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Geopolitical Dynamics and Business Strategies in the Knowledge Economy: A Bibliometric Analysis

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Abstract. *In today's world that becomes more and more interconnected, combining geopolitics with sustainable development and energy security undoubtedly represents a challenge for the knowledge economy. This research analyzes 122 papers from the Scopus database, conducting a bibliometric analysis. Co-occurrence and co-citation analysis are performed as quantitative techniques utilizing VOSviewer software, identifying key research trends and highlighting gaps in literature. In order to ensure a rigorous assessment, a systematic literature review has been used. It is enhanced during the paper that attention is rising for corporate diplomacy, which mitigates geopolitical risks, for the supply chain obstacles related to energy transition and for the increased control techno-nationalism exerts on the global trade relations. Literature gaps are identified referencing the adoption of geopolitical risk management into corporate sustainability practices, the absence of an integrated framework for evaluating the supply chain disruptions impact on the decarbonization measures and the insufficient research on the future impact of techno-nationalism on energy reliability and responsible corporate practices.*

Keywords: geopolitics, sustainable development, decarbonization, energy security, knowledge economy, bibliometric analysis, global trade dynamics.

Introduction

The convergence of geopolitics, sustainable development and energy security raises major barriers for businesses and policymakers. Geopolitical pressures, trade restrictions and global alliances are motivating companies to strategically plan and rethink on long-term (Valizadeh & Taheri, 2023). In the same time, the difficulties are intensifying in terms of energy transition, vulnerabilities of supply chains and the increasing role played by techno-nationalism in impacting global economies (Luo & Van Assche, 2023). Even if corporate diplomacy and state-guided energy initiatives (Carvalho & Da Costa, 2021) are explored within the existing research, there are limitations in terms of their impact and influence. In order for this gap to be addressed, 122 papers from Scopus database are bibliometrically analyzed throughout this research, using VOSviewer software to discover the main research trends, together with the major limitations.

The study enhances three main research gaps: the consolidation of geopolitical risk management with corporate sustainable development, the lack of a unified framework for evaluating supply chain breakdowns in decarbonization and the scarce research on the long-term impact of techno-nationalism on stable energy infrastructure.

The current paper addresses these gaps by answering the research questions (RQs) as follows.

RQ1: Which is the current state of the research in the sphere of business geopolitics? What are the most popular research themes that result from the analyzed publications?

RQ2: How do geopolitical dynamics impact organizational strategies? Are there any factors influencing them?

RQ3: What is the future research direction in terms of geopolitical impact / influencing factors on the business strategies?

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By examining these dynamics, the paper provides a structured perspective on how geopolitics shapes corporate strategy and global governance, while identifying future research directions.

Systematic literature review

Overview of the knowledge economy and geopolitical challenges

In the knowledge economy, knowledge plays the role of the main driver in terms of economic expansion. A knowledge economy primarily depends on intellectual capabilities rather than physical inputs or natural resources. Thus, investments together with innovation in various sectors, such as education, energy, manufacturing, technology are utterly important.

Knowledge is represented in its relation to people as "human capital" and reflects the need for workforce to continuously acquire and adapt skills. This growing demand for highly-skilled workers embodies the "learning economy". According to the Organization for Economic Co-operation and Development, the "knowledge-based economies" are the economies "directly based on the production, distribution and use of knowledge and information" (OECD, 1996, p.7). OECD's policies on science and technology in different industries are designed to enhance the performance and well-being of the knowledge-based economies, together with driving increased investments in high-tech sectors, the expansion of advanced industries, a more skilled workforce and productivity gains. The knowledge-based economy is developed on knowledge production, strategic planning and mapping efforts and is brought to life through meetings, conferences and broader action networks. As Moisio affirms, the uncertain context of knowledge-based global capitalism is continuously structured through studies and concepts that connect this form of capitalism to certain political regions or communities (Moisio, 2018). Moreover, there is highlighted the idea of knowledge economy increase, which is not only an economic phenomenon, but it is very much linked to geopolitical and territorial dimensions. It is widely known that knowledge has always been perceived as a major force for productivity increase and economic growth, especially underlining the way in which information, technology and constant learning are building the economic success. As highlighted by Unger, at present, traditional manufacturing has been substituted with knowledge economy as the most advanced production form. The traditional mass production no longer serves as the main engine for economic growth. However, an evolved knowledge economy is still not reachable even in the wealthiest regions and it is constantly examined (Unger, 2019).

It is commonly accepted that knowledge creation is a dynamic process, which is driven by the relationship between tacit and explicit knowledge. The SECI (Socialization, Externalization, Combination and Internalization) model emphasizes that this process occurs through social interactions across individuals, organizations and networks, leading to continuous knowledge transfer and transformation (Pelău et al., 2010).

Since we live in a data-driven world, digitalization plays a crucial role in the development of cutting-edge technologies, introduced in all the economic sectors. In this sense, the concepts of digitalization and the digital economy are intertwined. The digital economy marks the evolution from Industry 3.0 (digital revolution), more exactly the shift from analog to digital technologies, to Industry 4.0, which integrates modern technologies and interconnected systems that promote innovation and efficiency. This transition reflects the growing integration of technology in every aspect of business and society (Javaid et al, 2024). In this sense, knowledge-based economy is related to the digital economy, considering the fact that knowledge is essential for the tech-driven economies and that digital tools enhance knowledge distribution.

As the digital economy and competition for control are intensifying, the partnership between nations and firms plays a crucial role. The powerful states should act in a responsible way towards the less powerful ones, in order for geopolitical stability to be reached. Power cannot be exclusively exercised by companies or states, thus a persistent need for political resource development is required. Governments are encouraged to recognize the necessity of sharing structural power with companies and developing mechanisms of cooperation with not only other states, but also with multinational firms (Lawton et al., 2023). Visible indeed is the fact that global business has been transformed by big data and digital technologies, ruled by big tech firms, like Amazon, Apple, Meta, for which data represents a key element in their evolving learning competencies. Changes in the balance of power in terms of data ownership have been reflected especially by the recent high-profile disputes between big tech companies and government.

The world we currently live in has mostly become directed by geopolitical volatility and challenges of sustainable development, in which companies and policymakers deal with a complex, dynamic environment. Essential fields of interests are newly represented by corporate sustainability, energy stability and digital autonomy, powered also by decarbonization and technological sovereignty. While states and firms are struggling to adapt to these obstacles, the integration of digitalization and energy transition has introduced new trends in worldwide trade and governance. It is highly advisable for multinational companies (MNCs) to face with agility the new challenges resulted from market pressures, regulatory systems and environmental matters, triggered by intensifying geopolitical conflicts and supply chain disruptions (Magyari, 2023).

