

THE GLOBAL LANDSCAPE OF DIGITAL DETERMINANTS OF FDI: A BIBLIOMETRIC ANALYSIS OF THE TRANSITION TO DIGITALIZATION AND ARTIFICIAL INTELLIGENCE

Fadhilah Mohd Ishak@Zainudin ¹
Asma' Rashidah Idris ^{2*}
Wan Masnieza Wan Mustapha ³
Asma Shazwani Shari ⁴
Tismazammi Mustafa ⁵

¹ Faculty of Business and Management, Universiti Teknologi MARA Kelantan Kampus Machang, 18500 Machang, Kelantan, Malaysia (E-mail: fadhi513@uitm.edu.my)

² Faculty of Business and Management, Universiti Teknologi MARA Negeri Sembilan Kampus Rembau, 71300 Rembau, Malaysia (E-mail: asmar440@uitm.edu.my)

³ Faculty of Business and Management, Universiti Teknologi MARA Kelantan Kampus Machang, 18500 Machang, Kelantan, Malaysia (E-mail: masnieza@uitm.edu.my)

⁴ Faculty of Business and Management, Universiti Teknologi MARA Kelantan Kampus Machang, 18500 Machang, Kelantan, Malaysia (E-mail: asma663@uitm.edu.my)

⁵ Faculty of Business and Management, Universiti Teknologi MARA Kelantan Kampus Machang, 18500 Machang, Kelantan, Malaysia (E-mail: tisma372@uitm.edu.my)

*Corresponding author: asmar440@uitm.edu.my

Article history

Received date : 10-4-2026
Revised date : 11-4-2026
Accepted date : 17-5-2026
Published date : 1-7-2026

To cite this document:

Mohd Ishak @ Zainudin, F., Idris, A. R., Wan Mustapha, W. M., Shari, A. S., & Mustafa, T. (2026). The global landscape of digital determinants of FDI: A bibliometric analysis of the transition to digitalization and artificial intelligence. *International Journal of Accounting, Finance and Business (IJAFB)*, 11 (65), 150 - 168.

Abstract: *The connection of digital transformation and international capital flow has appeared as a critical focus of modern macroeconomic debate. Understanding the determinants that attract foreign direct investment (FDI) has become a primary policy agenda for nations seeking to bridge the digital boundaries and foster sustainable growth. Thus, this study offers a comprehensive bibliometric analysis of scholarly literature by exploring the digital drivers of FDI. Hence, the analysis map out 222 documents, extracted from the Scopus database spanning from 1999 to 2026. The bibliometric analysis was carried out through Biblioshiny software (via the R-package Bibliometrix) to analyses the structural and conceptual evolution of the field. The performance parameters demonstrate a significant growth in annual publication volumes and citation impacts. This shows that the research field has reached a global concern from academic scholars. The geographical analysis found that China has been the pioneer leader followed by United States, India, Saudi Arabia, Malaysia and Romania. Thematic network mapping portrays that the publication has progressed from basic ICT infrastructure, shifting towards innovation, digital governance, and environmental sustainability converge. Hence, this study contributes the research sphere by transforming a dispersed global data into a structured overview to facilitate the future research direction.*

Keywords: *Foreign Direct Investment (FDI); Digitalization; Artificial Intelligence.*

Introduction

Foreign Direct Investment (FDI) is crucial and important in forming the global economic landscape. The attraction of capital flows has undergone a significant transformation in the era of digitalization. Thus, new digital technologies have reshaped the strategies of multinational companies in attracting capital flows (Yao & Wang, 2026). The digital economy is characterized by developments in information and communication technology (ICT), and it has become an important factor influencing FDI flows, particularly in fostering technology transfer, innovation, and economic growth (Darmo & Ognjanović, 2025; Hintošová, 2020; Nguyen, 2025).

Recent global developments further underscore the urgency of understanding the relationship between digitalization and FDI. In recent years, global FDI flows have experienced considerable volatility due to geopolitical tensions, economic uncertainty, supply chain restructuring, and rapid technological change. Simultaneously, the expansion of the digital economy, digital services, cloud computing, big data analytics, and artificial intelligence (AI) has transformed the investment landscape. Digital technologies are increasingly influencing firms' location choices, operational strategies, and investment decisions. As countries compete to attract high-value foreign investments, digital readiness, technological capabilities, AI adoption, and digital infrastructure have emerged as critical determinants of investment attractiveness. Nevertheless, substantial digital infrastructure gaps and unequal levels of digital development continue to exist across countries, creating significant disparities in their ability to attract and sustain FDI (UN, 2025).

Furthermore, connectivity, digital infrastructure, and artificial intelligence (AI) have become increasingly important alongside traditional determinants of international capital flows (Andy et al., 2024; Huang & Liu, 2024). High-quality internet and telecommunications infrastructure have emerged as core location advantages. The staggered arrival of submarine fiber-optic cables in Africa demonstrates that high-speed internet causally increases FDI, particularly in service sectors such as finance, technology, retail, and healthcare, while also interacting positively with electricity and transportation infrastructure (Mensah & Traoré, 2022). Internet infrastructure can also reduce foreign investment inequality, although the effects vary across regions and trade regimes within China (Hao et al., 2025).

Digitalization boosts the attractiveness of international capital flows by improving digital infrastructure and reducing transaction costs, thereby facilitating FDI inflows. For instance, in developing regions, the expansion of ICT enhances productive capacities and global competitiveness, creating a bi-directional relationship in which FDI inflows further strengthen digital capabilities (Darmo & Ognjanović, 2025; Sinha et al., 2020). Similarly, in advanced economies, digitalization interacts with FDI to stimulate private investment and promote sustainable economic practices (Nguyen, 2025).

Despite the growing body of literature examining digitalization, ICT development, AI adoption, and FDI, the existing evidence remains fragmented (Darmo & Ognjanović, 2025). Previous review studies have largely focused on conventional determinants of FDI, such as institutional quality (Shah et al., 2016), trade openness (Yeboah et al., 2025) and macroeconomic stability (Şıklar & Kocaman, 2018; Petro et al. 2025), while limited attention has been devoted to

emerging digital determinants and AI-driven transformation. Moreover, existing reviews tend to investigate these themes separately or within specific geographical contexts, providing limited understanding of how digital infrastructure, connectivity, ICT development, and AI collectively influence FDI. Consequently, the intellectual structure, thematic evolution, influential research streams, and emerging areas within this interdisciplinary field remain insufficiently explored.

Given the accelerating pace of digital transformation worldwide, a comprehensive bibliometric review is both timely and necessary (UN, 2025). Unlike traditional literature reviews, bibliometric analysis enables a systematic examination of the knowledge structure, research trends, influential contributors, and thematic development of a field. More importantly, focusing on digital determinants, AI, and FDI within a single analytical framework offers a novel perspective on how technological advancement is reshaping global investment patterns. Such an assessment is valuable for identifying research gaps, highlighting neglected themes, and guiding future scholarly inquiry and policy formulation in the digital economy era.

Therefore, a Biblioshiny analysis was conducted to visualize the intellectual structure, longitudinal progress, and thematic evolution of this research domain. The bibliometric analysis provides a clear representation of how research in this area has evolved over time. A total of 222 documents were extracted from the Scopus database covering the period from 1999 to 2026. R Studio software using the Bibliometrix package was employed to perform longitudinal publication analysis, keyword analysis, annual citation analysis, and the identification of influential scholarly contributions. Therefore, this study aims to map the current boundaries of the field, illuminate neglected areas within the literature, and identify promising avenues for future research.

