



Exploring Research Trends On Foreign Direct Investment : A Bibliometric Study

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Abstract. *The purpose of this study is to identify and analyze trends in the most relevant scientific work being conducted on the topic of foreign direct investment. In addition, an exploration of this topic is carried out in a way that allows the expansion of empirical and conceptual knowledge. A bibliometric analysis was carried out using the Bibliometrix and Biblioshiny software packages on academic articles indexed in the Scopus database. Search criteria were applied, initially resulting in a total of 8,115 articles in the period 2013–2023. Finally, after applying exclusion criteria, a total of 1361 interesting and valid articles were obtained. The results of this study present important relevant topics in the topic of foreign direct investment, provide a quantitative analysis that provides an overview of the research topic on foreign direct investment presenting tables, graphs and maps, and identify key performance indicators for article production and citations. The findings of this study are that articles centered on this concept have gained significant traction, forming the basis for efforts aimed at improving the concept of sustainable investment in the context of the various variables that influence it.*

Keywords *Foreign Direct Investment, bibliometric, economic development, bibliometric analysis*

1. INTRODUCTION

Foreign direct investment has an important role in the economic development process in a country, especially in developing countries. The importance of this research topic is emphasized through the impact of various things caused by foreign direct investment activities, especially on economic growth, technology transfer, and overall development (Arbia & Sobhi, 2024; Fortune & Panicker, 2024; Hordofa, 2023; Nguyen et al., 2024; Siripi et al., 2024). These studies have been conducted by researchers around the world, as evidenced by a significant trend in the academic literature over the past decade with research results that reflect the important role of foreign direct investment in economic growth, technological advancement, and environmental sustainability.

Based on the results of several studies, it was found that FDI is a catalyst for a country's economic growth. This is shown by the dominance of FDI research topics related to economic growth that are stated to have a positive impact on economic growth (Afif & Ciptawaty, 2020; Ali et al., 2018; Forte & Moura, 2013; Hummairah et al., 2021). However, the relationship between FDI and economic growth is not accepted by researchers as a whole as two things that affect each other and have a positive impact. Some studies suggest that the benefits of FDI can depend on the economic conditions and institutional framework of the country where the investment is received. Among others Belgibayeva dan Plekhanov Belgibayeva & Plekhanov (2019) highlighted the adverse impact of corruption on FDI inflasi, which suggests

that poor governance can deter foreign investors due to increased risks and transaction costs. This idea is further supported by Quazi et al. (Quazi et al., 2014), which explores a dual perspective on the impact of corruption on FDI in Africa, illustrating that while corruption can create barriers, it can also facilitate investment in environments with weak regulatory frameworks.

Therefore, this study conducts a bibliometric analysis in order to visualise and map the research profiles and emerging trends in Foreign Direction of Investmen. This research aims to provide valuable insights for researchers, educational institutions, teachers, and librarians regarding the future trajectory of FDI research. They can leverage this information to inform their own research agendas and contribute to the continued advancement of the field. Furthermore, policymakers can use the study's findings to make informed decisions that promote and support scientific creativity research. This is because they can gain a comprehensive understanding of the research that has been conducted on this topic, allowing them to stay up to date with the latest developments and contribute to the field's advancement. The research questions are listed below:

1. What is the main information of Foreign Direction of Investmen literature?
2. What is the development of Foreign Direction of Investmen literature?
3. What is the review of top-cited articles of Foreign Direction of Investmen literature?
4. What are the conceptual structures of Foreign Direction of Investmen literature?

2. METHODS

Data

This study employs a bibliometric approach to identify and map Foreign Direct Investment (FDI) research trends. Research trends refer to the collective shift in focus among researchers toward a specific scientific topic. These trends highlight global communities' pressing issues and needs through evolving scientific inquiry. Bibliometric mapping is a method used to conduct such analyses. By utilizing bibliometric research, scholars can discover pertinent research directions. Access to bibliographic databases is essential for researchers to identify scientific publications, including titles, authors, abstracts, and references. Scopus is a reputable bibliographic database that provides access to various scientific works, including journals, conference proceedings, and books that adhere to international standards. Scopus is known for indexing only high-quality scientific literature and data.

Article selection process and methods

The bibliographic data search mechanism in Scopus was implemented on November 26, 2024. First, the search stage was conducted. The search began in the Scopus database by selecting the column within the article title and typing "Foreign Direct Investment." From this stage, 8,115 initial records were obtained. Subsequently, a search was conducted based on the period from 2013 to 2023, narrowing the results to 4,512 records. This was followed by filtering based on document type, specifically "article," and restricting the language to English, yielding 3,491 articles. "Open Access" was chosen at the access selection stage, resulting in 1,366 records. A double-check was then performed in Microsoft Excel to review the titles and abstracts of the articles to ensure the accuracy of the documents. Finally, 1,361 valid records were obtained.

