New Direction for Green Economics Through The Development of Global Islamic Economics: A Bibliometric Analysis

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ABSTRACT

Green economics is the study of sustainable economic transformation with environmentally friendly principles. Many studies that position green economics discuss the energy transition and the influence of technological and scientific developments, including from the perspective of policy studies from the political realm. However, of the many articles, only a few specifically discuss topics with a legal perspective and Islamic economic principles. Even though the basic foundation of maqashid sharia is an essential element in protecting the environment and being sustainable, this research aims to see the extent of Islamic studies in the green economics sector. From the results of the bibliometric analysis, researchers also see many gaps between the green economy and the Islamic economy, one of which is in terms of sharia management, halal industry, sharia finance, social finance, sharia management still focuses on energy transformation and even though the governance side still has uncertain benchmarks. Meanwhile, the halal industry only discusses the term green supply chain. From various existing studies, the research only focuses on sustainable economic theory, while the discussion on Islamic-based green economics is not very in-depth and specific.

Keywords: green economics, islamic economics, bibliometric analysis

INTRODUCTION

The green economy is part of encouraging the creation of inclusive and sustainable economic development. A green economy can also be interpreted as producing low or no carbon dioxide emissions for the environment, saving natural resources, and being socially just1. The green economy transition still has

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many obstacles to implementation, including the absence of relevant measurements in every policy, especially in Indonesia. People in Indonesia also still consume very high levels of food with high energy intensity. This will have an impact on our society, including in terms of dependence on fossil energy².

Apart from that, this transition also impacted relatively high price increases. Market prices often fail to value environmental resources like clean air and environmental friendliness. The green economy was built to support a system that, according to economic principles, allocates resources optimally and efficiently. This has been implemented in various developed countries in the world. The more developed the country is, the healthier, innovative, and more sophisticated its collective politics will be in developing the economy.

Economic imbalances, especially from the rising price sector in the green economic transformation process, will cause misery for society, especially for people experiencing poverty. This is also a concern for various stakeholders, including governments, financial institutions, and investors. So as not to 'damage' the development of a sustainable economic system. On the one hand, Islamic economics also has a significant urgency not to be underestimated, especially in terms of Islamic finance in Muslim-majority countries. It has become one of the leading players in the sustainable economic industry, including the rapidly developing Islamic finance sector.

Previous research has also been carried out on sharia financing, only from the specifications from an Islamic perspective it has not been carried out in depth from the green economic orientation sector in detail. It is important to specifically discuss the green economy which focuses on Islamic studies as the main theory in prioritizing sharia principles as a reference in building a sustainable economy from the green economic sector and paying attention to aspects of the social environment and friendly energy from an Islamic perspective.

Sharia finance is also packaged with finance that is oriented towards sustainable development, namely Sustainable Development Goals (SDG), which are expected to lead to sustainable development through green economic principles. So, what needs further attention is the environmental, social and governance aspects. In this way, Islamic finance is becoming increasingly important³.

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Strategic studies related to the green economy from an Islamic perspective have not yet been carried out specifically. Therefore, to address this gap, this article reviews the available literature in the field of green economics from an Islamic perspective from 2010 to November 2023 by identifying journals through main keywords through bibliometric analysis: identity. This is important to do because it has an impact on compliance with caring for maintaining and implementing sustainable economic development that is environmentally friendly, especially regarding the transformation of green energy from an Islamic perspective. It has also been realized that there is a lack of literacy in order to increase understanding regarding the relatively new green economy.

This article specifically discusses green economics from the perspective of Islamic economics through a bibliometric study to see gaps related to this discussion. So that it becomes input for several studies to be studied in depth as a strategic study to support future government policies. This research seeks to reveal that research on green economics and Islamic economics from the Islamic perspective sector and sharia principles supports research that prioritizes environmentally friendly and sustainable economic transformation.