Objectives

The objectives of the study are:

1. To identify and analyze the evolution of trends in Foreign Direct Investment in the current era of digitalization.
2. To assess the annual changes in subject trends, co-word analysis and scientific publications.

Related Works

Digitalization can be measured through a composite index of internet, mobile, and fixed lines. It shows the nuanced impact on FDI in developing countries. One study found that the relationship between digitization and FDI is inverse in which the development of digitization can inhibit the international capital inflows that may be due to the increased in risks and costs (Ho et al., 2025). Its marginal contribution is declining for developed countries (Arbia & Sobhi, 2024; Nguyen, 2025). In developed and developing countries, broadband and internet users generally support FDI, but with significant asymmetry: digitalization and institutional quality attract FDI in developing countries yet may not encourage FDI in some developed economies, where digital maturity and competition are changing the choice of location (Nguyen, 2025).

According to Mensah & Traoré, (2022), access to electricity and transportation networks amplifies the effect of increasing FDI of high speed internet in Africa (while financial development magnifies the role of digital infrastructure in Brazil, Russia, India, China, and South Africa, (BRICS) (Tsaurai, 2025). Within large countries, digitalization can bridge and widen regional FDI gaps, depending on trade openness and existing infrastructure foundations

(Hao et al., 2025). At the firm level, digitalization reshaping the traditional ownership, location, internalization (OLI) advantage. A study of 571 U.S. manufacturing firms showed that a high level of digitalization resulted in strong profits and these gains were fortified when firms were highly internationalized and embedded in an FDI-rich home environment (Bhandari et al., 2023). This supports the view of the new OLI advantage based on open digital resources, global connectivity, and integration, organized through advanced analytics and AI-related tools (Bhandari et al., 2023).

Furthermore, Huang & Liu (2024) found that the utilization of Robot adoption in Chinese listed firms (a proxy for AI) significantly encourages outward flow of FDI, especially toward OECD rich countries whereby the mechanisms run through higher output and total factor productivity. Study that was done by Babina et al., (2024) found that AI investments in U.S. firms drive growth through product innovation, leading to greater sales, employment, and market value, while AI intensity in China's strategic emerging industries strengthens technological innovation by easing financing constraints and boosting R&D. These innovation and productivity gains create new purposes and abilities for international expansion, including FDI (Li et al., 2024).

Despite the advancement in the digitalization, traditional FDI theories are still considered as the primary intellectual basis regarding the determinants of FDI. The OLI paradigm and related advantages theory connect FDI to firm specific ownership advantages, internalization benefits and host country location advantages, which jointly explain why firms internationalize, where they locate, and how they enter foreign markets. These frameworks emphasize market size, cost conditions, infrastructure, resources, and institutional quality as key determinants, and distinguish market-, resource- and efficiency-seeking motives (Li, 2023; Ren, 2024). The current study extends this framework to emerging markets and services and incorporates institutional quality and environmental conditions as key components of ownership and location advantages (Chrystella et al., 2025; Garg et al., 2025; Xing & Wang, 2022).

ICT infrastructure and broader digitalization have emerged as new and critical location advantages. Empirical research on Malaysia and Chinese cities shows that mobile telephone, telecommunication infrastructure and broader digitalization indices significantly and positively affect FDI inflows, especially in lower-income or less developed locations, alongside institutional quality and traditional macroeconomic variables (Ming et al., 2022; Zhang et al., 2024). Meanwhile, Mai (2025), conceptualized digital transformation as a structural and institutional shift that reforms the "L" in OLI by providing connectivity, data infrastructure and e-government, which reduce transaction costs, improve transparency and create new competitive advantages for host countries. The new norm further identifies that innovation, digital transformation, human capital, knowledge related asset and ICT infrastructure as the main factors that influence where FDI is located (Andy et al., 2024). At the firm level, digitalization also reshaping ownership and internalization advantages. A recent study further argue that the traditional OLI advantage has weaken due to digital forces and emphasized the new OLI which is based on open resources, linkages and integration, where highly digitalized firms benefit more from FDI spillovers and global networks (Bhandari et al., 2023). However, Bhandari et al., (2023) found that the relationship between digitalization and firm performance is non-linear, suggesting that the benefits of digitalization are compelling at higher levels of digital adoption yielding a robust profitability when supported by outward and inward FDI inflows.

Furthermore, Li & Liang (2025) found a U-shaped relationship between the digital economy and FDI, emphasizing that impact of digitalization towards FDI change at different stages of development. The study found that wages, market maturity and knowledge technologies served as moderating factors. Artificial intelligence, digital platforms and automation further challenge traditional internationalization logics. According to Santos & Williamson (2024), AI and machine learning allow the born digital firm to better understand and enable fine-grained personalization based on user data, thus reducing the need for experiential learning through physical FDI. Therefore, the traditional role of country differences as proxies for preferences and conditions has become less important.

A recent work on SMEs shows that AI readiness and broader digitalization are strongly connected with international performance, positioning digital capabilities as the main ownership advantages for smaller firms (Denicolai et al., 2021). At the same time, investments in AI and FDI can increase carbon emissions unless thoughtfully aligned with green innovation, highlighting a tension between digital expansion and environmental goals (Konat et al., 2026). Sustainability, green finance and renewable energy introduce a further layer to the evolving OLI framework. Meanwhile, Hintošová & Bódy (2023) highlighting the sustainable FDI as the main element in the digital economy, suggesting that growth in digital development can help attract FDI with stronger sustainability attributes, particularly in regions like the Nordic countries. Empirical evidence from ASEAN shows that environmental degradation can dissuades the attraction of FDI, particularly regarding the pollution and emphasized on the stricter regulation to enhance a country's attractiveness for sustainable investors (Garg et al., 2025).

Digitalization enhances the effects of green finance and facilitates risk mitigation in renewable projects (Gao et al., 2023; Soltani, 2024). Green digital finance and FDI contribute to the nexus of digital and green transition by promoting green innovation and renewable energy efficiency. The findings from larger scale studies on resource rich and emerging economies confirm that green finance, ICT and digital economy together contribute to renewable energy generation and sustainable growth and clearly connect FDI with sustainability objectives and renewable projects (Hassan et al., 2025; Nie et al., 2024). The contemporary literature across these strands converges on an extended OLI view in which digital infrastructure, AI capabilities and green attributes are no longer peripheral but central determinants of ownership, location and internalization advantages.

Methodology

This research employs a bibliometric analysis to analyze the scholarly literature, progressive trajectory and how research spheres has shift regarding the determinants of Foreign Direct Investment (FDI) in the era of global digitalization. Bibliometric analysis was selected for its capacity to provide a rigorous, quantitative evaluation of scholarly output, citation influence, and thematic transitions within a specific body of knowledge.

Data were collected from the Scopus database, chosen for its comprehensive indexing of high impact, peer reviewed international journals. The data was extracted on May 10, 2026, utilized the keywords of "Foreign Direct Investment" OR "FDI" AND "Digital** OR "ICT" OR "Industry 4.0" OR "Artificial Intelligence" OR "AI" OR "Data Governance" AND "Determinant*" OR "Driver*" OR "Location Advantage" OR "Investment Climate". The Scopus database generated 222 records and were imported to Biblioshiny software to generate bibliometric mapping.