Data Analysis

Filtered documents are extracted using comma-separated value (.csv) files from Microsoft Excel, which include details such as affiliation, author name, title, country, journal name, and keywords. These files were then analyzed descriptively based on the research questions. To visualize bibliographic data, this study uses Biblioshiny bibliometric software. The tool offers a variety of functions for detailed bibliographic analysis of scientific publications, including publication count metrics, citations, shared event networks, and keywords. In addition, Biblioshiny provides standard and consistent bibliometric measurements and indicators.

Quantitative descriptive analysis is used to gather key insights into Foreign Direct Investment research, including information on titles, the most productive sources or journals, leading publishing countries, and top-affiliated institutions. The study also investigated the author's citation patterns through co-authorship analysis. Finally, co-occurrence knowledge mapping was carried out to visualize development path trends, keywords, and research themes related to Foreign Direct Investment. The frequency and prominence of common keywords in this mapping reflect the popularity of a particular theme in the research field. As a result, keyword co-occurrence mapping is used to evaluate how often the term appears in the literature and its significance in the knowledge map.

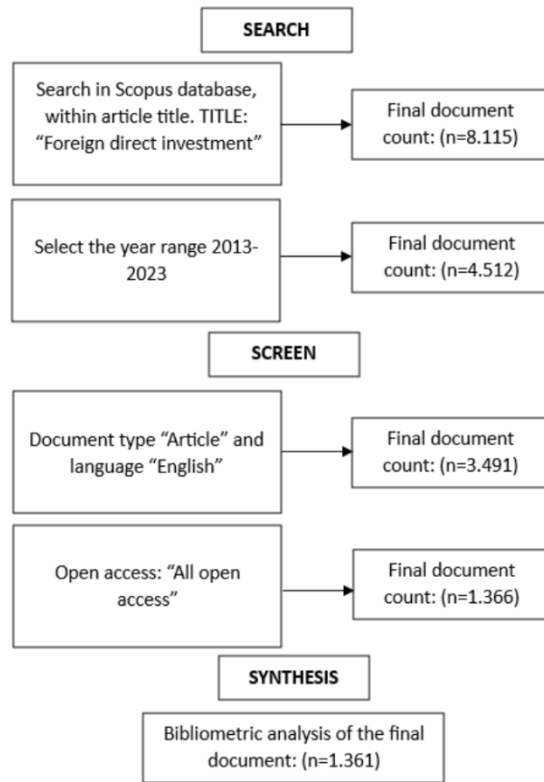


Figure 1 Research Procedure

3. RESULTS AND DISCUSSION

Main Information

Table 1 shows primary information in the field of Foreign Direct Investment literature over the period extracted from the Scopus database. The research exhibits substantial annual growth, and has a notable impact, as indicated by the average citations per document. The field embraces domestic and international collaboration, as evidenced by the co-authorship patterns. The percentage of international co-authorships means that this study area presumably has a high collaboration index. With a wide range of keywords and interdisciplinary themes, Foreign Direct Investment research continues to explore and contribute to various domains, fostering investment and the role of FDI in a country's economic growth.

Table 1. Main information of bibliometric data.

Description	Results
Main Information About Data	
Timespan	2013:2023
Sources (Journals, Books, Etc)	517
Documents	1361
Annual Growth Rate %	19.3%
Document Average Age	4.28

Average Citations Per Doc	16.7
References	63921
Document Contents	
Keywords Plus (Id)	1297
Author's Keywords (De)	2802
Authors	
Authors	2963
Authors Of Single-Authored Docs	241
Authors Collaboration	
Single-Authored Docs	276
Co-Authors Per Doc	2.69
International Co-Authorships %	28.88
Document Types	
Article	1361

The publication trend of scientific creativity consists of a gradual increase, as depicted in Figure 2. In the years between 2013 and 2023, the number of publications fluctuated but slowly continued to increase, starting in 2013 with 36 publications, the increase in the number occurred quite sharply from 2017 to 2019 (from 67 publications to 147 publications) and from 2021 to 2023 (from 170 publications to 257 publications). Fluctuations in the development of this topic also occurred and experienced a decrease in the number of publications with this topic in 2015 and 2017. A significant surge occurred in research topics on FDI in the period 2013-2023. This implies an increased interest in the topic among researchers and scholars during this period.