METHODS

This research is a bibliometric analysis which aims to evaluate literature from scientific research activities through statistical reviews. This analysis is a tool to discover the impact of scientific publications in identifying research gaps and building networks with other topics specifically to increase visibility in a study. This research uses a systematic literature review (SLR) approach, which is one of the most organized techniques for bibliometric statistics, transparent and recyclable at each stage of analysis.

This research is used to synthesize specific research on the topic of green economics and global Islamic economics. This SLR focuses on subject clusters in terms of methodology, theory, research domain (network) and meta-analysis of the scientific substance of green economics and Islamic economics globally. Systematic literature review (SLR) actually aims to help future researchers identify general research into more specific field studies and to provide opportunities for ideas from the next researcher.

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RESULT AND DISCUSSION

Article Screening Results

Article collection is carried out through the stages of defining keywords or topics related to “green economics” or “Islamic economics”. Paper screening was carried out through the Publish or Perish application, which found 60 papers on these two topics in the period 2010 to November 23, 2023, with 350 citations and an average of 25 each year (shown in Figure 1).

![Figure 1: Results found when searching for "Islamic economics" and "green economics"
Source: Authors’ compilation using publish or perish (PoP)](image)

Meanwhile, with the keywords "green economics" or "Syariah", only one paper was found and "green economics" or "sharia" was found in 4 papers within the same time period of 2010 and 2023. Next, the researchers decided to use the results with the keywords "Islamic economics" and "green economics" because they are considered closest to the aim of writing to look at the substance of the development of green economics research from an Islamic perspective and the development of Islamic economics globally.

**Article Mapping**

Research on green economics, which intersects with Islamic economics, will be widely carried out in 2021 and 2023, and it is possible that it will continue to develop in the following year. Extraction of several papers consisting of 57 types of scientific articles and three types of books/results from international conferences. In terms of methodology, qualitative research still dominates with 43 articles and one conference result. Meanwhile, the quantitative research consists of 7 research articles, and the rest consists of 6 systematic literature reviews (SLR), 1 article of the literature review type, and 2 of the book series type (shown in Figure 2).

![Figure 2. Annual scientific production](image)

In 2021, we will discuss the topic of green economics in principle towards sustainable development goals (SDGs), which, in principle, Islamic finance also adapts to sustainability through Islamic socio-economics. Even Islamic finance also emphasizes playing an active role in caring for the environment, considering climate and cultural changes through bank participation. Islamic finance has

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also been transformed through the term 'green sukuk' to encourage Islamic wealth and become a commitment to maintaining the goals of social humanitarian principles through the principles of maqosid sharia. In general, Islamic financial sustainability emphasizes the integrative principles of Islamic social and financial practices such as Islamic microfinance, wealth inclusion, corporate and agro Zakat, Zakat, Waqf, SRI Sukuk, and Green Sukuk itself, with attention to sustainability by protecting the environment.

Apart from that, articles discussing the circular economy are also becoming a trend in 2021 and are also oriented towards sustainable development, which he considers to be very lacking in research. This research is oriented towards economic and non-economic aspects in an inclusive manner by paying attention to aspects of efficiency, promotion, and environmental preservation, of course, by paying attention to applicable Sharia principles in order to encourage increased economic transformation towards a circular economy.

Meanwhile, in 2023, some green economics research will still discuss green sukuk, which are environmentally friendly and are developing to explore regional energy policy adaptation, dynamic interactions between fossil fuel-free, ESG and carbon-saving investments, plant migration towards agricultural adoption, manufacturing/green supply chains on halal products, as well as the impact of Internet of Things (IoT)-based energy developments in order to protect the environment from damage and ensure sustainability. For years

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11 Billah, “Islamic Wealth and the SDGs: Global Strategies for Socio-Economic Impact.”
other than 2021 and 2023, the topic of green economics has focused on exploring fintech, Islamic finance, and Islamic social finance.