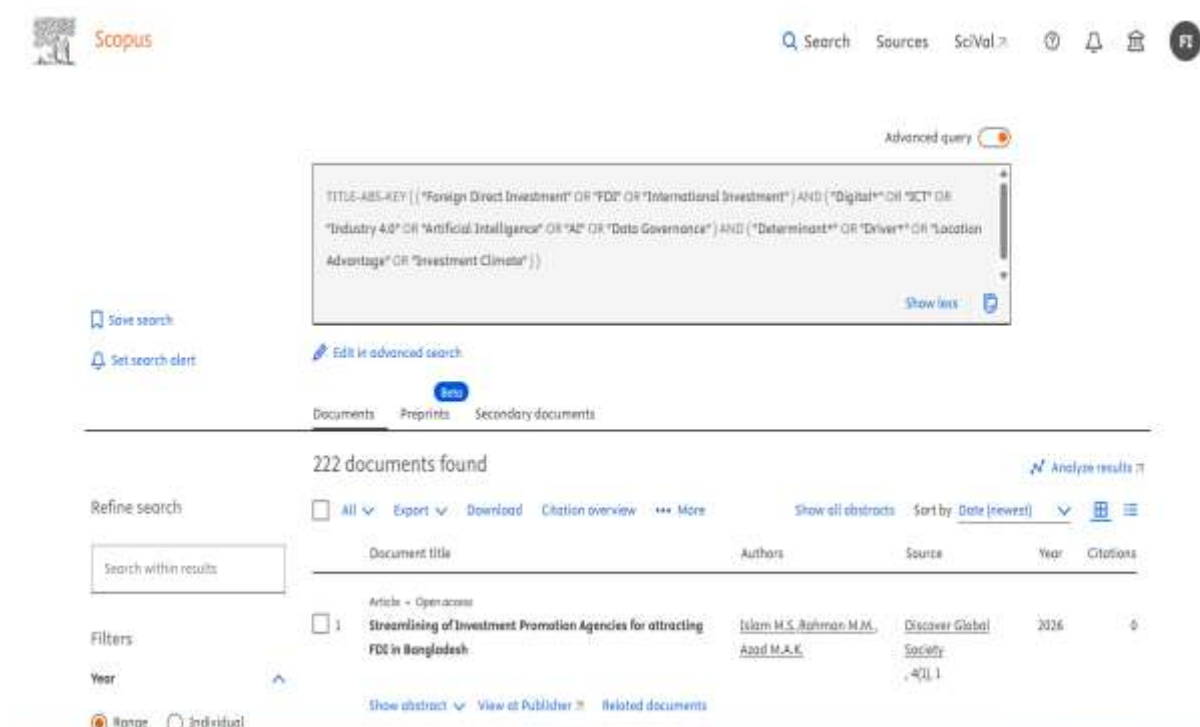


Figure 1: Scopus database search

The study employs a Biblioshiny software which is the R- Studio software (R-package Bibliometrix) to cater a comprehensive evaluation of the field. To identify the historical expansion and scholarly impact, the annual scientific production and average citations per year were analyzed. To evaluate journal influence, Bradford's Law was applied to separate the most important journals from the less relevant journals, evidenced by an analysis of sources' production overtime. The geographic contributions were examined through Country Scientific Production and Country Production Overtime. To integrate the intellectual linkages between different research field, a Three-fields Plot was spawned to connect authors, countries and keywords. Finally, the study utilized CoWord Network to visualize the conceptual connections and a Thematic Map to categorize research topics into motor, niche, emerging, or basic themes based on their density and centrality. Hence, these visual techniques have assisted the identification of prominent research connections and the evolution of digital determinants in the global investment landscape.

Results & Discussion

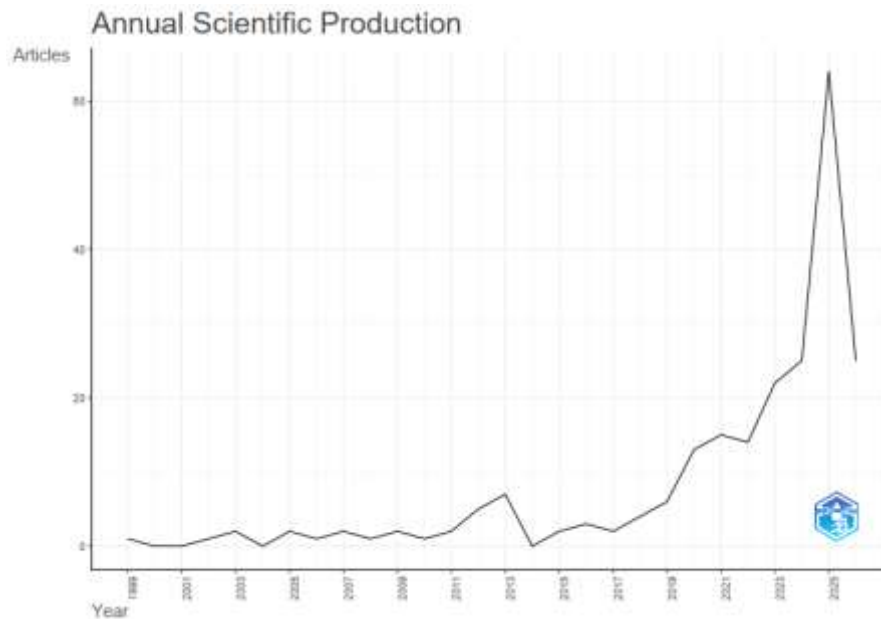


Figure 2: Annual Scientific Production

The publication trends of Scopus database show a clear transformation in scholarly interest toward the digital determinants of foreign direct investment (FDI). The annual scientific production of this research area was characterized by minimal and relatively stagnant from year 1999 to approximately 2011. This pattern suggests that digitalization was not yet perceived as a significant determinant of international investment decisions. The production started to increase gradually between year 2012 -2025 indicating the scholarly interest on digitalization due to the Industrial Revolution (IR 4.0) which emphasized automation, digital connectivity, and technological innovation. Starting from 2021, the annual publication has shown an upward trend with 15 articles were produced and keep increasing in 2023 with 22 articles were produced. The recent years evidenced that the production of publication has increased sharply with more than 60 articles are produced in 2025. This significant increase evidenced that the research field has gain the scholarly inquiry. Although there is a small reduction in 2026 which is 25 documents, this reduction is most likely due to the incomplete research activity for the current publication year rather than declining scholarly interest. Overall, the trend proves that the traditional OLI (Ownership Advantages, Location Advantages & Internalization Advantages) framework is progressively evolving to accommodate the realities of an increasingly digital and data driven global economy.

