Digital Management on Green Economy: A Review Using R Indexed by Dimensions.ai

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Abstract. This research aims to find out and map research related to the development of Digital Economy research trends published by leading journals on Digital Management in a Green Economy. The analysis focused on describing the characteristics and trends of the keywords, authors, and journals. The data analyzed were from 108 research publications in Dimensions. The search terms were "Digital Management on Green Economy". The searches used to establish the study dataset were last updated on May 28, 2022. Descriptive statistical methods were used, and a bibliometric analysis was conducted using Biblioshiny, an R-based app, to generate a bibliometric map. This study found that the most common words in this topic were "Artificial Intelligence", "Health Inequities", "Solid Waste" and "Waste Management". And there is an evolution of the research theme from 2005 to 2020 about "management system" to "blue technology" which will occur from 2021 to 2022. The findings of this study can provide insight for regulators and academics to develop technology and management of The Green economy.

Keywords: digital management, green economy, blue technology, bibliometrix

1 . Introduction

Sustainable development and environmental preservation are now widely recognized as critical requirements for protecting our world from human-caused damage. Various global projects are underway to combat today's negative development impacts, such as global warming and climate change. The focus on reducing fossil fuel demand by implementing the 3Rs (Reduce, Reuse, Recycle), often known as the circular economy, is a common thread running through all of these programs.

The circular economy is an economic activity with an optimum level of output in exploiting natural resources by minimizing natural exploitation, decreasing environmental damage, and reducing emission and waste levels through the implementation of a sustainable concept (Strielkowski, 2016). The circular economy model is a superior version of the linear economic product-consumption–disposal model, with the goal of optimizing and maximizing

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the potential of each material and recovering materials that have reached their end of life through environmentally friendly technical improvements (Marino & Pariso, 2021).

According to World Health Organization (WHO) estimates, the global health crisis is worsening, with over 7 million people dying each year. The awareness of environmental improvement and better management appears to have become a shared consciousness. The motto "return to nature" began to be heard all across the world, even in Indonesia's banking business. In recent years, the term "green banking" has become increasingly popular (Andarsari & Firdiansyah, 2020). The environmental harm that frequently happens cannot be isolated from human activity, with the majority of the damage being generated by profit-seeking human commercial activities. Environmental resources such as air, water, soil, and biota can produce goods and services that bring economic advantages, either directly or indirectly (Ningsih et al., 2020).

Every country, including Indonesia, has a long-term objective of becoming a greener economy. The quality of the environment in Indonesia today reflects the successful implementation of the Green Economy. The economic, social, and environmental cycles are inextricably linked. The quality of the environment is greatly influenced by the outcomes of economic and social activity. Often, development is carried out solely for the purpose of achieving economic expansion, without regard for environmental sustainability. Human social and economic actions, as well as natural disasters, can regularly degrade or degrade the quality of the human environment. The actions of these numerous activities are what prevent the natural, artificial, and social environments from being preserved (Wiyekti, 2021).

Good management is required to support economic activities since management is defined as the planning, implementation, and supervision of organizational resources in order to achieve goals effectively and efficiently (Usman, 2013). To stay up with the trends, good and certified technology is also required to assist management in running effectively and efficiently. And at the moment, the technology that is developing is digital technology. It is unavoidable that the progression of time is constantly accompanied by increasingly rapid technological breakthroughs, and that as a result of these technological advances, human needs and demands are becoming increasingly demanding. As a result, the human lifestyle is inextricably linked to all-electronic technologies. Almost all large organizations and startups now employ technology to help them.

This study attempts to identify and map research on the evolution of digital management on green economic trends published in key digital management journals. The data was compiled from 108 Dimensions indexed research publications published between 2005 and 2022. The Biblioshiny program will be used to process and evaluate this data in order to create a bibliometric map of research advancement connected to digital management in the green economy.

2 Literature Review

Management is derived from the Latin language, specifically from the words manus, which means hand, and agree, which means to do. The two words are combined to form managere, which means "to manage." Managere is an Italian word that means "to manage" (verb), "to manage" (noun), and "to manage" (person). Management translates to management in Indonesian (management). The planning, implementation, and supervision (p3) of organizational resources to achieve goals effectively and efficiently are referred to as management in a wide sense (Usman, 2013). Management is the science and art of managing the process of effectively and efficiently employing human resources and other resources to achieve a specific goal (Hasibuan, 2016).