There can also be remarked that energy transition, of utmost importance for climate change, has initiated a complex environment concerning energy supply, resource reliance and political aspects of energy access (Valizadeh & Taheri, 2023). These barriers are created by technological developments, in which digital control and techno-nationalism are leaving their mark on the determination of business strategy. Plenty of efforts are brought to the semiconductors and IT infrastructure areas, which create the context of control prioritization by states with regards to the advanced technology development, having the scope of safely guarding national priorities (Luo & Van Assche, 2023). Thus, corporate-state relations are crucial for companies' good management of geopolitical vulnerabilities and for the adjustment of their strategic direction with public policies that encourage digital independence and trustworthy supply chains. Moreover, attention should be brought to both the advantages and threats of the low-carbon economy transition (Nistoreanu et al., 2017). With nations' main goal of acquiring decarbonization outputs, the necessities for a reliable energy ecosystem and green business models should truly be met. Additionally, the inter-state conflicts can clearly be remarked by China and Russia's energy plans and confer a clear delimitation between energy provision, sustainable practices and commercial competitiveness, enhancing the need to increase efforts in all these domains (Carvalho & Da Costa, 2021). At the same time, businesses are harnessing digital competencies in order to face these complexities, incorporating sustainability into their main operational strategies, taking into account the laws and market demands that guide the worldwide energy development. As Glaser-Segura et al. (2018) point out, World Heritage Site (WHS) designation enhances a country's global standing, attracts investment and drives economic growth. Governments use WHS status to gain influence, while companies change their plans to take advantage of tourism, building projects and sustainability rewards.

Bibliometric analysis represents a general practice method for attaining a comprehensive understanding of the development and configuration of a research area. According to Hood & Wilson (2001), it assesses the evolution and performance of fundamental elements such as journals,

papers, authors, countries and other relevant factors, conferring valuable insights into the trends and dynamics within a given field. The term “bibliometrics” officially appeared in Alan Pritchard’s "Statistical Bibliography or Bibliometrics?" influential paper from 1969. He defined bibliometrics as "the application of mathematical and statistical methods to books and other media of communication". Before this new term was born, the term “statistical bibliography” had been used, but then Pritchard suggested using “bibliometrics” to analyze scientific literature in a more refined way and also to analyze the large-scale knowledge sharing (Pritchard, 1969).

Methodology

The main purpose of the research is to conduct a **comprehensive bibliometric analysis** that explores the existing knowledge on the **impact of geopolitical dynamics on multinational companies' business strategies.** The goal of the research is to determine critical trends and driving factors in the field, providing a systematic overview of the academic landscape.

By answering the research questions, the paper aims to map the intersection of geopolitics and business strategy within the **current state of research** and also, to identify the **substantial research themes**, emphasizing consistent publications and authors. Furthermore, the paper analyzes the agents and barriers into how **geopolitical dynamics influence organizational strategies** and outlines **future research directions**, identifying gaps and upcoming trends to support academic awareness in the field.

The paper also integrates a **systematic literature review** in addition to the bibliometric analysis, which confers a broader view of the current academic literature state in this research area.

The paper follows the following structure: defining the research questions, selecting the database, searching the keywords, selecting the relevant articles and finally extracting and assessing the data.

Results and discussions

Data collection

In order to answer the research questions, **Scopus** database was used to search for scientific articles from the geopolitical impact on business strategies field. Scopus is one of the most prestigious databases, where over 24,000 valuable articles from worldwide publishers are placed.

Scopus database was preferred against Web of Science (WoS), as the search criteria holds the possibility of choosing from title, abstract and key words, as compared to WoS’s only title or topic. 122 articles published in leading journals of business, management, economics and energy have been assessed, using the bibliometric visualization tool VOSviewer.

According to Srivastava (2007), a thorough assessment of the literature should follow these key stages:

-formulating the literature review strategy;
-deciding the inclusion and exclusion criteria;
-conducting a research selection and evaluation procedure.

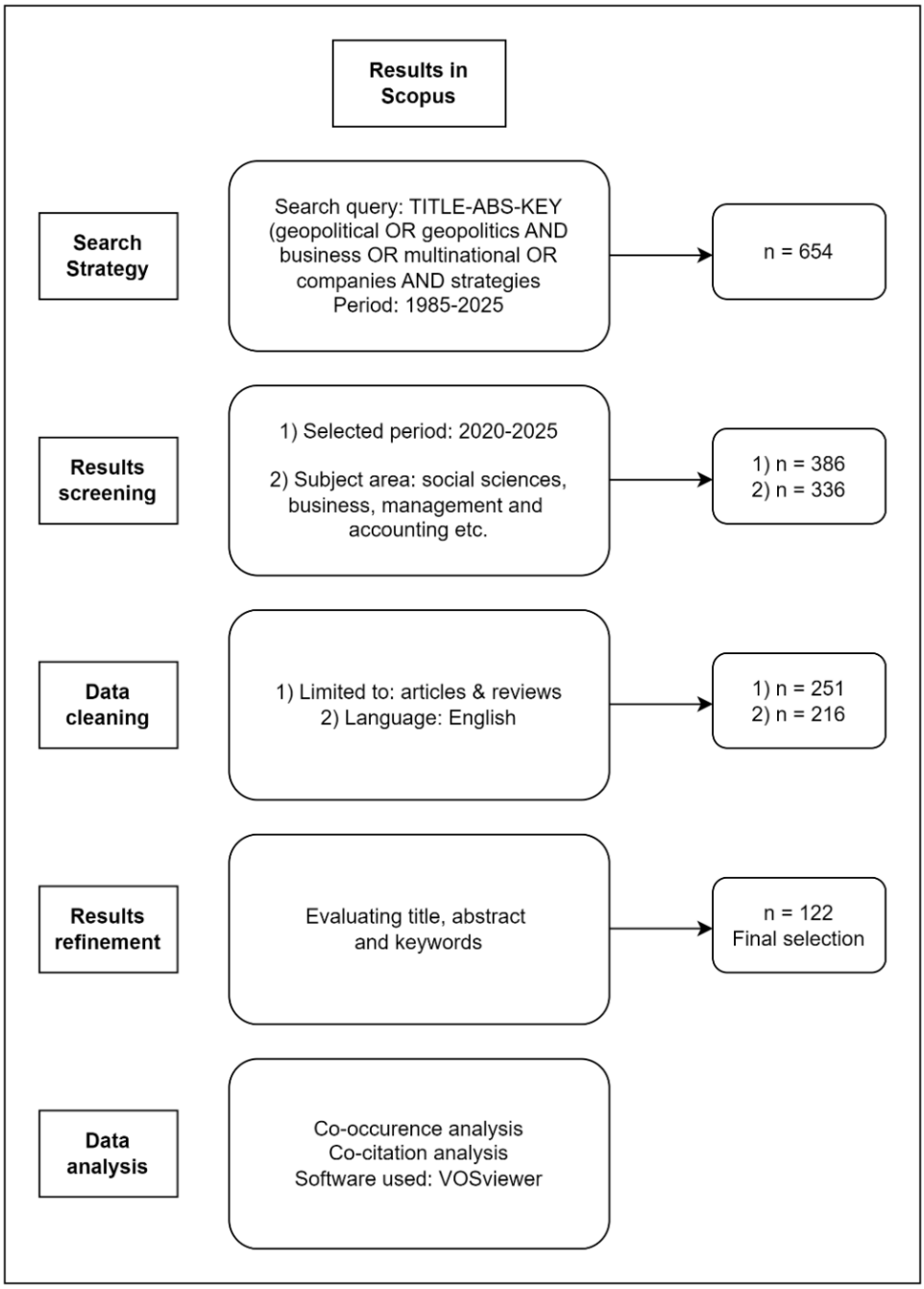


Figure 1. Bibliometric analysis results – Scopus database

Source: Author's own contribution.