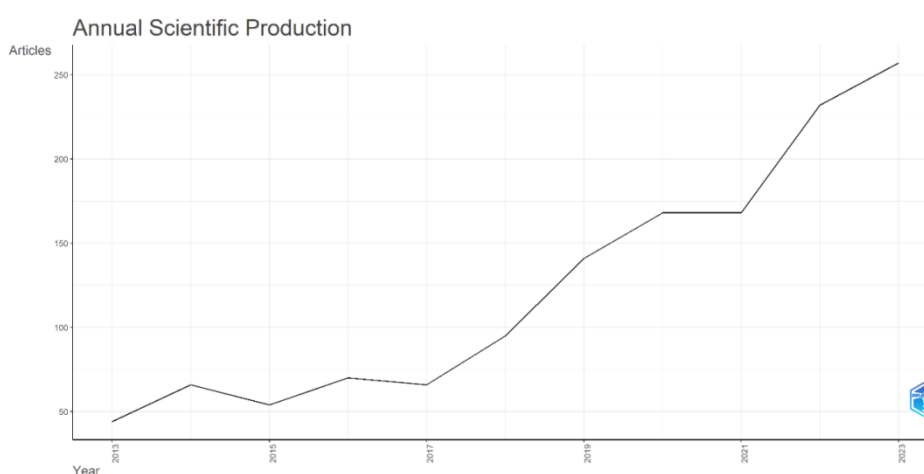


Figure 2. Annual Scientific Production

Foreign Direct Investment (FDI) has become an important topic in economic research, especially regarding its impact on economic growth in different regions of the country and the

context of the discussion (Gligorić et al., 2018; Sokang, 2018). The relationship between FDI and economic growth is complex and diverse, often influenced by local conditions such as governance, market stability, and the prevailing economic environment (Ha & Hua, 2022; Kherfi & Soliman, 2015). A significant body of research shows that FDI generally has a positive effect on economic growth. In addition, in line with the emergence of attention to the importance of FDI in fostering sustainable economic development in developing countries in 2023, it is expected that research on FDI will continue to increase with the development of topics at the level of sustainable economic development. This is shown by one of the studies stated by Montances (2023) which identifies FDI as an important driver of GDP growth along with other macroeconomic indicators, underscoring the need for policymakers to understand these dynamics to promote sustainable economic development.

Thematic development

The Sankey diagram in Figure 4 illustrates the thematic development of keywords related to foreign direct investment to the most significant authors on this topic (Schmidt, 2008). These keywords serve as markers for key concepts and themes that are widely used in scientific ideas about FDI research subjects. The keywords used in the Sankey diagram appear to be derived from articles that have been published in a previous period. These keywords are then developed thematically sustainable by other researchers. This diagram illustrates how far there is a flow of quantitative data information on the main topic of FDI. Indexing on content taken in the study has represented an over-visualization of the number of relationships with authors (Bonilla-Chaves & Palos-Sánchez, 2023), indexing has found an emphasis on relationships that have developed on the terms "foreign direct investment", "China" and "economic development, among others."

Among the authors, Dossou and Kwablah have the most relevant topics with most of the main topics, the most recent article by the two authors reveals about foreign direct investment in renewable energy for sustainable economic development (Dossou et al., 2023; Kwablah, 2023). In relation to the keyword "China", Sheng has focused his research on the topic of foreign direct investment on carbon reduction which also focuses on sustainable economic development (Sheng et al., 2023).

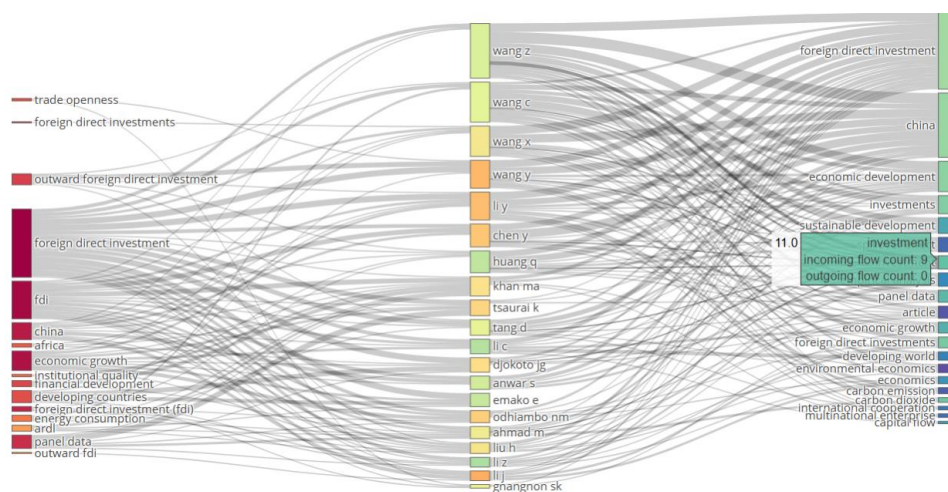


Figure 3. Thematic development of scientific creativity research using Sankey Diagram.