Management is a broad phrase that is used frequently in all scientific fields. Because every activity is linked to things that are managerial in nature, it is possible to structure the path of activities. Economic operations, especially the green economy, require good management in order to comply with applicable standards.

Green Economy is an economic concept that strives to promote society's wellbeing and social equity while lowering the danger of environmental damage. This Green Economy can also be defined as an economy that emits little or no carbon dioxide into the atmosphere, conserves natural resources, and is socially just. The green economy differs from other economic ideas in that it directly assesses natural capital and ecological services as economic value and uses cost accounting in which the costs borne by society can be traced back and calculated as liabilities, resulting in a unified system that does not harm or ignore assets (Stafford & Faccer, 2014).

A green economy also refers to a low-carbon economy that produces no emissions or pollution for the environment, conserves natural resources, and promotes social justice (Adamowicz, 2022). The Green Economy is a concept in economics that aims to increase welfare and social justice. This approach has three points to consider: low carbon, socially inclusive, and resource-efficient. The goal of the Green Economy is to reduce the negative effects of economic growth on the environment and natural resource shortages (Borel-Saladin & Turok, 2013). So, in a nutshell, the Green Economy is an economy that is low in carbon (i.e., does not emit emissions or pollution), conserves natural resources, and is socially responsible.

This economic model was developed in response to the human tendency to prioritize profit over sustainability. The current economic paradigm pushes humanity to exploit all available resources without consideration for environmental preservation in order to obtain maximum benefits. The use and exploitation of natural resources that are not balanced by conservation efforts in the name of human well-being appear to be having a negative influence on the environment's sustainability. This jeopardizes not only the natural environment's long-term viability but also human survival. The topic of global warming and climate change is just one of several environmental issues that are not just local but also global in nature. This increased awareness of environmental issues encourages countries around the world, including Indonesia, to consider balancing economic growth with natural environmental conservation efforts, resulting in the birth of economic paradigms that include environmental and social justice considerations. The concept of sustainable development has been around in Indonesia since the 1970s, but it has tended to focus on economic development, even short-term growth, until recently. The created development paradigm solely encourages extractive economic development. Without denying that the quality of a huge quantity of power and the environment has improved, it is fair to say that efforts to support environmental functions and the sustainable use of natural power are still a long way off (Makmun, 2016).

3 Research Method

This study's methodology is a qualitative method approach with descriptive statistics literature review of 108 articles on the issue of green economy digital management. The qualitative research method is founded on postpositivism's concept, and it is used to examine the condition of natural objects (rather than experimental), using the researcher as the primary instrument. Triangulation (mixed), inductive/qualitative data analysis and qualitative research outcomes stressing importance rather than generalization are all data collection strategies (Sugiyono, 2019).

After then, bibliometric analysis was used to continue the investigation. In information science, bibliometric studies highlight trends of document consumption, literary creation, or information sources in a subject. There are two sorts of studies in bibliometrics: descriptive studies and evaluative studies. Descriptive studies look at authorship patterns such as the gender of the author, the type of work the author undertakes, the extent of collaboration, and the author's productivity to determine the productivity of articles, books, and other formats. The author, as well as the development and topic of the essay, are all done at this university. Counting references or cites in research articles, books, or other formats is how evaluative studies examine the use of literature (Pattah, 2013).

Qualitative research is a type of descriptive research. The data collected isn't used to confirm or deny the theory (if any). The results of the analysis do not have to be in the form of numbers or coefficients between variables; they might be in the form of a description of the observed symptoms (Subana & Sudrajat, 2005). Descriptive statistics, on the other hand, is a part of statistics that analyzes the strategies for gathering, summarizing, and presenting a summary of study data. As a basis for diverse decision-making, the data must be summarized accurately and on a regular basis in tables, charts, and graphs (Wijaya, 2013).

For the stages in this bibliometric research, the following is a detailed description of the process and a description of each stage.