Search strategy

Presented further there is the search strategy applied for gathering the most relevant articles in the area of interest.

After searching within article title, abstract and keywords, 654 total documents were initially found, from the period 1985-2025.

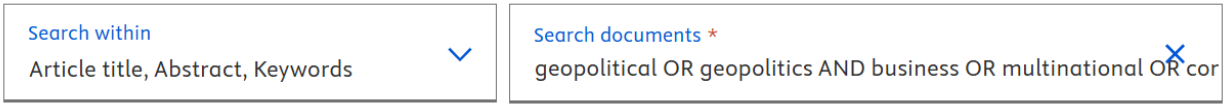


Figure 2. Search strategy

Source: Author's own input.

The search query text was the following:
TITLE-ABS-KEY (geopolitical OR geopolitics AND business OR multinational OR companies AND strategies)

Results screening

The decided range in terms of time was 2020-2025, resulting 386 documents. This decision pertains to the fact that the geopolitical context can vary significantly from one year to another, thus it has been wished to highlight the most actual works, since geopolitics in business strategies has been a subject of increased interest in the latest years.

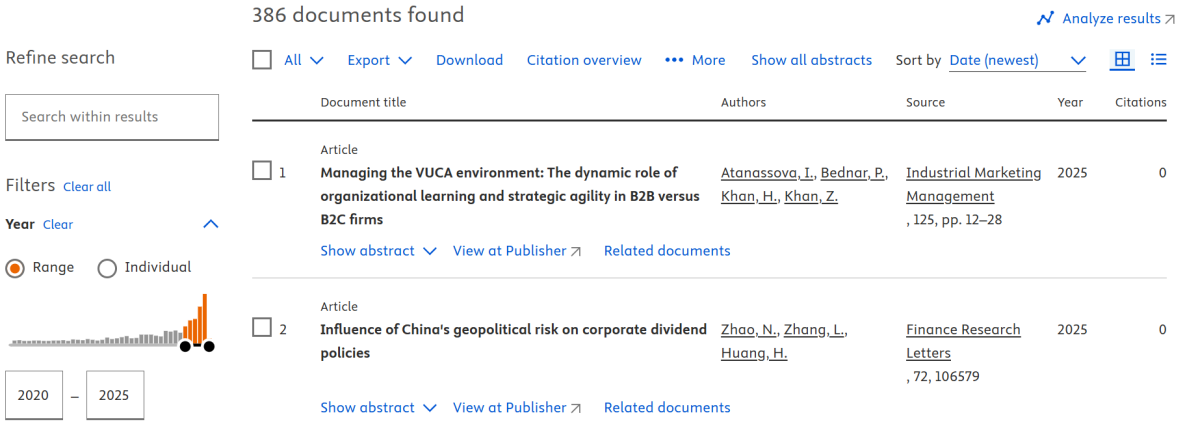


Figure 3. Time range – results

Source: Author's own work.

Next, according to the search strategy of the paper, after filtering the subject areas of interest on social sciences (177), business, management and accounting (125), economics, econometrics and finance (108), environmental science (56) and energy (51), the identified documents worth investigating were in number of 336.

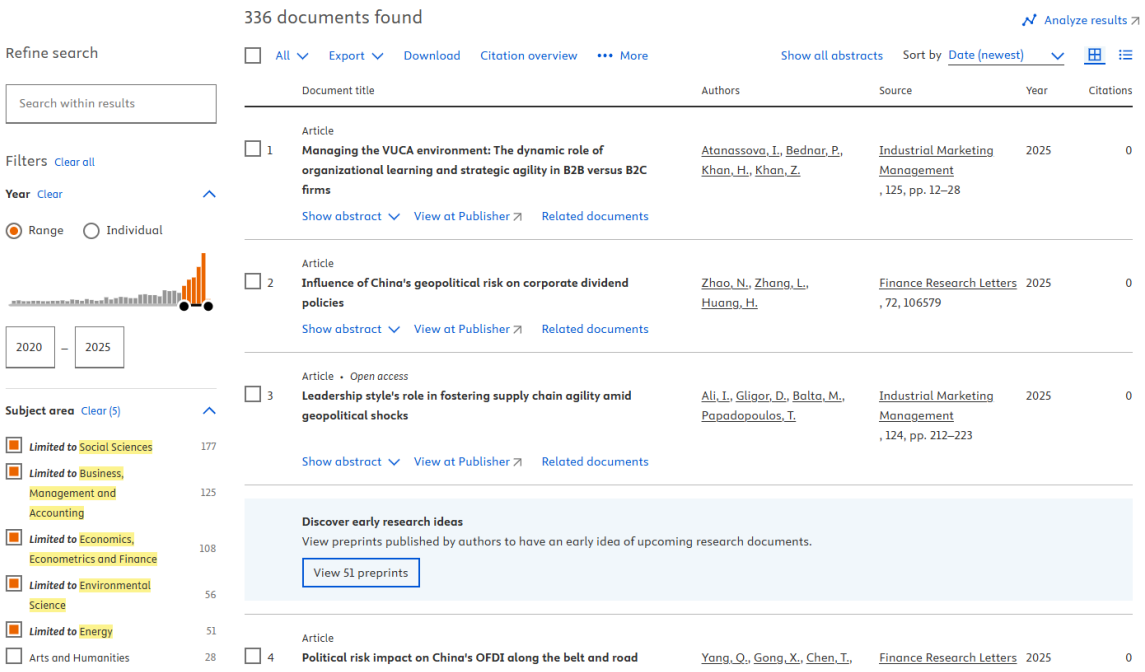


Figure 4. Selection of subject areas

Source: Author's independent contribution.

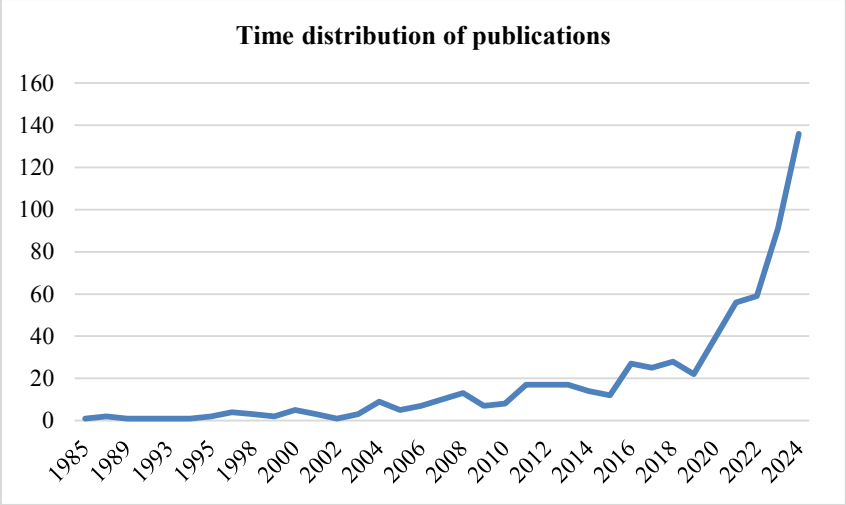
Data cleaning

Next, the chosen document types were articles and reviews. The selection of the peer-reviewed publications helps at guaranteeing the accuracy and quality of the results, selection after which 251 documents resulted. Conference papers and books were excluded from the search since Scopus emphasizes high-quality, peer-reviewed research.