**Clusters and Network Analysis**

Cluster analysis was carried out through VOSviewer graphic visualization to produce groupings and networking of keywords related to green economics and Islamic economics using co-occurrence analysis involving all keywords. The minimum number of keyword frequencies is 4, from 2700 keywords, and 137 keywords were taken from 229 keywords that met the requirements. Of these 137, 9 clusters were produced, which were marked with several colours, namely red, blue, orange, purple, green, yellow, brown, light blue and pink (shown in Figure 3).

![Figure 3. Co-occurrence with all “Green Economics” and “Islamic Economics” keywords](image)

Several network visualisations are divided among the nine clusters linked by these two keywords. Cluster 1, which is about green economics, is related to a topic that is closely related to Islamic finance and the circular economy; it is built on the topic of business models as a link to the topic of green economics. While other issues are connected to many other topics whose scope is larger than
that of green economics studies, blue economics has emerged as a distinct field as a subset of Islamic finance studies and circular economy (shown in Figure 4).

Figure 4. Network Visualization with “Green Economics” keywords

Meanwhile, Islamic economics is in line with Islamic finance, which is most dominantly tied to the circular economy, green sukuk, business and halal products, all of which lead to protecting the environment and being sustainable. The circular economy is connected to the green economy, while Islamic finance is a derivative of the circular economy, including business models, which are also topics that are the focus of discussion.

Figure 5. Network Visualization with “Islamic Economics” and “Circular Economy” keywords

The next discussion will emphasize business models for implementing green economics. This business model is oriented towards protecting the environment and maintaining sustainability, which is better known as the Sustainable Development Goals (SDGs). SDGs are more constructed in the direction of care with the principle of not damaging and protecting the environment, which is known as environmentally friendly.

Green banking and green financing are two examples of the environmentally friendly terminology that have been embraced in the financial industry. This modification encourages banks to engage in providing environmentally friendly finance and is an example of an environmentally friendly banking policy. Additionally, Islamic banks can play a bigger role in promoting sustainable economic growth by integrating green policies into every aspect of their operations.¹⁹ Even environmentally friendly banking policies have been criticized and determined by Bangladesh to be in accordance with Sharia

law, in accordance with the main sources of Sharia, the Koran and Sunnah. 20. Even Julia et. al. have designed an Islamic financial framework with the term green banking through comparison results between Islamic banks and conventional banks through a maqosid sharia perspective21.

The Islamic business model and financial products give Islamic banks an advantage over conventional banks in providing financing at all stages. This research is a scientific development that integrates the circular economy and sustainability principles. Both from the aspect of connecting the principles, responsibilities, goals and business models of Islamic finance with social, economic and environmental sustainability22.

Green Sukuk also adapts to the green economy in maintaining value from the customer side. This is seen from the functional, social, emotional, religious and knowledge values. This provides valuable insight into understanding the determinants that stimulate potential investors to purchase environmentally friendly financial products in the Islamic finance industry, which has emerged as an important element in the country’s economic engine23. Sukuk also has a role as green sukuk for sustainable economic development in Indonesia, especially in increasing climate change mitigation. This study also found that projects financed by the issuance of State Sukuk have complied with sharia provisions and have met green infrastructure criteria through the stages of project identification, preparation and assessment of project feasibility, issuance of Green Sukuk, project implementation and completion of project monitoring and project evaluation.24

These are also subjects that are extensively researched from an environmental and political standpoint in order to develop a green economy in some nations. To guarantee that measures for environmental protection with projections will have an effect on environmental harm, this is only due to derivative political issues, which are thought to be anti-environment. This affects the nation’s efforts to create economic sustainability as well.25