Table 1. Research Stages

No	Stage	Stage
1	Selection of the object of analysis and scientific basis	(a) Determine the scientific and theoretical fields of the work (b) Limit work goals (c) Select the scientific basis on which the research of the article will be carried out
2	Search procedure	(a) Define search terms (b) Specify engine for advanced search (c) Define search filter
3	Collecting and compiling data	(a) Choose a reference manager software (b) Define bibliometric analysis software (c) Download references from reference managers, bibliometric and electronic spreadsheet formats (d) Import files to reference manager software
4	Contextual analysis of scientific outputs to samples	(a) Analysis of the temporal volume of the selected journal (b) Analysis of selected articles citations (c) Keyword analysis of the selected articles (d) Detailed (complete) keyword analysis (e) Future direction research analysis
5	Citation network analysis was carried out by sample	(f) Classification of methodology & nature of articles

Source : Customized from Costa et al. (2017)

This research uses data from published studies on the topic of Islamic Civilization Ana Economy research from a variety of periodicals. On May 28, 2022, data was gathered using a search for publications indexed by Dimensions, and the investigation was conducted using the keyword "Halal Tourism Management." A total of 108 articles published between 2005

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and 2022 will be returned in the search results. The data was examined using Microsoft Excel 2016 and came in the form of subjects utilized in the publication of articles on the Islamic civilization economy. Biblioshiny software was used to assess the development trends of publications on digital management in the green economy.

4 . Result and Discussion

4.1 Source

The table below displays a collection of documents used in a study on the topic of digital management in the green economy. The total number of papers used is 108, grouped into five categories: journal articles (64), book chapters (27), editorial (9 documents), reviews (4 documents), and proceedings (4 documents).

Table 2. Sources of Document

No	Document Types	Number of Articles
1	article	64
2	chapter	27
3	edited book	9
4	preprint	4
5	proceeding	4
	Total	108

According to the results of the aforementioned grouping of document categories, the most common type of document used as a research subject is a document in the form of a journal article, which accounts for 59 percent of all research subjects and 64 documents. Meanwhile, by 4 percent or as much as four documents, the least documents utilized were in the form of a Proceeding and Preprint. This demonstrates that the references utilized in this study are reliable, as the majority of them are from scientific papers.

4.2 Trends in Publication

This section lists the number of articles published on the topic of digital management in the green economy. Over a 17-year observation period, from 2005 to 2022, 108 publications were published. With 27 articles published annually, 2021 was the year with the most published digital management on green economy-themed papers. Between 2005 and 2012, it was discovered that Dimensions did not index the number of publications for a number of years.
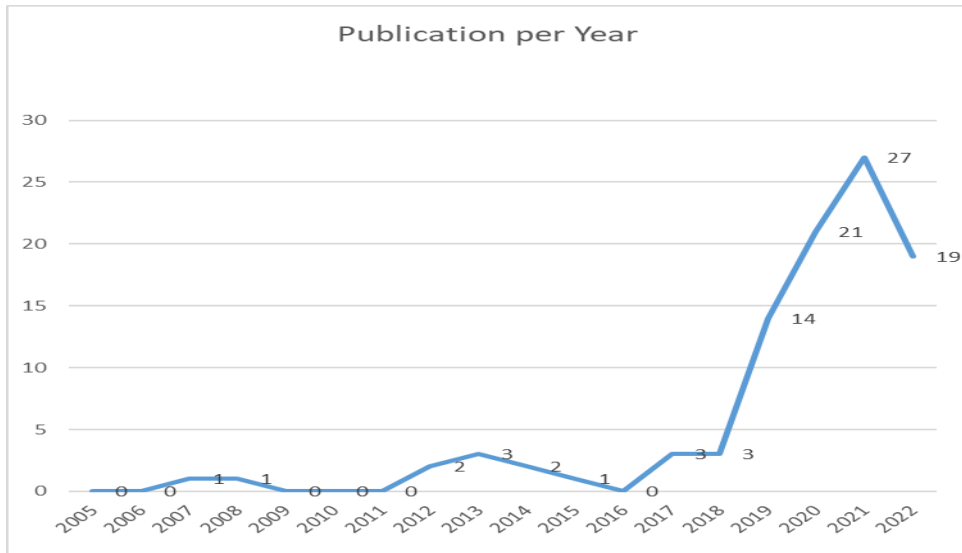
Figure 1. Trends of Publication