This process was followed by applying a filter of language, selecting only English, resulting 216 documents.

Results refinement

The exclusion criteria were applied on the 216 publications, being removed 94, on the reason of title and abstract not matching with the theme as expected. Thus, after examining the titles, abstracts and keywords, only 122 had been suitable for further being taken into consideration and analyzed.



Graph 1. Time distribution of publications

Source: Author's own contribution.

In the graph from above the time distribution of the publications firstly appearing in 1985 can be visualized. Until 1997, only one or two articles were getting published, followed by a slight increase of 10 articles in 2007. There was a surge reaching 27 published documents in 2016 and 56 documents in 2021, drawing recent years attention to geopolitics in business strategies. This upward trend continued visibly, attaining 91 articles in 2023 and 136 articles in 2024, suggesting the growing interest in the field.

The top journals in which the 122 articles have been published are the following, in terms of reputation and impact:

Table 1. Reflection of the chosen articles in top journals

Rank	Journal Name	Field
1	Strategic Management Journal	Strategy, Management
2	Journal of Management	Management, Organizational Studies
3	Journal of Management Studies	Business, Management
4	Journal of International Business Studies	International Business
5	Academy of Management Learning and Education	Management Education
6	Journal of Operations Management	Operations, Supply Chain
7	Production and Operations Management	Operations Research
8	International Journal of Operations and Production Management	Operations, Manufacturing

Rank	Journal Name	Field
9	Journal of Business Research	Business, Marketing
10	Journal of Cleaner Production	Sustainability, Environmental Sciences
11	Ecological Economics	Environmental, Ecological Economics
12	Political Geography	Political and Economic Geography
13	Geoforum	Human Geography, Geopolitics
14	Journal of Common Market Studies	European Integration, Economics
15	Energy Strategy Reviews	Energy Policy, Sustainability
16	Renewable Energy	Sustainable Energy
17	Resources Policy	Energy, Resource Management
18	Emerging Markets Finance and Trade	Finance, Emerging Markets
19	International Journal of Finance and Economics	Finance, Economics
20	Financial Innovation	Financial Technology, Innovation

Source: Author's distinct contribution.

Data analysis – Bibliometric analysis

In this section there are presented the conducted bibliometric analyses in VOSviewer software, more exactly **co-occurrence analysis and co-citation analysis.**

On one hand, co-occurrence analysis is a topic modelling technique that gives the direction of research trends, helping at mapping them. The focus is placed on the content and thematic framework of the study. On the other hand, co-citation analysis tracks the knowledge progression by presenting commonly cited papers and grouping them into clusters, concentrating on the effect and influence of research.

Co-occurrence analysis is a content-based analysis, while co-citation is a citation-based one. The visualization output for the first one is represented by networks of keywords via clusters, while for the second one the output consists of networks of papers or authors via citation relationships.

Results of bibliometric analysis

1. **Co-occurrence analysis** -examines how frequently certain keywords or concepts from a research field appear together in a set of data. In addition, this analysis is useful for systematically reviewing a field and also for unveiling the underexplored research gaps.

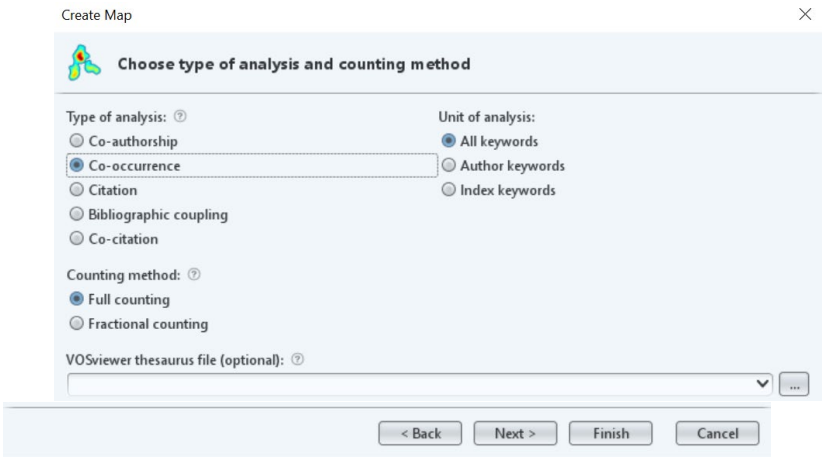


Figure 5. Co-occurrence selection in VOSviewer

Source: Author's original work.

From the following image it is selected how often it is wished for the keywords to appear in the generated map. The minimum number of occurrences has been set to 4, so only keywords that appear 4 or more times in the dataset will be included in the map. There are 808 total keywords. For the 24 keywords, there will be displayed the total strength of the co-occurrence that links them with other keywords.

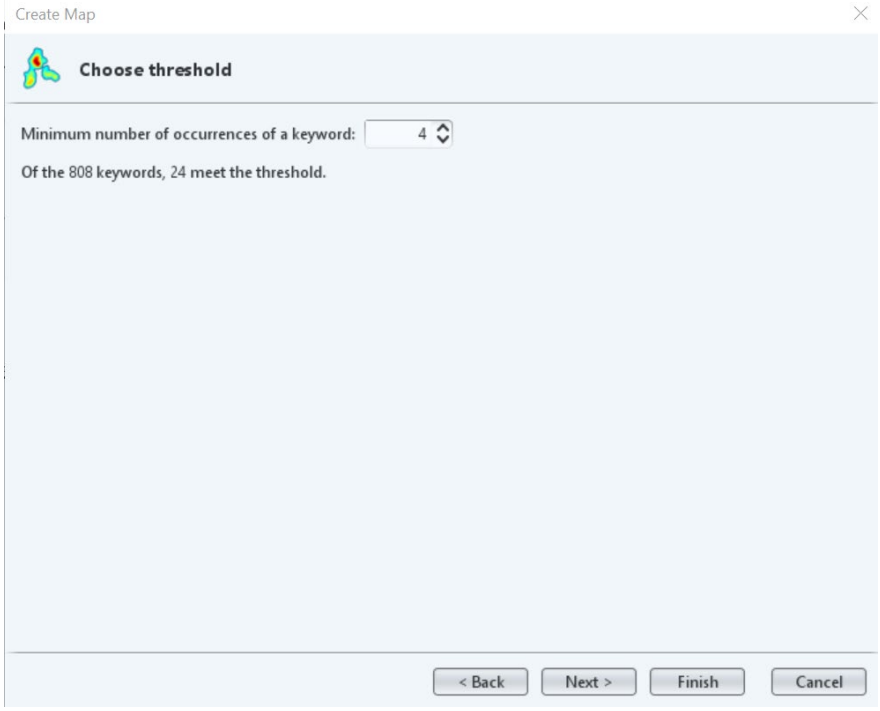
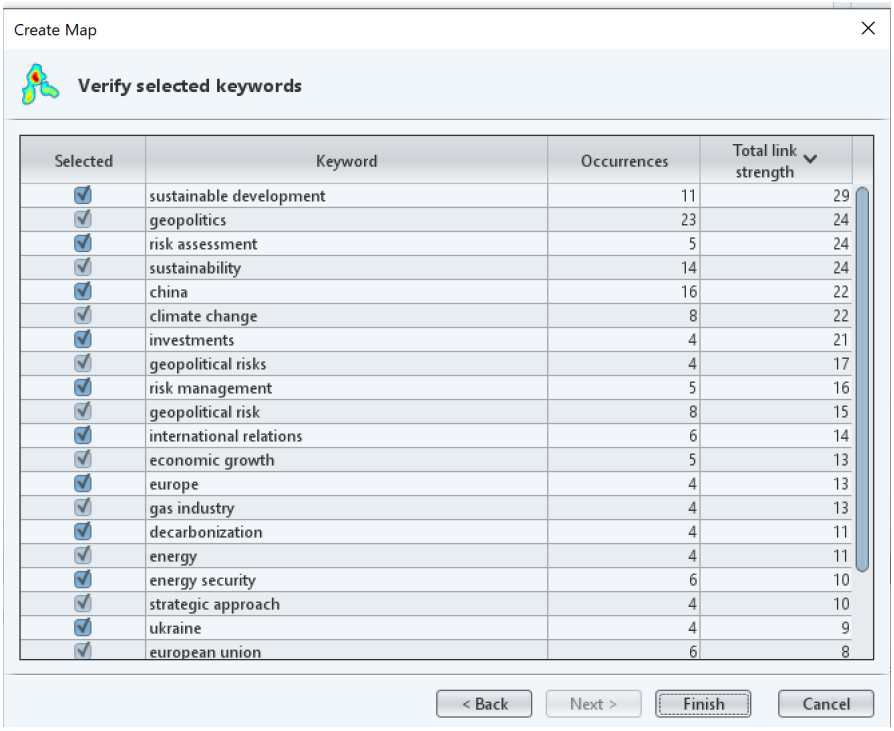