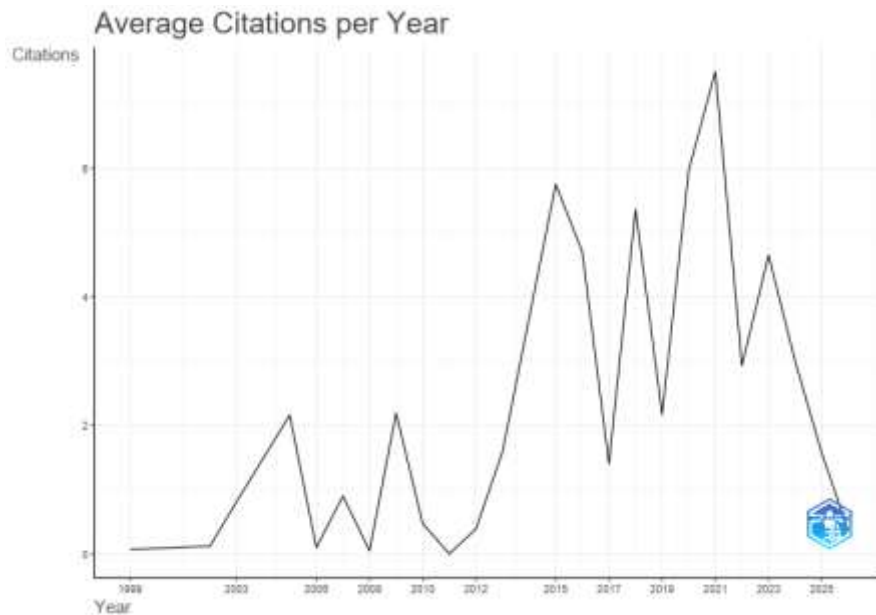


Figure 3: Average citation per year

The trend of average citations per year indicates the increasing academic influence of research in this field over time. Between 1999 and 2012, citation levels remained relatively low and unstable suggesting limited scholarly attention and a relatively underdeveloped research area. There is a minor fluctuation during this period reflecting the presence of a few influential studies but overall academic impact remained weak. However, there is a significant increase after 2013 with a major peak in 2021 with 7.51 average citation per year. The second highest average citation per year recorded in 2015 with 5.75 citation. This implies that the research field started gaining a global interest among researchers particularly due digital transformation and technological development. Although the average citations declined after 2023, this is likely due to newer publications requiring more time to accumulate citations rather than reduced research importance.

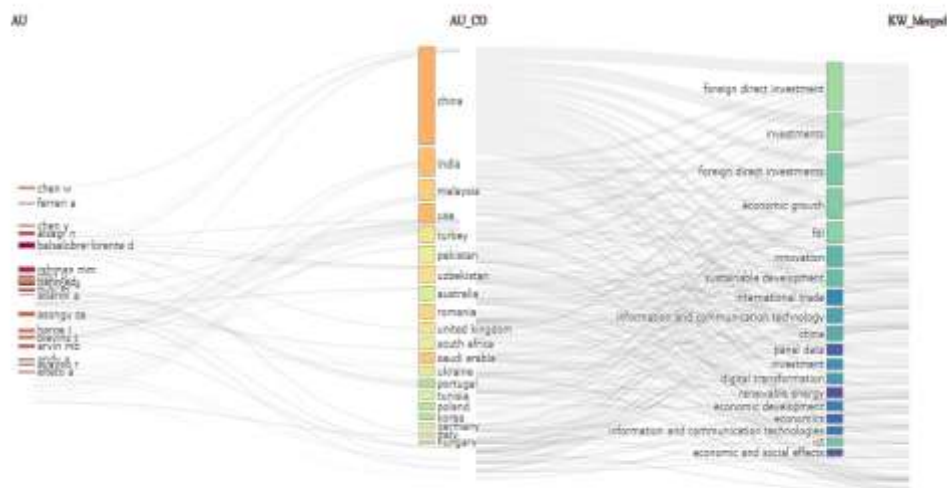


Figure 4: Threefields Plot

The Threefields Plot illustrates the relationship between authors, countries of authors and frequently used research keywords within the literature on the determinants of foreign direct investment (FDI) in the era of digitalization. The study signifies that China is the most dominant research contributor, followed by countries such as India, Malaysia and the United States. This finding suggests that developing countries, particularly Asian countries are actively contributing to the academic literature on FDI and digital transformation. The strong participation of Asian countries also reflects that the regions are becoming global leaders in academic publication in the research field.

The keyword network demonstrates that foreign direct investment, economic growth, innovation and digital transformation are the highest central topics within the literature. The strong linkage between these keywords indicates that researchers increasingly view digitalization as a crucial factor to influence investment attractiveness and economic performance. Furthermore, terms such as information and communication technology (ICT), international trade, renewable energy and sustainable development suggest that the literature has extended beyond traditional FDI determinants toward broader discussions on sustainability, technological advancement and digital economies. The presence of keywords such as panel data, economics and economic and social effects further suggests the growing use of quantitative and empirical approaches in examining the relationship between digitalization and FDI.

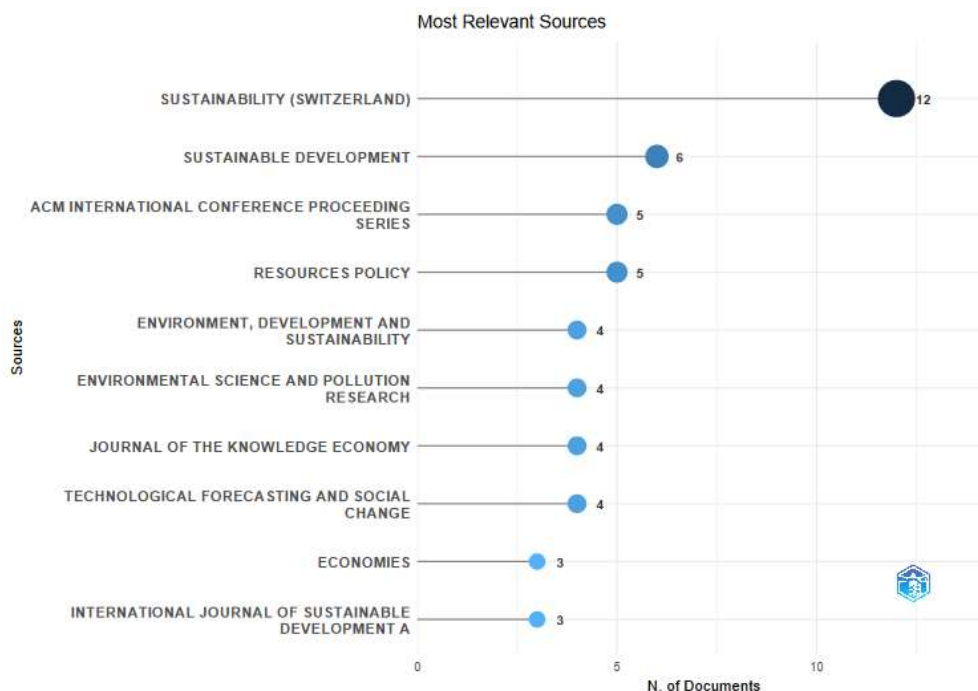


Figure 5: Most Relevant Sources

The figure 5 above shows the most relevant publication sources in the research area indicating that research field moving towards sustainability oriented journals. The highest number of publications with 12 documents is Sustainability (Switzerland), followed by Sustainable Development with 6 documents. Furthermore, the ACM International Conference Proceeding Series and Resources Policy each contributed 5 documents. Meanwhile, the Environemnt, Development and Sustainability, Environmental Science and Pollution Reserch, Journal of the Knowledge Economy and Technological Forecasting and Social Change are contributed 4

journals each. The least documents published are Economies and International Journal of Sustainable Development which recorded 3 documents each. The findings revealed that the literature is multidisciplinary, integrating sustainability, technology, environmental studies, and economic development perspectives, reflecting the growing concern on sustainable and digital transformation research.