According to the graphs above, the number of articles published with the Dimensions indexed digital management on the green economy theme is on the rise. Despite the fact that there was a void of indexed articles from 2005 to 2017, there was a vacancy of indexed publications from 2005 to 2017. The year 2021 had the most publications, with a total of 27 on the issue of digital management in the green economy.
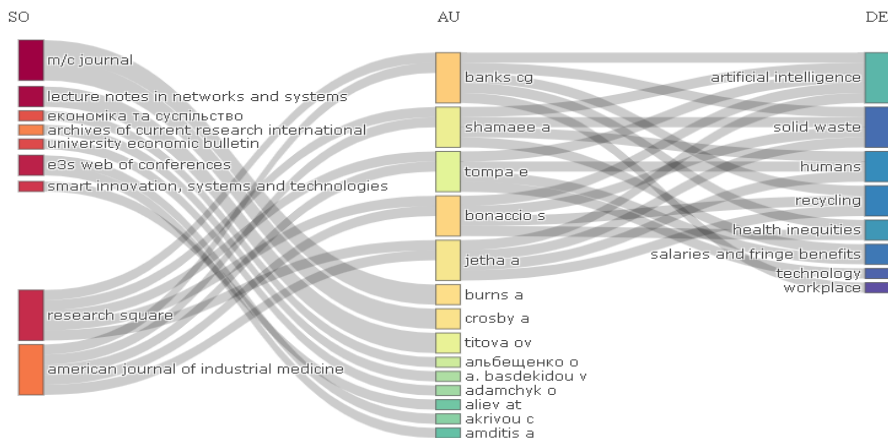
4.3 Plots in Three Fields

Figure 2. Three Fields Plot

The Three Fields Plot image above is made up of three elements: the name of the publication journal, a list of the authors' names, and the theme/topic that was used. A gray plot, which is related to each other, connects the three elements. Each journal lists authors who frequently contribute to the publication, starting with the name of the journal. Each contributor identifies a topic that they frequently employ in their studies on Islamic civilisation and economics. The number of publications linked with each of these items is indicated by the rectangular size.

The figure above shows that there are 9 journals indexed in the Three Fields Plot that publish paper-themed digital management on green economy in the first element. The research square, which was displayed with a red rectangle associated to multiple authors, including Banks CG, Shamaee A, Tompa E, Bonaccio S, Jetha A, was the top journal that published the most papers with the theme digital management on green economy.

Then, in the image's center, proceed to the second element, which reveals the author's name, where numerous authors are linked to the previous journal. Furthermore, the author will be linked to the image's theme keywords, which are frequently utilized to the right of the image. This plot in this study included 14 of the best researchers. Each author's number of research papers is indicated by the rectangular size. In this study, the authors focused on the issue of digital management in the green economy, namely Banks CG, which is represented by orange rectangles.