Most Influential Literature

Table 4 presents a list of widely cited articles in the field of FDI research, which significantly influenced the concept and content of subsequent research and also inspired the further exploration of research topics from different interesting and multidimensional subjects. Most of this article uses quantitative methods. The top ranking is occupied by Sbia (Sbia et al., 2014), which analyzes the relationship between foreign direct investment, clean energy, trade openness, carbon emissions, and economic growth in the case of the UAE. After that, Paul (Paul & Benito, 2018) conducted a study using the Antecedent, decision, and outcome (ADO) format as an organizing framework in providing an overview of the literature on various dimensions and characteristics of foreign direct investment (OFDI) by companies in developing countries. In third place, Shahbbaz (Shahbaz et al., 2019) confirmed that there is a reciprocal relationship between economic growth and carbon emissions. Meanwhile, Nasir (2008) secured the fourth place by finding that in ASEAN-5 countries, economic growth, financial development, and FDI lead to an increase in environmental degradation. Furthermore, Xia (Xiao et al., 2020) found that the degree of interdependence between Chinese firms and foreign firms in China in various forms, including symbiotic, competitive, and partner interdependence, had a positive relationship with the level of OFDI activity of Chinese firms, Xia also revealed that Chinese firms with higher levels of state ownership were less susceptible to the pressures of imposed by foreign companies to invest abroad. In addition, the works of Omri (Omri & Kahouli, 2014), Gaur (Gaur et al., 2018), Ben Jebli (Ben Jebli et al., 2019), Paul (Paul & Feliciano-Cestero, 2021), and Ning (Ning et al., 2016) have also contributed significantly to the progress of research on the topic of foreign direct investment.

These widely cited articles collectively provide a comprehensive understanding of various aspects of foreign direct investment, from how it relates to economic growth to its impact on carbon emissions in different countries. Their profound influence on the ground has paved the way for further investigation and innovation, which ultimately prompted the development of foreign direct investment research as a vital discussion in the face of a sustainable economy.

Table 2. Most highly cited foreign direct investment paper from 2013 to 2023.

Paper	DOI	Total Citations	TC per Year	Normalized TC	Sources
SBIA R, 2014	10.1016/j.econmod.2013.09.047	475	43.18	12.88	Economic Modelling
PAUL J, 2018	10.1080/13602381.2017.1357316	467	66.71	15.06	Asia Pacific Business Review
SHAHBAZ M, 2019	10.1016/j.jclepro.2019.01.282	462	77.00	19.56	Journal of Cleaner Production
NASIR MA, 2019	10.1016/j.jenvman.2019.03.112	452	75.33	19.13	Journal of Environmental Management
XIA J, 2014	10.1002/smj.2157	271	24.64	7.35	Strategic Management Journal
OMRI A, 2014	10.1016/j.enpol.2013.11.067	236	21.45	6.40	Energy Policy
GAUR AS, 2018	10.1057/s41267-017-0136-2	230	32.86	7.42	Journal of International Business Studies
BEN JEBLI M, 2019	10.1186/s40503-019-0063-7	229	38.17	9.69	Latin American Economic Review

PAUL J, 2021	10.1016/j.jbusres.2020 .04.017	212	53.00	14.33	Journal of Business Research
NING L, 2016	10.1016/j.respol.2016. 01.014	207	23.00	8.73	Research Policy

4. CONCLUSION

The most important and impactful theme in foreign direct investment research is related to sustainable economic growth and development. This topic stands out because it discusses the concept of sustainability of life in the future which requires various indicators or variables that can be adjusted. As a result, this concept-centric article has gained significant traction, serving as the basis for efforts geared towards improving the concept of sustainable investing in the context of a wide variety of variables that affect it.

The fundamental weakness of this study is the limitation of data. Thus, it should be better for future researchers to choose other rigorous databases to enrich the data and comparative analysis. However, the pragmatic implications of this study are widespread.

Researchers can take advantage of empirically proven research models. At the same time, policymakers can adjust the investment policies implemented to determine the sustainability of economic development in the future. Facilitating global collaboration is equally important, encouraging the exchange of ideas, expertise, and best practices that transcend geographical boundaries. Ultimately, this study provides a solid foundation for future researchers to investigate the complex dynamics of foreign direct investment and its related domains, aligned with the important themes identified in this study.

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