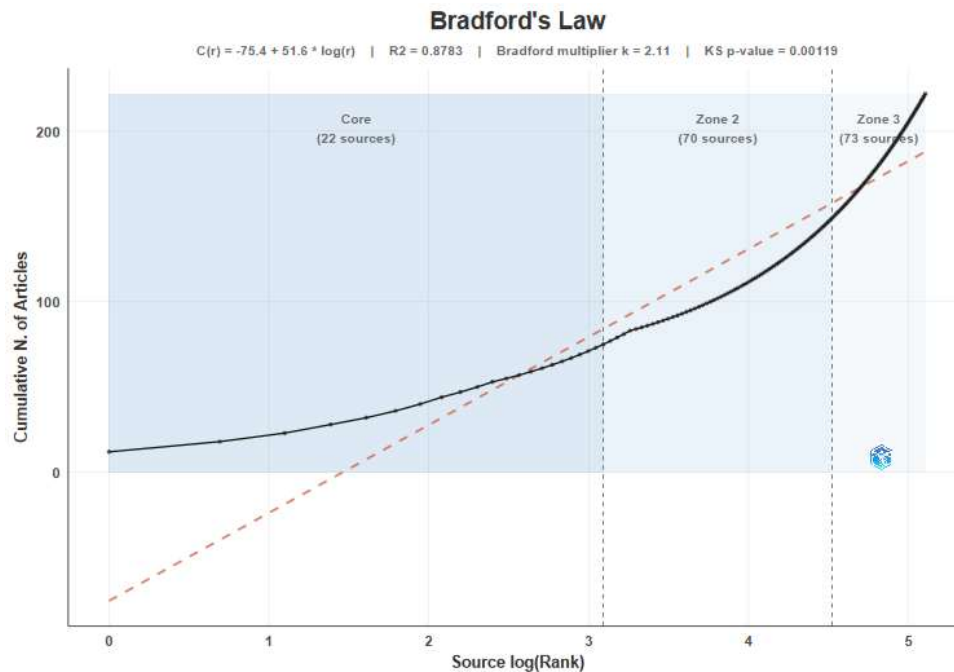


Figure 6: Bradford's Law

The diagram illustrates the application of Bradford's Law in identifying the distribution of articles across publication sources. The Bradford's Law divide the journals into three zones. The first zone which is the core zone consists of only 22 sources. However, these journals contribute the highest share of articles, indicating that a limited number of journals dominate the field. Meanwhile, the second zone, which is Zone 2 consists of 70 sources and the last zone contains 73 sources, showing that a much larger number of journals publish fewer articles individually. The high R^2 value of 0.8783 indicates that 87.83% of 222 papers are distributed across different journals which are strongly adheres to Bradford's Law.

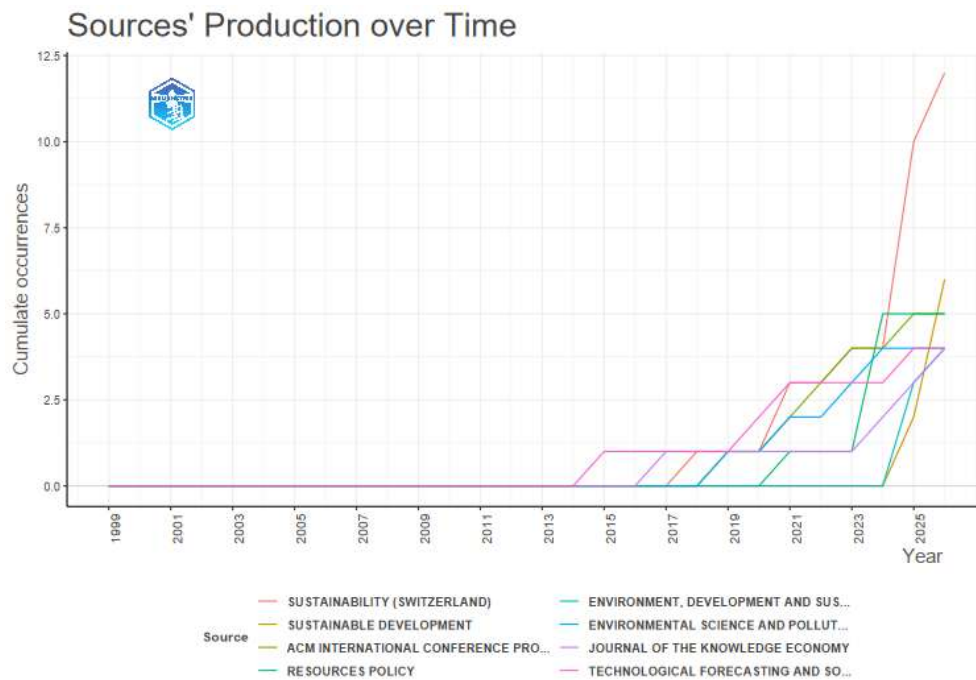


Figure 7: Sources' Production Overtime

The figure 7 above illustrates the production trends of major publication sources over time, highlighting the growth of research output across journals. The findings indicate that the publication started to grow after 2015 even though it is still limited. A noticeable increase in publication was started after 2020 whereby the journal of Sustainability (Switzerland) demonstrates the strongest growth trajectory, rising sharply to approximately 12 cumulative occurrences by 2026, strengthening its leading role in the field. Other journals such as Sustainable Development and Resources Policy also show progressive growth in publication output. Meanwhile, journals related to environmental studies, technology, and knowledge economy exhibit moderate increases over recent years. Overall, the diagram suggests that research interest in the field has evolved significantly in recent years particularly within sustainability oriented journals.

Country Scientific Production

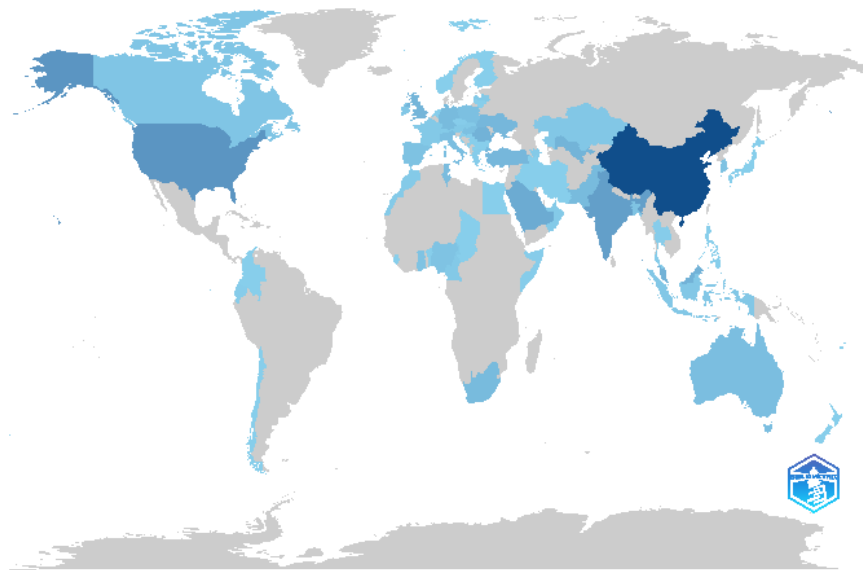


Figure 9: Country Scientific Production

The figure 9 above shows the countries that are publishing documents related to the research field. The dark blue colour implies the highest research activity while the lighter blue shows countries with fewer publications. The map visualized that China as the global leader by producing a substantial academic focus on technological growth and digital economy investments. Then, it followed by United States as another major hub of research. Beyond these two giants, a steady stream of research is spread out across Europe, India, and Australia. Interestingly, many emerging economies across Southeast Asia, the Middle East, and parts of Africa are also coloured light blue. This indicates that the topic is globally important, as many countries including developing countries, particularly Malaysia are actively producing research on how digitalization would affect international capital flow.