Finally, on the right side of the graphic, the third piece explains the research topic. Each topic is linked to authors who have written extensively on relevant themes. There are eight keyword themes included in the image's results. The words artificial intelligence are frequently marked with a green rectangle among all the topics that come up. This demonstrates how World Technology is inextricably linked to studies on green economy digital management.
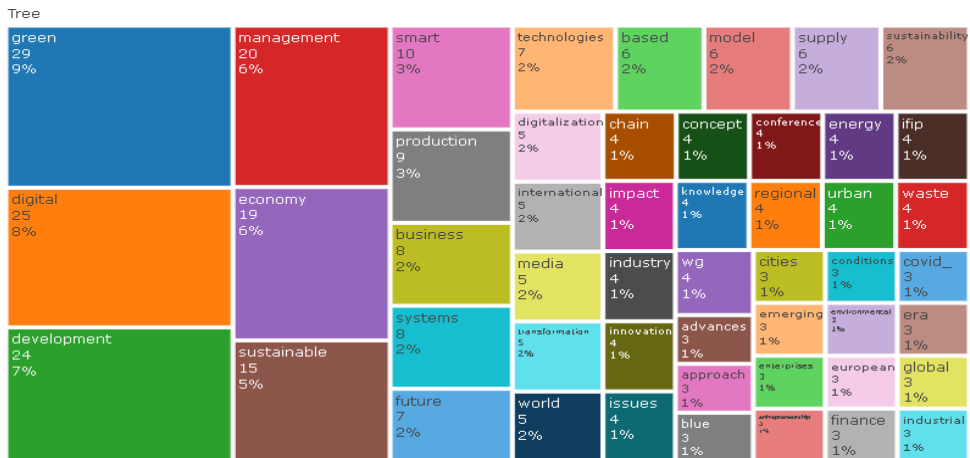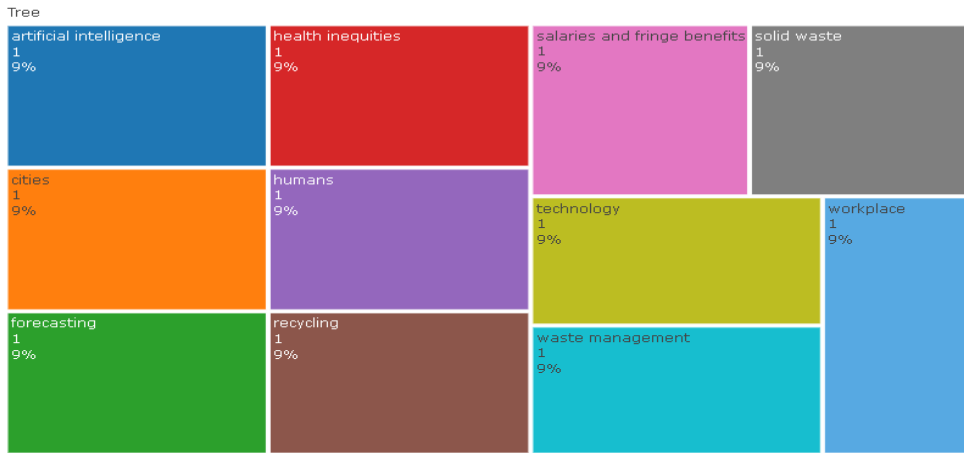
4.3 Tree Map of the World

Figure 3. Tree Map World by Title

The World Tree Map above is a title-by-title description of the words that frequently appear in the data set of papers on the issue of digital management and green economy in various forms. According to the quantity of words that appear, World TreeMap displays graphics of varying sizes of words. In terms of location, the World TreeMap shows that the word "green" comes first in as many as 29 words, accounting for 9% of the total. The second term is "digital," which has a total of 25 words and an 8 percent proportion, and the third word is "development," which has a total of 24 words and a 7 percent rate.


Figure 3. Tree Map World by Keyword plus

The World TreeMap above is a description of the words that frequently appear in the data set of papers researched with the theme of digital management on green economy in various forms, organized by keyword plus. According to the number of words that appear, World TreeMap displays graphics of varying sizes of words. In the image below, each term has the same size, indicating that the terms in question is a topic that is frequently discussed in articles on digital management in the green economy. "Artificial intelligence," "forecasting," "waste management," "solid waste," and other terms can be found on the image.