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22 Rashid and Siddique, “Circular Economy, Green Economy, and Sustainable Development: Establishing the Interconnections and Discoursing the Role of Islamic Finance.”
23 Yudi Ahmad Faisal et al., “Examining the Purchase Intentions of Indonesian Investors for Green Sukuk,” Sustainability (Switzerland) 15, no. 9 (2023), https://doi.org/10.3390/su15097430.
25 Aliev, “The Role of the Sustainable Development Concept in Shaping Energy Policy Transformations in the Caspian Region Countries.”
In terms of the development of Internet of Things (IoT) technology and integrated solar energy sources, they also continue to be developed, and attention is paid to the green energy side in order to ensure continued benefits and no damage to the environment. This requires special attention in actively contributing to overcoming air pollution, renewable energy solutions, and handling air pollution, as well as solutions to the current depletion of energy. Meanwhile, other findings show a long-term and short-term relationship between Islamic social capital and environmentally friendly growth in Malaysia. It only goes one way from Islamic social capital to green economic growth. These findings have important policy implications for measuring green economic growth to take into account social welfare and to fulfil Maqasid Syariah.

**Topics Closely Related to Islamic Economics**

Research that leads to Islamic economics is built into five research topics, namely research that emphasizes sustainability through protecting the environment, which emphasizes the maqosid sharia perspective. Furthermore, from the financial side, Sharia Sukuk is being built, but it also focuses on sustainability and environmental friendliness. Meanwhile, Islamic principles continue to be adapted through social finance and a religious way of life in accordance with Islamic ideology.

Social finance is very closely related to Islamic finance, which both have principles of increasing income and growth, but as research develops in relation to the topic of social finance, it has now led to sustainability by maintaining social principles in order to protect and maintain the environment and humanity. In this way, the growth of social finance becomes a new role model as a reference in developing Islamic economic growth.

Next, there is a discussion about banking, which comes with the term green banking, which talks about governance that prioritizes Islamic principles but aims at sustainability. The last one is the halal industry, which still focuses on the halal supply chain.

The following is a classification of research that leads to research with Islamic economics:

<table>
<thead>
<tr>
<th>No</th>
<th>Topic</th>
<th>Authors</th>
<th>Year</th>
<th>Keyword</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Circular Economy</td>
<td>Sumer S, Yanik R</td>
<td>2021</td>
<td>Circular Economy, Economic Growth, Islamic Finance, Islamic Financial Products, Sustainability</td>
</tr>
<tr>
<td>2</td>
<td>Islamic Finance</td>
<td>Hamid NA, Muda R, Alam MM, Omar N, Nadzri FA</td>
<td>2021</td>
<td>Consumption, Green Economy, Islamic Social Capital, Malaysia, Maqasid Shariah, Zakat</td>
</tr>
</tbody>
</table>

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26 Amali et al., “IoT-Based Solar Cell Power Supply Design and Analysis at the Assyifa Islamic Boarding School Laboratory, Subang Regency, West Java as an Environmentally Friendly Green Energy.”

| Billah MM | 2021 | Awqaf Model, Green Sukuk, Islamic Microfinance, Islamic economics, Islamic ethical wealth, Islamic finance, SDGs, Socio-economic impact, Wealth and Asset Awqaf |
| Thaker MA, Khaliq AB, Thaker HB, Amin MF, Pitchay AB | 2021 | Digital currency, FinTech, Green finance, Integrated model, Islamic green finance |
| Bassens D | 2015 | Faith-based markets, Financialization, Investments, Sharia |
| Delle Foglie A, Keshminder JS |  | ESG, Financial inclusion, Islamic bonds, Islamic finance, Socially responsible investment, Sukuk, Sustainable finance |
| Khoros VG, Dolgov BV, Solov'eva ZA | 2019 | North Africa, Islamic values and institutions, modernization, “green economy” |
| Sumer S, Yanik R | 2021 | Circular Economy, Economic Growth, Islamic Finance, Islamic Financial Products, Sustainability |
| Sukuk | 3 | Islamic bond, Islamic finance, Scopus database, descriptive analysis, sukuk, synthesis analysis environmental finance |
| Morea D, Poggi LA | 2017 | Green sukuk, Grid parity, Wind energy |
| Sukuk | 4 | Islamic bond, Islamic finance, Scopus database, descriptive analysis, sukuk, synthesis analysis environmental finance |
| Islamic Green Banking | 28 AV, Kanaeva OA | 2019 | Islamic banks, development banks, inclusive growth, project financing, responsible finance, responsible investments, risk management, sustainable banking, sustainable development, sustainable finance, “green” banking |
| Aminuzzaman M, Bakar R, Aminul Islam M | 2016 | Bangladesh, Economic development, Foreign, Islami bank Bangladesh limited, Islamic banking |
| Faisal YA, Gunawan I, Cupian, Hayati A, Apriliadi A, Fajri M | 2023 | emotional value, functional value, green sukuk, knowledge value, purchase intention, religious value, social value |
| Halal Industries | 5 | Halal, Halal supply chain (HSC), Halal supply chain management (HSCM), Sustainability, Sustainable performance measures |