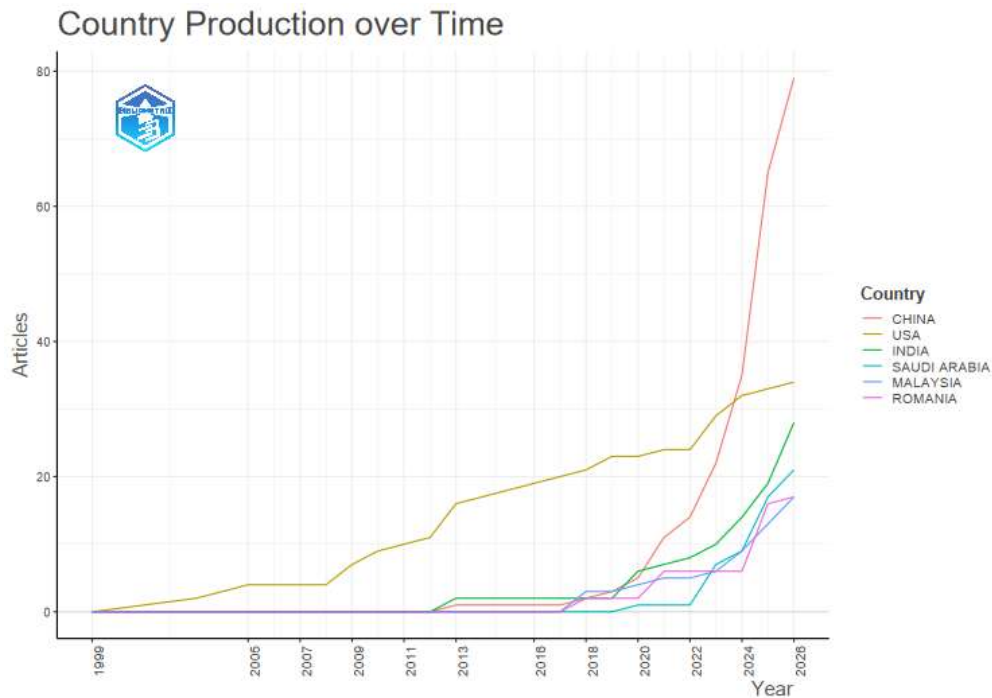


Figure 10: Country Production over Time

For many years, the USA (the gold line) was the leading pioneer, steadily growing its research output from 1999 onward while other nations remained inactive. However, the most remarkable shift happens in 2022, when China (the coral line) shows a sharp trajectory increase in publication, reaching up to 79 publications in 2026 in which completely undertakes other countries. Then, followed by USA, reaching 34 publications related to the research area. Other emerging economies such as India, Saudi Arabia, Malaysia and Romania show a similar trend of rapid growth starting around 2020 to 2026. In 2026, India producing 28 publications, Saudi Arabia 21, while Malaysia and Romania are both producing 17 publications. This collective shift shows that the research area has attracted a global interest to explore the new research regarding the digital hubs.

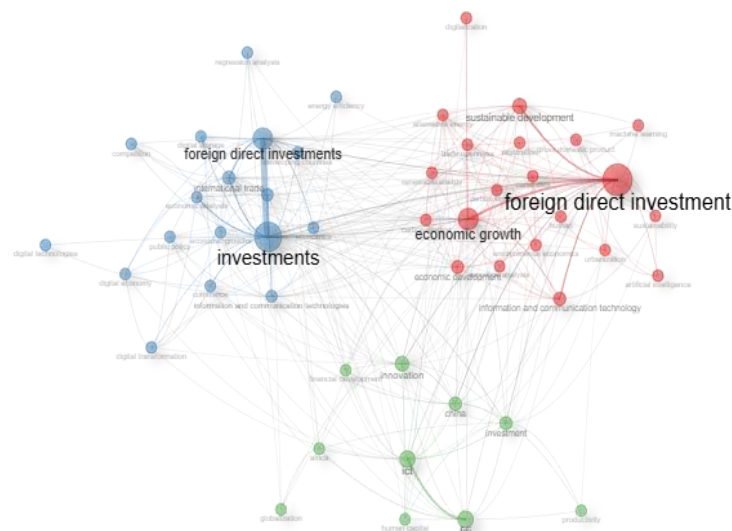


Figure 12: Co-Word Network

The co-word network map illustrates conceptual clusters related to digitalization and FDI scholarly discourse. The analysis shows that there are three interconnected thematic clusters related to the research field. The Red Cluster places foreign direct investment at the centre of macroeconomic advancement. The Blue Cluster captures the macro-foundations of the field, explicitly pairing global investment trends and international trade with early information and communication technology (ICT) infrastructure. The Green Cluster which located at the bottom of the map links innovation, ICT and human capital directly to the Chinese market. The network has visualized the dense cross-connections between economic growth and investments which serve as the structural bridge connecting the entire field together. On the contrary, highly specific variables located on the far outer edges such as digital technologies and productivity remain largely isolated, presenting clear gaps where future research could better integrate micro-level digital tools into the broader macro-economic framework.

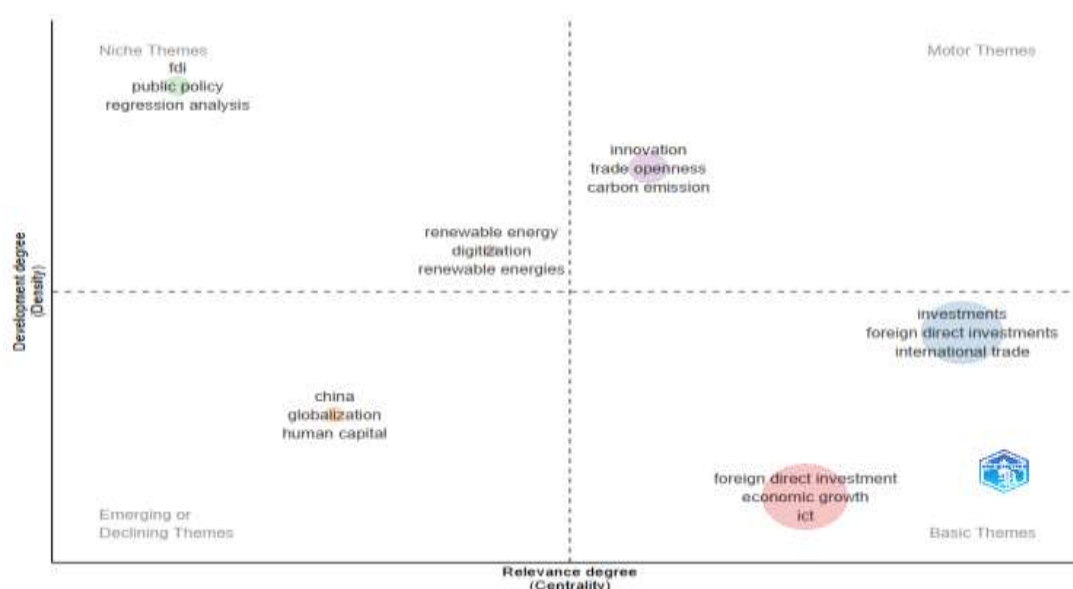


Figure 13: Thematic Map

The thematic map demonstrates how different themes within the digital FDI literature are growing, plotting them based on their overall relevance to the field and how deeply they have been developed since 1999 – 2026. The upper-right quadrant isolates the Motor Themes which represent well-developed, mainstream topics driving the core intellectual progress of the field. The foremost cluster in this quadrant includes "innovation," "trade openness," and "carbon emission." This indicates that over the past 27 years, the literature has established a mature, highly relevant nexus connecting open macro-trade policies and technological innovation directly to environmental sustainability and impact assessments.