Figure 6. Threshold choosing

Source: Author's unique contribution.



Selected	Keyword	Occurrences	Total link strength
☑	sustainable development	11	29
☑	geopolitics	23	24
☑	risk assessment	5	24
☑	sustainability	14	24
☑	china	16	22
☑	climate change	8	22
☑	investments	4	21
☑	geopolitical risks	4	17
☑	risk management	5	16
☑	geopolitical risk	8	15
☑	international relations	6	14
☑	economic growth	5	13
☑	europe	4	13
☑	gas industry	4	13
☑	decarbonization	4	11
☑	energy	4	11
☑	energy security	6	10
☑	strategic approach	4	10
☑	ukraine	4	9
☑	european union	6	8

Figure 7. Keywords verification

Source: Author's individual contribution.

The "Occurrences" column refers to the number of times a keyword appears in the dataset, while "Total link strength" column reflects the sum of the strengths of all connections an item has in the network. In addition, a link represents the co-occurrence between two items.

It is important to be noticed that the keywords from a cluster are frequently used in the same papers.

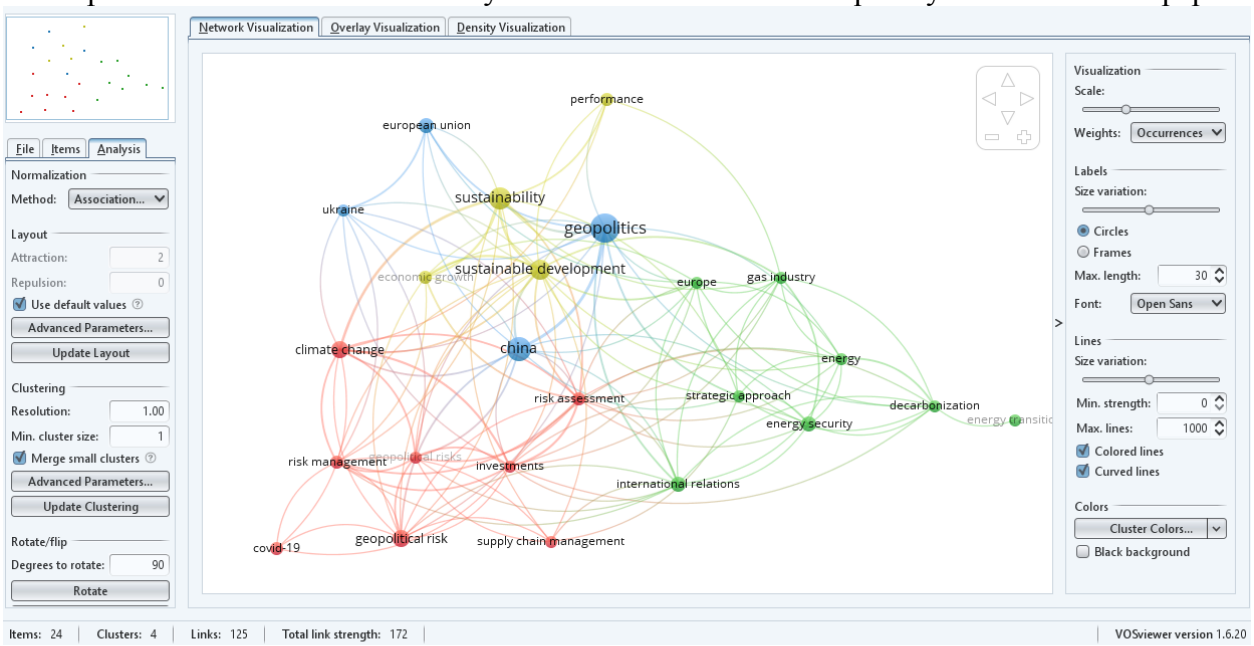


Figure 8. Association strength normalization method - Network Visualization

Source: Author's personal contribution.

The chosen normalization method is the association strength, the most widely used one for identifying relevant clusters and connections. It measures the strength of the relationship between two items relative to their total connections. This can be observed in Figure 8, under the "Analysis" tab. Four clusters in total have been generated by the software, with corresponding keywords. A cluster is a set of items included in a map.

The table from below reflects the most relevant keywords of the search query, arranged in descending order of the total link strength (TLS), together with occurrences (OC) and respective clusters associated. In this sense, "sustainable development" (OC = 11, TLS = 29) leads, followed by "geopolitics" (OC = 23, TLS = 24) and "sustainability" (OC = 14, TLS = 24).

Table 2. Keywords, occurrences, total link strength, cluster

Rank	Keyword	Occurrences	Total link strength	Cluster
1	sustainable development	11	29	4
2	geopolitics	23	24	3
3	risk assessment	5	24	1
4	sustainability	14	24	4
5	china	16	22	3
6	climate change	8	22	1
7	investments	4	21	1
8	geopolitical risks	4	17	1
9	risk management	5	16	1
10	geopolitical risk	8	15	1
11	international relations	6	14	2
12	economic growth	5	13	4
13	europe	4	13	2
14	gas industry	4	13	2
15	decarbonization	4	11	2
16	energy	4	11	2
17	energy security	6	10	2
18	strategic approach	4	10	2
19	ukraine	4	9	3
20	european union	6	8	3
21	supply chain management	4	7	1
22	performance	5	6	4
23	covid-19	5	4	1
24	energy transition	4	1	2

Source: Author's direct involvement.