4.4 Topics on the Rise
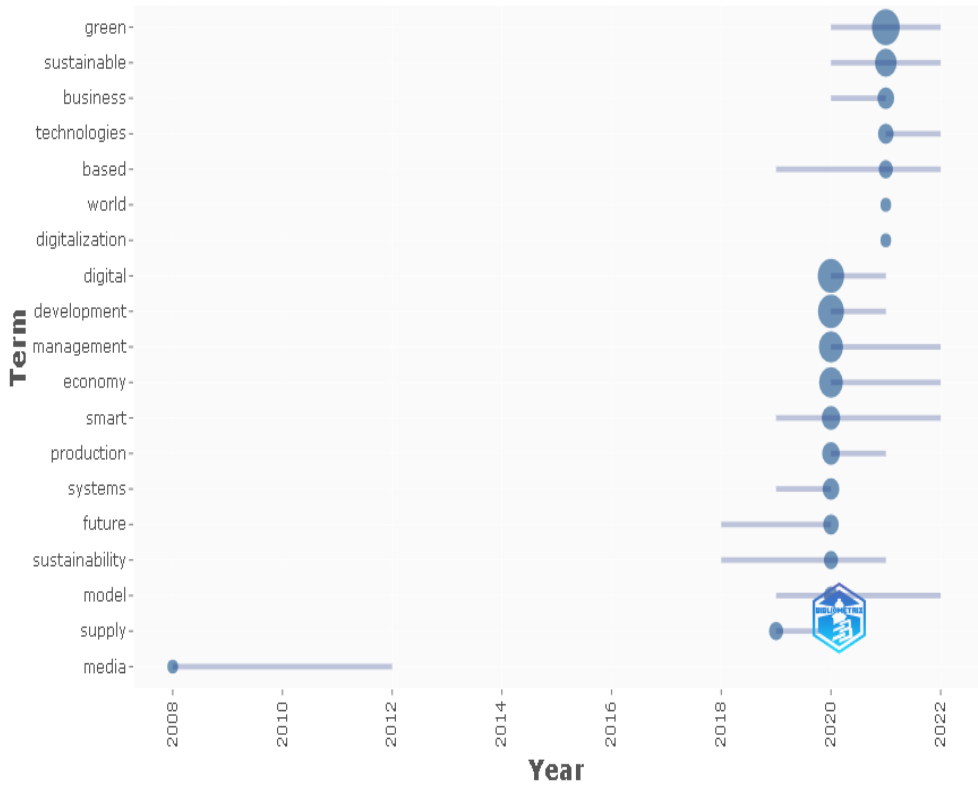
Figure 4. Trend Topics

The figure above displays an overview of the evolution of the topic over time with a division each year, which is part of this study. As a result, it is clear which themes have been utilized for a long time and which topics have only recently been used. The frequency of the number of words in the research on the theme of Halal Tourism Management was also adjusted to the emergence of the topic. The larger the number of words utilized, the higher the number of new words used, and the more to the right the number of new words used.

According to the statistics, the keyword "media" has been utilized since 2008, particularly in relation to development topics and issues. Systems, production, smart, economy, digital, and a variety of other topics will be widely discussed in 2020.