In contrast, the lower-right quadrant highlights the Basic Themes which demonstrate high relevance but relatively low specialized development, serving as the foundational building blocks of the discipline. Two major clusters emerge which are "investments, foreign direct investments, international trade" and "foreign direct investment, economic growth, ICT." This demonstrates that macro-level economic growth, international trade dynamics and information and communication technology (ICT) infrastructure form the essential baseline context of this research domain, rather than specialized research frontiers.

The Niche Themes consists of "fdi", "public policy" and "regression analysis." This indicates that while empirical and statistical methodologies for evaluating public policies regarding foreign direct investment are highly rigorous, they remain operationally isolated from the broader mainstream discourse. Notably, a borderline cluster comprising "renewable energy," "digitization," and "renewable energies" captures a vital transitional phase in the literature, signalling a wave of rapid development where digital transformations are actively integrating into the green energy sector.

Meanwhile, the Emerging or Declining Themes depicting the cluster of "China," "globalization" and "human capital." Given the extensive longitudinal timeline (1999–2026), this positioning suggests that broad, generalized discussions around macro-globalization and human capital within the Chinese market have largely run their course, shifting toward a declining status as the literature pivots toward more specific and detailed variables.

Conclusion

This study has employed a bibliometric analysis using Biblioshiny software (R-package Bibliometrix) to discover the scholarly literature surrounding the determinants of FDI in the era of digitalization. The digital revolution has fundamentally reshaped how multinational enterprises (MNEs) choose and use foreign locations. Drawing on the keyword of "Foreign Direct Investment" OR "FDI" AND "Digital** OR "ICT" OR "Industry 4.0" OR "Artificial Intelligence" OR "AI" OR "Data Governance" AND "Determinant*" OR "Driver*" OR "Location Advantage" OR "Investment Climate", the Scopus database has extracted 222 documents from 1999 – 2026. The analysis utilized R- package Bibliometrix to visualize all the analysis. The annual scientific production and average citation of the research area show an increasing trend even though the productions are still limited. This implies that the research field has attracted scholars from multidisciplinary field and the highest number of publications are coming from Sustainability. The analysis also highlights the contributions of the publications from developed and developing countries including Malaysia. The highest number of documents is from China, followed by USA, India, Saudia Arabia, Malaysia and Romania. The thematic mapping reveals a critical research gaps and directions for future research. The future research should shift from the declining macro-narratives of generalized globalization and instead focus on the empirical micro-foundations of the digital-green transition, mapping out how public policies can push these transitioning digital-energy themes into the dominant Motor Theme quadrant.

Acknowledgement

Appreciation goes to Universiti Teknologi MARA for granting access to the research infrastructure and academic resources that facilitated the completion of this paper. The perspectives and view conveyed in this work belong exclusively to the authors and do not reflect the official stance or policies of the university. The study was conducted without any external financial assistance or research grants. The authors declare that there are no conflicts of interest could influence the objectivity and integrity of the findings.

References

- Abdi, A. H., Zaidi, M. A. S., Hassan, M. A., & Ahmed, S. (2025). Accelerating sustainable transformation in Sub-Saharan Africa: The role of clean energy, digitalization, foreign direct investment, and industrialization. *Frontiers in Environmental Science*, 13, 1624721. doi:10.3389/fenvs.2025.1624721.
- Andy, A., Idris, A., & Ayavoo, R. (2024). Location attractiveness in the new norm: A systematic review. *SAGE Open*, 14. doi:10.1177/21582440241281036.
- Arbia, A., & Sobhi, K. (2024). Foreign direct investment, information and communication technology, and economic growth: The case of North African countries. *Scientific African*, 25, e02234. doi:10.1016/j.sciaf.2024.e02234.
- Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. doi:10.1016/j.joi.2017.08.007.
- Aria, M., & Cuccurullo, C. (2026). *Science mapping analysis: A primer with Biblioshiny*. New York, NY: McGraw-Hill.
- Babina, T., Fedyk, A., He, A., & Hodson, J. (2024). Artificial intelligence, firm growth, and product innovation. *Journal of Financial Economics*, 151(2), 103745. doi:10.1016/j.jfineco.2023.103745.
- Bhandari, K., Zámorský, P., Ranta, M., & Salo, J. (2023). Digitalization, internationalization, and firm performance: A resource-orchestration perspective on new OLI advantages. *International Business Review*, 32(6), 102135. doi:10.1016/j.ibusrev.2023.102135.
- Chrystella, D. F., Ibrahim, S., & Lihua, Y. (2025). Maximizing The Impact Of Foreign Direct Investment: Trends, Determinants, And Strategies For Sustainable Economic And Social Development. *IOSR Journal of Economics and Finance*. <https://doi.org/10.9790/5933-1601043150>
- Darmo, L., & Ognjanović, I. (2025). Does the foreign direct investment enhance digital readiness? *South East European Journal of Economics and Business*, 20(1), 100–112. doi:10.2478/jeb-2025-0008.
- Denicolai, S., Zucchella, A., & Magnani, G. (2021). Internationalization, digitalization, and sustainability: Are SMEs ready? A survey on synergies and substituting effects among growth paths. *Technological Forecasting and Social Change*, 166, 120650. doi.org/10.1016/j.techfore.2021.120650
- Eid, B. M. (2024). Digitalization, FDI, and sustainability: Exploring the impact of digital foreign direct investment on environmental and social well-being in Uzbekistan. *Advanced Economics and Pedagogical Technologies*, 1(2), 38–48.
- Fan, L., Ou, J., Yang, G., & Yao, S. (2024). Digitalization and outward foreign direct investment of Chinese listed firms. *Review of International Economics*, 32(2), 604–634. doi:10.1111/roie.12687.
- Gao, K., Chen, H., Tian, S., Sun, R., Cui, K., & Zhang, Y. (2023). A nexus between green digital finance and green innovation under asymmetric effects on renewable energy markets: a study on Chinese green cities. *Environmental Science and Pollution Research International*, 30, 46632–46646. doi.org/10.1007/s11356-022-24750-7.
- Garg, S., Garg, A., & Mittal, S. (2025). Unveiling the enigmas on determinants of sustainable foreign direct investment dynamics: empirical insight from ASEAN economies. *Competitiveness Review: An International Business Journal*. doi.org/10.1108/cr-10-2024-0208
- Götz, M. (2020). Attracting foreign direct investment in the era of digitally reshaped international production: The role of investment policy and clusters-The case of Poland. *Journal of East-West Business*, 26(2), 131–160. doi:10.1080/10669868.2019.1692985.