For an easier visualization, the colours, together with the focus topic of each cluster are reflected as follows:
Cluster 1 (Red) – geopolitical challenges and risks;
Cluster 2 (Green) – energy and decarbonization;
Cluster 3 (Blue) – global power dynamics;
Cluster 4 (Yellow) – sustainability and economic growth.

Table 3. Clusters and their items

Cluster	Number of items
1	8
2	8
3	4
4	4

Source: Author's own work.

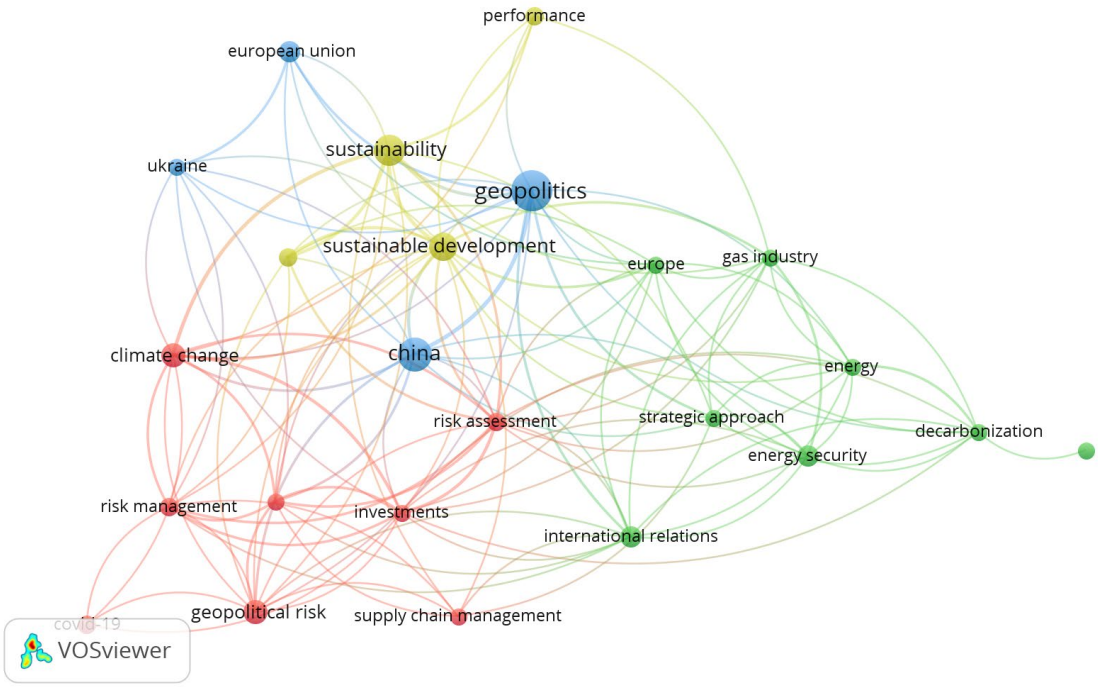


Figure 9. Output of co-occurrence analysis

Source: Author's original work.

It can be further noticed that the term "climate change" appears 8 times in the dataset and also that the sum of the strengths of all links between "climate change" and other terms is 22. This can be interpreted in the following way: a significantly higher TLS than the number of occurrences suggests that "climate change" is well-connected in the network. In addition, it co-occurs with other keywords. TLS holds a notably higher value (22) as compared to the occurrence (8), which can explain that the term is often linked to several other themes. Even having a lower frequency, the term connects various topics and is meaningful for the analysis.

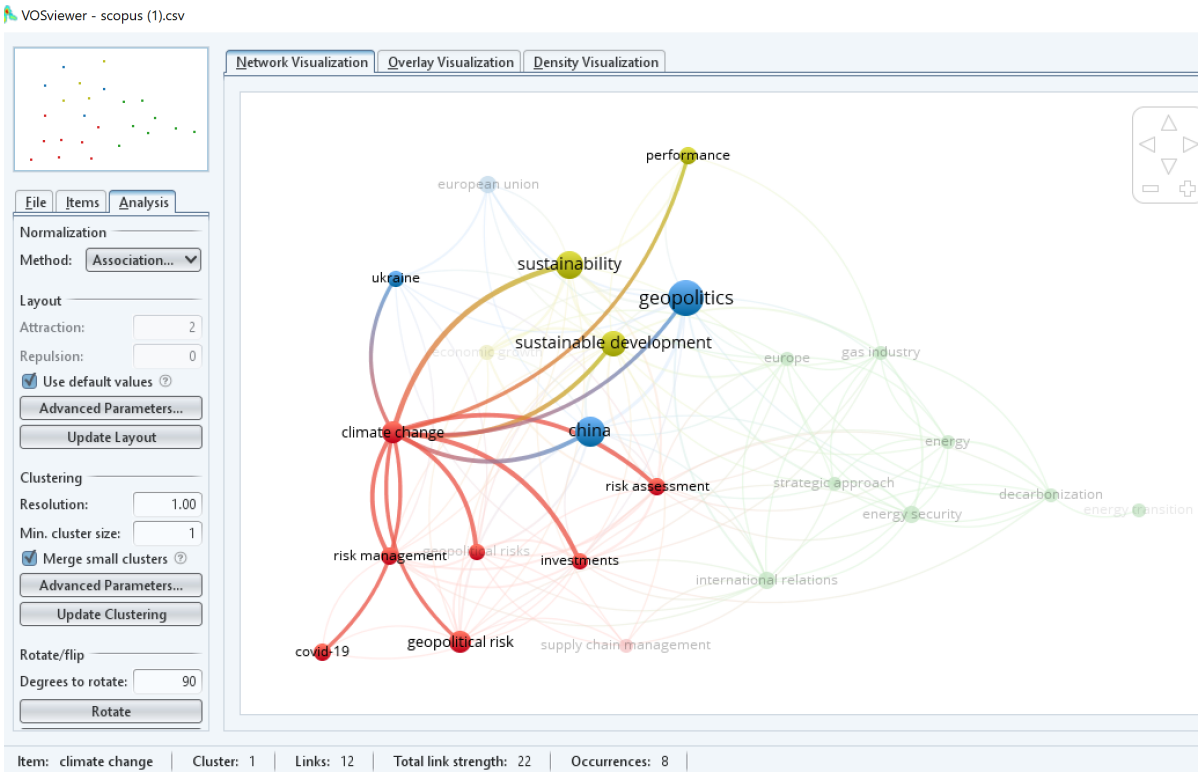


Figure 10. Relationships - clusters

Source: Author's individual work.

2. **Co-citation analysis** – by the help of which significantly important papers, journals or authors can be determined according to how frequently these are cited together in other works. This analysis is useful in presenting how various topics or methodologies are linked through citations, making connections between areas of research (White & Borgholthaus, 2022).