From the classification results above, the circular economy is the broadest topic in the Islamic economic sector; this topic accommodates several Sharia financial topics; the circular economy is a role model for Islamic finance, so it builds sustainability by paying attention to the constructed environment systematically to realize green economic transformation. Meanwhile, green economics research from the sub-topic of Islamic finance has developed into social finance, which is studied by paying attention to the perspective of Islamic law, namely maqosid sharia. Where Islamic finance also includes green sukuk, which also transforms towards sustainability from an environmentally friendly and justice-based perspective.

Derived from the topic above, there are also scattered studies from the point of view of the Islamic banking subtopic, which also adapts to governance and policy which adapts to the principles of justice and sustainability by paying attention to the environmental and social aspects. This also accommodates social, and financial topics with terms such as wakf and zakat. Indirectly, topics that touch on Islamic finance also support and contribute to realizing the realm of financial inclusion. Apart from that, the halal industry also supports green economics from halal supply chains with the term green supply chain, only looking at the implementation of green supply chains in the realm of environmental friendliness and the use of environmentally friendly technology.

Indirectly, topics that touch on Islamic finance also support and contribute to realizing the realm of financial inclusion. Apart from that, the halal industry also supports green economics from halal supply chains with the term green supply chain, only looking at the implementation of green supply chains in the realm of environmental friendliness and the use of environmentally friendly technology.

**CONCLUSION**

The distribution of research relating to green economy and Islamic economics is still very wide open, and there are many gaps from an Islamic perspective. Research on the topic of green economics still emphasizes the transformation process of sustainable development, especially in the policy sector, adaptation of science and technology in general and from the energy side.

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29 Sumer and Yanik, “Circular Economy in Islamic Finance.”
32 Kanaev and Kanaeva, “Sustainable Banking: Conceptualization and Implementation Practice”; Faisal et al., “Examining the Purchase Intentions of Indonesian Investors for Green Sukuk.”
in particular. The articles in the extracted Scopus database also still focus on the study of Islamic finance, sukuk, fintech and Islamic finance. The results of our analysis, which was determined by bibliometric analysis, are connected to the sub-topic of the circular economy from an Islamic perspective. It's just that further, more specific research needs to be carried out on sub-topics with the perspective of Islamic law, maqosid sharia, and fiqh law.

On the other hand, green economics is very broad; researchers also see many gaps when looking at the sub-topics of Islamic economics, including Sharia management, halal industry, Sharia finance, and social finance. From the results of other analyses, it is clear that the Sharia management sub-topic still focuses on energy transformation, and from a governance perspective, it still has uncertain benchmarks. Meanwhile, the halal industry only discusses supply chains with the term green supply chain. These topics require deeper emphasis on these topics to be researched in the future so that they become strategic studies in the future.

Author’s Contribution
Achmad Sani Supriyanto: Contribute to formulating research ideas, collecting data, processing data, and interpreting data.
Masyhuri: Contributing to writing systematics, research methods.
Siti Harizah, Moch Mahsun: Contributing to analyzing interpretation results, the language proofread.

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The author declares that there is no conflict of interest.

Ethical Approval
Ethical approval No patient-identifying parts in this paper were used or known to the authors. Therefore, no ethical approval was requested.

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