- Ha, L. T. (2026). Digital society and green foreign direct investment in Europe. *Discover Sustainability*, 7(1), 215.
- Hao, Y., Liu, W., & Liu, M. (2025). The effect of internet infrastructure's impact on foreign investment inequality: Based on digital divide perspective. *SAGE Open*, 15. doi:10.1177/21582440251333183.
- Hassan, H., Sampene, A., Wang, X., & Xu, L. (2025). The socio-economic and technological dimensions of energy transition: Do financial mechanisms enhance renewable energy generation? *Energy Strategy Reviews*. <https://doi.org/10.1016/j.esr.2025.101895>
- Hintošová, A. B. (2020). The digital economy in the context of foreign direct investment flows. In *Fostering innovation and competitiveness with FinTech, RegTech, and SupTech* (pp. 210–227). Hershey, PA: IGI Global. doi:10.4018/978-1-7998-4390-0.ch011.
- Ho, T. L., Ngoc, L. H., & Ho, T. H. (2025). Nonlinear and heterogeneous effect of digitalization on foreign direct investment: Evidence from developing countries. *Emerging Science Journal*, 9(4). doi:10.28991/esj-2025-09-04-011.
- Huang, K., & Liu, Q. (2024). Artificial intelligence and outward foreign direct investment: Evidence from China. *Journal of Asian Economics*, 92, 101745. doi:10.1016/j.asieco.2024.101745.
- Konat, G., Salihoglu, E., & Han, A. (2026). Financial investments in AI-based technologies and carbon footprint in selected advanced industrial economies. *Carbon Balance and Management*, 21. <https://doi.org/10.1186/s13021-025-00383-4>
- Kusairi, S., Wong, Z. Y., Wahyuningtyas, R., & Sukemi, M. N. (2023). Impact of digitalisation and foreign direct investment on economic growth: Learning from developed countries. *Journal of International Studies*, 16(1), 166–182. doi:10.14254/2071-8330.2023/16-1/11.
- Li, D., Wang, H., & Wang, J. (2024). Artificial intelligence and technological innovation: Evidence from China's strategic emerging industries. *Sustainability*, 16(16), 7226. doi:10.3390/su16167226.
- Li, H., & Liang, E. (2025). Double-edged sword effect of digital economy on FDI: evidence from Chinese cities. *Post-Communist Economies*, 37, 974–1008. doi.org/10.1080/14631377.2025.2517983
- Li, S. (2023). Determinants of Foreign Direct Investment and the Advantages Theory. *International Journal of Applied Management Theory and Research*. <https://doi.org/10.4018/ijamtr.322772>
- Mai, H. G. (2025). Digital transformation as a catalyst for foreign direct investment: Evidence from an emerging economy. *Cogent Economics & Finance*, 13(1), 2586304. doi:10.1080/23322039.2025.2586304.
- Mensah, J., & Traoré, N. (2022). Infrastructure quality and FDI inflows: Evidence from the arrival of high-speed internet in Africa. *The World Bank Economic Review*. doi:10.1093/wber/lhad021.
- Ming, K., Tiong, Cheng, M., & Choong, C. (2022). The roles of ICT telecommunication infrastructure on foreign direct investment in Malaysia. *Asian Academy of Management Journal*. <https://doi.org/10.21315/aamj2022.27.2.1>
- Nguyen, V. (2025). Digitalization's divergent impact on FDI inflows: A comparative analysis between advanced and developing countries. *Transnational Corporations Review*. doi:10.1016/j.tncr.2025.200148.
- Nie, P., Zhong, J., Ren, Z., & Huang, J. (2024). Sustainable financing solutions for the growth of resource-driven economies in the digital economy age. *Resources Policy*. <https://doi.org/10.1016/j.resourpol.2024.105350>
- Olkhovik, V. V., Lyutova, O. I., & Juchnevicius, E. (2022). Economic growth models and FDI in the CIS countries during the period of digitalization. *Financial Journal*, 14(2), 73–90.

- Peng, C., Yang, S., & Jiang, H. (2022). Does digitalization boost companies' outward foreign direct investment? *Frontiers in Psychology*, 13, 1006890. doi:10.3389/fpsyg.2022.1006890.
- Petro, I. R., Ashraf, N., Samir, M. W., Mamdouh, A. T., Nabil, K. M., Nageh, M. R., & Mohammed, O. H. (2025). The Effect of Political Stability and Macroeconomic Indicators on FDI. *Journal of Advances in Economics and Business Studies*, 2(2), 36- 57.
- Ren, Y. (2024). A Review of the Determinants of Outward Foreign Direct Investment (FDI): From the Perspective of the Eclectic Paradigm. *Academic Journal of Business & Management*. doi.org/10.25236/ajbm.2024.061119
- Santos, J., & Williamson, P. (2024). Beyond connectivity: Artificial intelligence and the internationalisation of digital firms. *Inf. Organ.*, 34, 100538. <https://doi.org/10.2139/ssrn.4660555>
- Shah, S. H., Ahmad, M. H., & Ahmed, Q. M. (2016). The nexus between sectoral FDI and institutional quality: Empirical evidence from Pakistan. *Applied Economics*, 48(17), 1591-1601.
- Şıklar, İ., & Kocaman, M. (2018). FDI and macroeconomic stability: The Turkish case. *European Financial and Accounting Journal*, 13(1), 19-40.
- Sinha, M., Chaudhury, A. R., & Sengupta, P. P. (2020). An empirical analysis on FDI and ICT in India. In S. C. Satapathy, V. Bhateja, J. R. Mohanty, & S. K. Udgata (Eds.), *Smart innovation, systems and technologies* (Vol. 160, pp. 93–102). Singapore: Springer. doi:10.1007/978-981-32-9690-9_10.
- Soltani, A. (2024). Exploring the interplay of foreign direct investment, digitalization, and green finance in renewable energy: Advanced analytical methods and machine learning insights. *Energy Conversion and Management: X*, 24, 100802. doi:10.1016/j.ecmx.2024.100802.
- Stallkamp, M., Chen, L., & Li, S. (2023). Boots on the ground: Foreign direct investment by born digital firms. *Global Strategy Journal*, 13(4), 805–829. doi:10.1002/gsj.1453.
- Supriyanto, S., Widayani, H., Cornellia, R., Armin, R., & Kamal, I. (2025). The impact of foreign direct investment (FDI) on economic growth in developing countries to acceleration in digitalization. *Daengku: Journal of Humanities and Social Sciences Innovation*, 5(3), 337–353.
- Tkalenko, S., Sukurova, N., & Honcharova, A. (2019). Determinants of foreign direct investments in terms of digital transformation of the Ukrainian economy. In *The International Conference on Digital Science* (pp. 148–164). Cham, Switzerland: Springer. doi:10.1007/978-3-030-37737-3_13.
- Tsaurai, K. (2025). Impact of infrastructure development on foreign direct investment in BRICS countries. *Journal of Risk and Financial Management*, 18(3), 152. doi:10.3390/jrfm18030152.
- United Nations (2025). *World investment report 2025: International investment in the digital economy*. United Nations.
- Wu, S., Liu, X., Xiang, Y., Liu, Z., & Fan, M. (2025). Does digital transformation affect outward foreign direct investment performance? Evidence from China. *Sustainability*, 17(2), 779. doi:10.3390/su17020779.
- Xing, Z., & Wang, Y. (2022). Climate risk, climate risk distance and foreign direct investment. *International Journal of Climate Change Strategies and Management*. <https://doi.org/10.1108/ijccsm-09-2021-0100>
- Yadav, A., & Iqbal, B. A. (2021). Foreign direct investment in the era of digitalization and environmental sustainability. In *Contemporary issues in international business and entrepreneurship* (pp. 68–82).

- Yao, T., & Wang, D. (2026). Does intelligent development attract foreign direct investment? Empirical evidence from prefecture-level cities in China. *Sustainable Futures*, 11, 101719.
- Yeboah, E., Baffour, A. A., Chibalamula, H. C., & Atiso, F. (2025). The significance of foreign direct investment (FDI) and trade openness: evidence from nine European economies. *SN Business & Economics*, 5(3), 27.
- Zaevska, O. H., Pegoraro, D., & Piscitello, L. (2024). Digitalization, Industry 4.0 policies and inward foreign direct investments: Evidence from European regions. In *Handbook of international business policy* (pp. 357–380). Cheltenham, England: Edward Elgar Publishing.
- Zhang, D., Masron, T. A., & Lu, X. (2024). The impact of digitalization on foreign direct investment inflows into cities in China. *Cogent Economics & Finance*, 12(1), 2330458. doi:10.1080/23322039.2024.2330458.