4.5 The Evolution of Themes
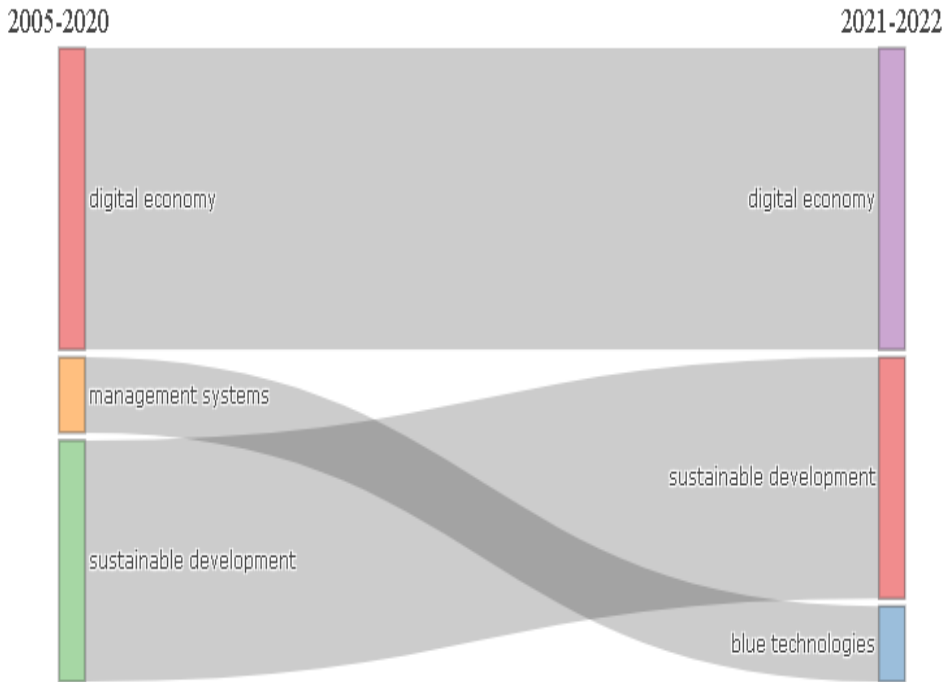
Figure 5. The Evolution of Theme

When comparing freshly published papers to papers that have been published for a long time, the themes employed in written works that are the subject of inquiry continue to change. The theme's progression is depicted in the graphic above, which also includes some commonly used subthemes. The left part displays some of the most popular themes from 2005 to 2020; there are three themes displayed, each with a different size based on the number of times the theme was used. The theme "digital economy" was voted the most popular, followed by "sustainable development" and "management systems."

The most recently used themes in the time between 2021 and 2022 are shown in the second or right section. There are three themes listed, all of which are evolutions of prior themes, such as "digital economy," "sustainable development," and "blue technology," which are expansions of various concepts represented by colorful grooves.

4.6 Map of the Themes
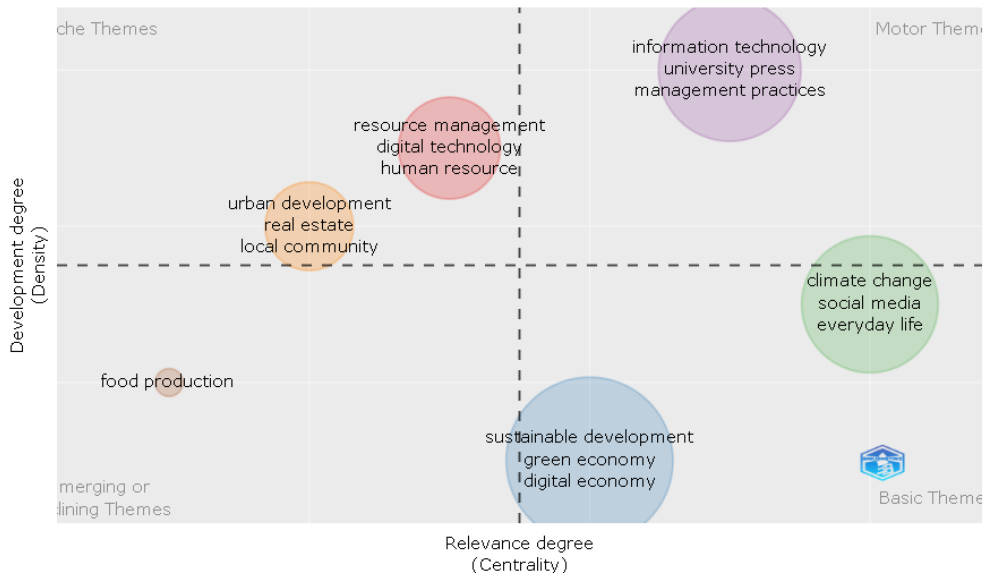
Figure 6. Thematic Map

This study also looked at themed maps that were separated into four quadrants depending on density and centrality, as seen above. This result is created using a semi-automated method that examines the titles of all references to the study object and adds relevant keywords that are not the author's keywords. So that the final product can capture a wider range of diversity.

The topic "motor" or "driving" is represented in the upper right quadrant by high density and centrality; this topic is "Information Technology," "university press," and "management practices." Given the importance of these topics for future research, they should be developed further. "Resource management," "digital technology," "human resource," "urban development," "real estate," and "local community" are among the underrepresented themes in the upper left quadrant, as indicated by high density but low centrality.

Furthermore, in the lower-left quadrant, there is a theme that has been used for a long time but has seen a downward trend with a pronounced low centrality: "Food Production." Finally, the lower right quadrant is a fundamental theme with a high centrality but low density. "Climate change," "social media," "daily life," "sustainable development," "green economy," and "digital economy" are among the topics covered.

