Netherlands, and Saudi Arabia.

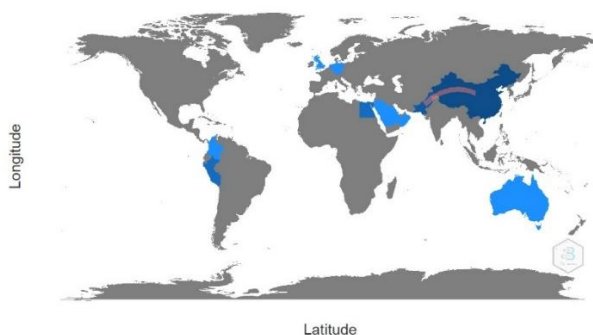


Figure 7. Country Collaboration Map

Based on Figure 7. The following can be interpreted that writers from China have mostly collaborated with writers from Pakistan. Furthermore, the maps of countries depicted in blue are countries that have conducted research and published on the Scopus database, namely China, Pakistan, Saudi Arabia, Australia, Peru, Colombia, Egypt, Germany, and the United Kingdom. Writers from the above countries, except China and Pakistan, tend to collaborate with writers from their own countries.

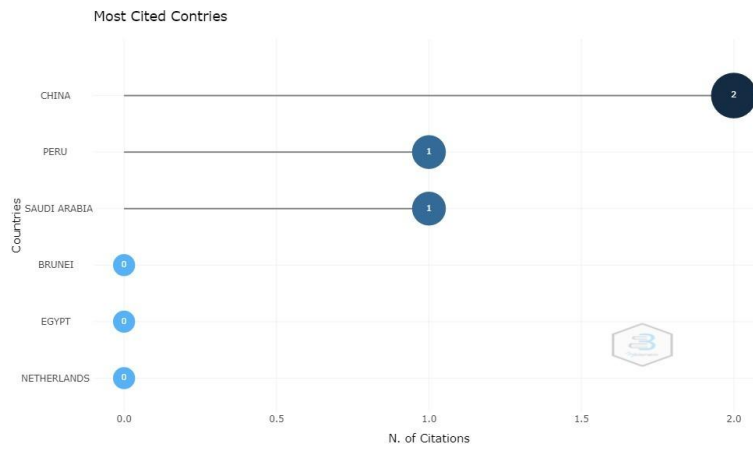


Figure 8. Most Cited Country

Based on Figure 8. The most influential or cited country in articles related to Green Entrepreneurial Intention in the Scopus database is China, with a total of 2 citations. Meanwhile, Peru and Saudi Arabia are in second place with 1 citation each. This position will continue to change and increase when more and more researchers are interested in researching the theme of this green entrepreneurial intention due to the importance of the theme for sustainable development.

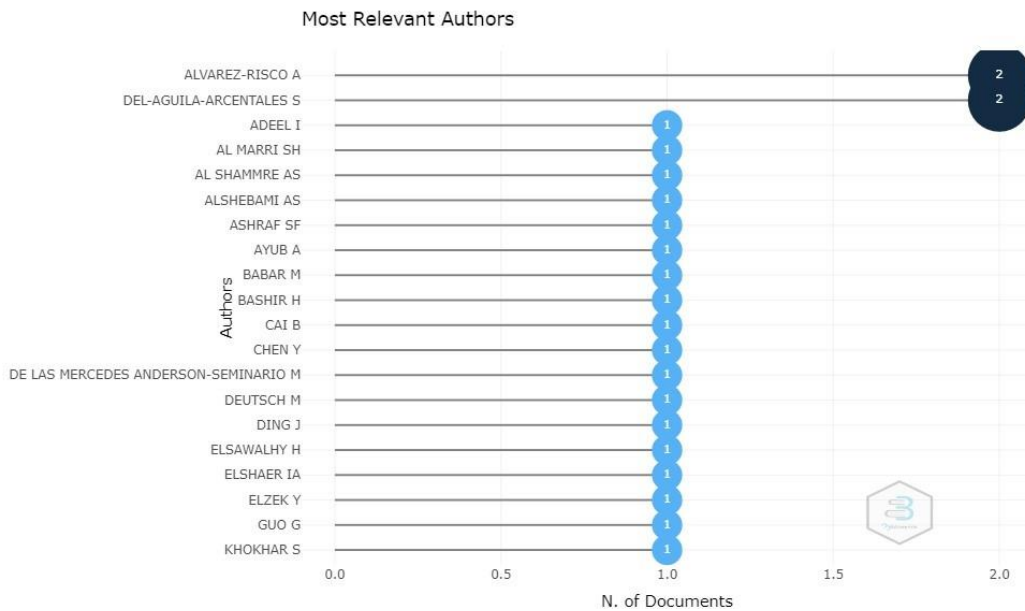


Figure 9. Most Relevant Authors

Based on Figure 9. It is known that the most relevant researchers for the theme of green entrepreneurial intention are Alvarez-Risco, and Del-Aguila-Arcentales, who each published two documents or documents, and then another researcher made 1 document. With this theme of interest in green entrepreneurship, only a few people have done it because it is still relatively new, so that makes me, as a researcher, interested in developing it, and it can be used as a reference for future researchers.

4. CONCLUSION

The study in this study related to "Green Entrepreneurial Intention" is a topic that is quite popular, but there are still few documents in the Scopus database. In 2023 the total number of documents related to this theme will only be 52 articles. The most prolific writers come from China, so that country takes part and collaborates with other countries in this research trend. This is evidenced by the most popular or corresponding authors originating from China, with four articles. However, the journal Sustainability from Switzerland took first place for the number of citations. Through this research database, this research has not been carried out or published in Scopus-indexed journals. Therefore, we recommend that many researchers take the Green Entrepreneurial Intention theme.

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