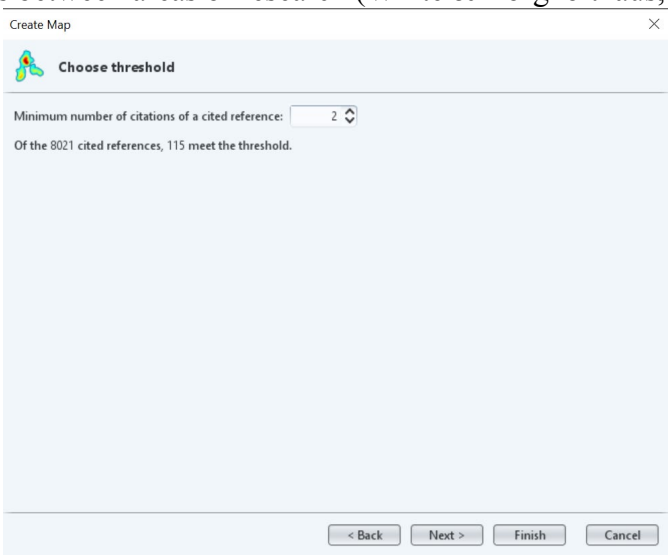


Figure 11. Threshold choosing

Source: Author's distinct work.

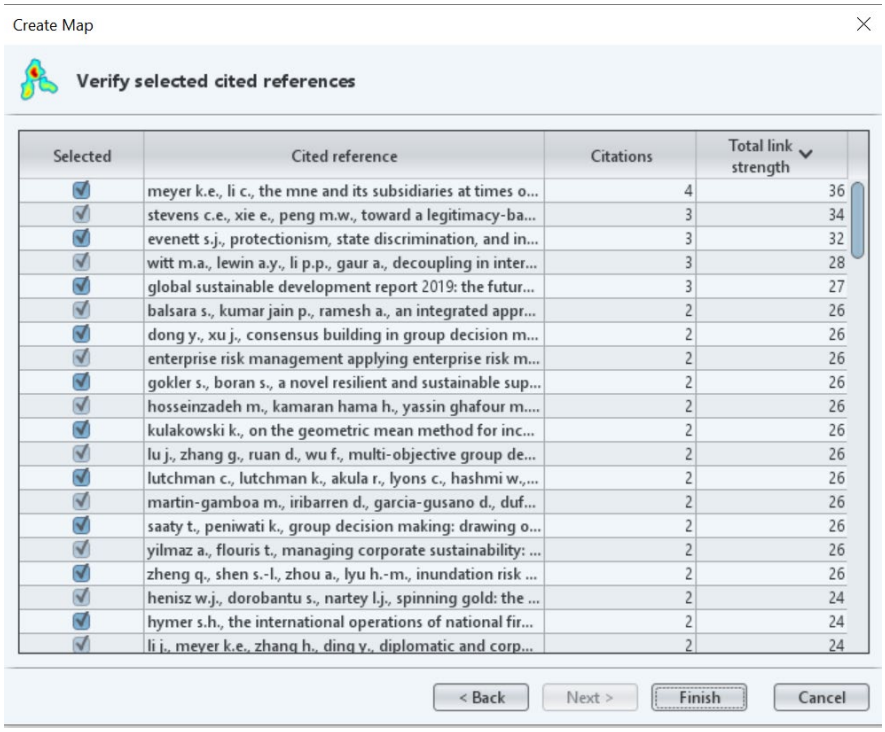


Figure 12. Cited references verification

Source: Author's original input.

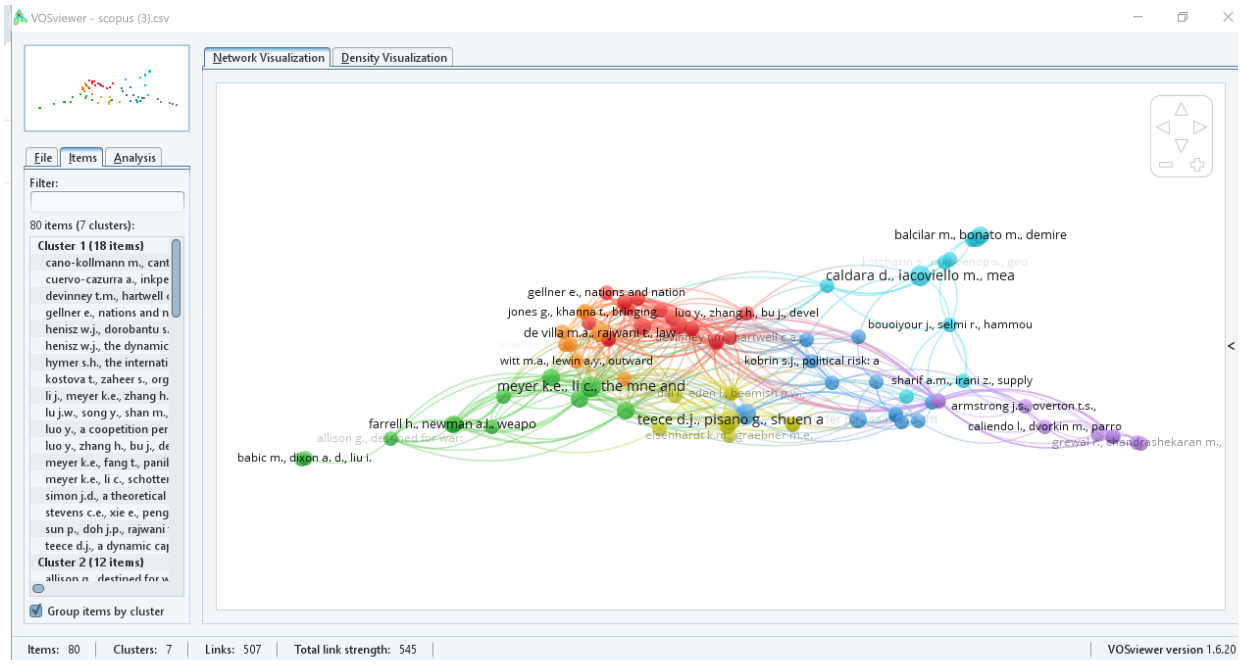


Figure 13. Co-citation analysis output

Source: Author's original contribution.

Seven clusters have been identified by the software. It can be observed that each node represents an article.

The number of items for each cluster can be seen below.

Table 4. Clusters and their number of items

Cluster	Number of items
1	18
2	12
3	12
4	10
5	10
6	10
7	8

Source: Author's direct involvement.

Articles with a high total link strength (even if with low citation count) are more impactful in terms of their thematic connections in the network and relevance for the research field.

Having a high citation count, the following articles are the most influential relative to direct references by other publications.

The table from below surprises the most cited references as results of the co-citation analysis, with the details of publication and the corresponding cluster.

Table 5. The most cited references

Author(s)	Title	Journal/Source	Volume(Issue)	Pages	Year	Cluster
Caldara, D., & Iacoviello, M.	Measuring geopolitical risk	American Economic Review	112(4)	1194–1225	2022	6
Meyer, K. E., & Li, C.	The MNE and its subsidiaries at times of global disruptions: An international relations perspective	Global Strategy Journal	12(3)	555–577	2022	2
Teece, D. J., Pisano, G., & Shuen, A.	Dynamic capabilities and strategic management	Strategic Management Journal	18(7)	509–533	1997	4
Witt, M. A.	De-globalization: Theories, predictions, and opportunities for international business research	Journal of International Business Studies	50(7)	1053–1077	2019	3
Evenett, S. J.	Protectionism, state discrimination, and international business since the onset of the global financial crisis	Journal of International Business Policy	2(1)	9–36	2019	2
Stevens, C. E., Xie, E., & Peng, M. W.	Toward a legitimacy-based view of political risk: The case of Google and Yahoo in China	Strategic Management Journal	37(5)	945–963	2016	1
Witt, M. A., Lewin, A. Y., Li, P. P., & Gaur, A.	Decoupling in international business: Evidence, drivers, impact, and implications for IB research	Journal of World Business	58(1)	—	2023	2

Source: Author's contribution to the study.