4.7 Findings

The preceding study's findings reveal a bibliometric analysis of Dimensions indexed journal articles with the theme of digital management of the green economy using the Bibliometrix program. Since the beginning of the 2005s, research on digital management has been a hot topic among academics, with a void from 2005 to 2016, then a major uptick in 2018, and it continues to rise.

According to the findings of the above analysis, research on the issue of Halal Tourism Management has been published by a variety of journals and authors, resulting in a wide range of topics. "Green," "Digital," and "Development" are then tied to the most generally utilized keywords in the most popular digital management on green economy subject articles. The terms "climate change," "social media," "daily life," "sustainable development," "green economy," and "digital economy" are words or sentences in the lower right quadrant, or basic topics, that become a central and relevant topic in the study with the theme digital management on the green economy. These keywords, which often appear in all of the article data examined, are mostly concerned with digitalization.

A change in a firm or organization that encompasses people resources, processes, strategies, and structures, as well as the adoption of technology to improve performance, is known as digital transformation (Royyana, 2021). One of the goals of digital transformation is to make the old method of doing things more effective and efficient, particularly in business (Qital, 2022). Digital transformation entails the development of digital infrastructure, the use of digital technology, and the strengthening of enablers .

Digital infrastructure is a combination of hardware, network, and software that is required to enable digital transformation. Methods for disseminating data and documents accessed through applications can also be called infrastructure. Desktop browser-based platforms (Internet Explorer, Google Chrome, Apple Safari), desktop apps, email platforms, mobile phones, and other platforms can facilitate digital activities. Internet access from any device, quality of service, application storage, and data management are all important aspects of digital business infrastructure management (Hikmah, 2021).

Green digital infrastructure, in accordance with the notion of a green economy, is required to support green economic activities that do not harm the environment. There are many activities nowadays that create environmental concerns, many of which are backed by business associations, organizations, and other groups in an attempt to eliminate things that damage the environment and make it better again (Butler, 2011). According to certain research, proper ICT use can have a direct impact on the environment and its long-term viability (Asadi et al., 2017).

Green ICT (green ICT) is an environmentally friendly ICT concept that uses information and communication technology to improve the environment. Green ICT is classified into two categories in theory: Green ICT (Green of ICT) and Green because of ICT (Green by ICT). Green ICT is a type of ICT activity that makes use of ecologically friendly energy and natural resources, such as renewable energy sources to power servers. Meanwhile, ICT is green since it is an activity that uses technology to increase environmental sustainability. Reducing the use of paper in workplace spaces is one example (Abraham et al., 2018).

The usage of devices and the efficiency with which they are used is highlighted in Green ICT, which typically refers to replacing PCs with more energy-efficient devices, reducing the use of non-essential and unnecessary computers, and employing renewable energy for data centers (Watson et al., 2010).

4.8 Directions for future research avenues

Based on our descriptive and bibliometric analysis of the digital management on green economy, we recommend but not limited to the following research areas:

- Based on the trend found in the bibliometric analysis above, that artificial intelligence is included in the topic of digital management. So it is necessary to test the effectiveness and efficiency associated with these AI instruments, for example; machine learning, Internet of things; deep learning; big data; sensors; cloud computing; drought; and robots. For the sake of developing a green economy.
- Need to test the technology that will be used, whether it is feasible and does not cause waste. So the concept of technology created is to reduce pollution can be realized.
- There is a movement towards the topic of discussion from just a management system to blue technology. So it is hoped that in the future it can be patented how the blue technology concept can support the green economy movement.

5 . Conclusion

The purpose of this study was to see how research on Halal Tourism Management has progressed from 2005 to 2022. The 108 documents used in this analysis reveal that research on the topic of green economy digital management has grown every year. The research square

was the top journal that published the most papers with the theme of digital management on green economy, and the writers on this study's theme were Banks CG, Shamaee A, Tompa E, Bonaccio S, Jetha A. Meanwhile, the keyword utilized in this study, "Green," frequently appeared first. Then there's "Digital," which comes in second, and "Development," which comes in third. Finally, "climate change," "social media," "daily life," "sustainable development," "green economy," and "digital economy" are the most recent hot issues. As a result, the research focused on the topic of digital management in the rising green economy.

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