The articles jointly highlight that geopolitical risk is increasing and businesses should build capabilities and develop strategies in order to remain competitive and manage uncertainty. Caldara and Iacoviello (2022) examine in their paper how geopolitical risks affect investments and economic stability. Also, the fact that sustainability and long-term resilience are essential for firms and authorities should receive more attention. Witt (2019) affirms that de-globalization may impact sustainability efforts and points out the trade barriers. In their paper from 2023, Witt, Lewin, Li and Gaur present decoupling as a response to geopolitical shifts, showcasing how countries and businesses are reducing interdependence.

The main insights, categorized on themes, are derived from the analysis of 122 articles as follows:

• Corporate strategy

It might be advantageous if companies that adopt corporate social responsibility (CSR) strategies are using less complex decision-making tools in order to create a balance between budgetary and ethical concerns. Goby & Karimova (2022) highlight that these basic principles are adaptable and can guide businesses in choosing CSR actions that closely fit with their organizational goals. In addition, in Egea et al. (2020) and Bucheli et al. (2024)'s studies there is brought to attention the fact that MNCs perceive diplomacy as a key nonmarket approach, managing the challenges of economic and political instability.

• Energy transition & decarbonization

As affirmed in "Decarbonization challenges and opportunities in the Central European energy sector: Implications for management", the transition to low-carbon energy confronts with regulatory stagnation, financial constraints and opposition from fossil fuel stakeholders. In the same context the governmental, technological and financial barriers remain significant even if collaboration for green energy between China and Latin America is increasing. Also, Noussan et al. (2021) present how green and blue hydrogen are critical for future and contribute to the global shift towards a more sustainable energy sector.

• Geopolitics of energy security

In this story, the relationships between certain nations have played the role of either a game-changer or a game-hinderer, in the sense that a collaboration considered unstable in the past has now been transformed into a strategic partnership on long-term, especially for the oil and gas sector, as it is in the case of China and Russia (Valizadeh &Taheri, 2023). Then, Sheth & Uslay (2023) affirmed that the Russo-Ukrainian war brought huge shifts in business-to-business supply chain and relationships in the energy markets. Also, USA is forming partnerships with countries like Australia, Canada and Chile, as well as with European Union (EU), to secure a stable supply of lithium and rare earth minerals. These partnerships have the scope of relying less on China by investing in mining, refining and supply chain diversification, as highlighted by the articles of Ufimtseva et al. (2024) and Sanchez-Lopez (2023).

•Digitalization & geoeconomics

The aggressive expansion of China's digital infrastructure in Africa is noticed, with US trying to limit the influence, noticed by Kumar (2024). Next, Europe's pressure for technological sovereignty can be observed through its attempt to reduce reliance on USA Big Tech firms that would make EU independent again from financial and technological point of view (Bassens & Hendrikse, 2022).

•Supply chain resilience & market strategies

With their reshoring and nearshoring trends, companies are bringing operations closer to home to avoid geopolitical disruptions. Furthermore, the recent geopolitical disruptions are forcing companies to recreate their supply chain strategies in a more flexible manner (Fernández-Miguel et al., 2022).

Research gaps

The identified research gaps around the analyzed articles are structured on the following sections:

- long-term impact of environmental, social and governance (ESG) strategies on geopolitical risk mitigation: ESG is recognized as a tool for resilience, but there is a lack of longitudinal analysis on how it reduces exposure to geopolitical shocks over decades;
- -corporate diplomacy effectiveness in managing geopolitical risks: current literature acknowledges the role of corporate diplomacy, lacking empirical analysis on its success rate;
- -MNC strategy adaptation reported to economic nationalism: many studies focus on historical cases, but real-time adaptation strategies of MNCs to growing economic nationalism are underexplored;
- -role of private finance in large-scale energy transition projects: the majority of studies focus on government policies, but the role of private investors, banks and financial innovation in accelerating decarbonization is underexplored;
- -energy security risks in a decarbonized economy: various studies discuss the shift from fossil fuels, but rarely address the new risks associated with renewable energy reliance (e.g. critical mineral dependencies);
- -long-term impact of Russia-Ukraine war on global energy markets: the existing studies assess the short-term effects, but long-term structural shifts in global energy trade remain uncertain;
- -the role of Organization of the Petroleum Exporting Countries (OPEC) in a decarbonizing world: most studies analyze OPEC in fossil fuel contexts, but its influence on green energy transition is hardly explored;
- -geopolitical risks of the rare earths supply chain: the importance of rare earth elements is acknowledged, but there is limited research on their vulnerability to geopolitical disruptions;
- -the role of artificial intelligence (AI) in geopolitical strategy: studies on AI emphasize economic applications, but its potential role in statecraft and diplomacy is underexplored;
- -techno-nationalism and digital sovereignty: Europe and USA are pushing digital sovereignty policies, but their economic impacts remain uncertain;
- -future of global supply chains in the world of deglobalization: many studies analyze the current trends, but predictions on long-term supply chain restructuring are lacking;
- -strategies for critical raw material reserves for energy transition: governments are providing lithium, cobalt and nickel, yet their long-term availability and economic impact are uncertain.

Conclusion

This paper provides an overview of the existing research on the intersection of geopolitics, corporate sustainability and energy security. To address RQ1, a rigorous bibliometric analysis has been conducted, using co-occurrence and co-citation techniques in VOSviewer, providing a careful investigation of the main research trends and primary themes in the geopolitical business environment. The analysis brought to light a growing attention to corporate diplomacy, energy transition barriers and the role of techno-nationalism in determining international trade dynamics. Answering RQ2, a systematic literature review has been performed to evaluate the results of geopolitical dynamics on organizational strategies. The findings highlight the pivotal relevance of geopolitical risk management in firm decision-making, the fundamental influence of supply chain disturbances on emission cutting efforts and the growing purpose of state policies in forming international business landscape. Finally, by addressing RQ3, the study highlights essential research gaps and specifies the need for a well-connected framework, linking geopolitical risks

with sustainable corporate practices, a broader evaluation of supply chain obstacles regarding energy sector transformation and ongoing investigation of the further implications of techno-nationalism on global energy safety. These deficiencies reflect the potential for future research to create thorough models that may improve awareness and sustain lawmakers and business executives in driving the challenges of the emerging geopolitical environment.

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List of abbreviations

AI = Artificial Intelligence

CSR = Corporate Social Responsibility

ESG = Environmental, Social and Governance

EU = European Union

IT = Information Technology

MNCs = Multinational Companies

OC = Occurrences

OECD = Organization for Economic Co-operation and Development
OPEC = Organization of the Petroleum Exporting Countries
SECI = Socialization, Externalization, Combination and Internalization
TLS = Total Link Strength
USA = United States of America
WHS = World Heritage Site
WoS = Web of Science