GEOPOLITICAL RISK AND REAL INVESTMENTS IN SHIPPING COMPANIES: A BIBLIOMETRIC ANALYSIS-BASED LITERATURE REVIEW

Islam Abdallah [(1)], Mohamed Bahaa Bekheit [(2)]

(1) PhD Student and Teaching Assistant, College of International Transport and Logistics, Arab Academy for Science, Technology and Maritime Transport, Aswan, Egypt, islam.3bdala@aast.edu

(2) Professor of Finance and Accounting, and Dean of the College of International Transport and Logistics, Arab Academy for Science, Technology and Maritime Transport, Aswan, Egypt, m.bahaaeldin@aast.edu

Keywords: Geopolitical Risk (GPR), Shipping Companies, Shipping Finance, Investment Decision, Real Investment.

ABSTRACT: Geopolitical threats and events have significantly increased geopolitical risk in the first two decades of the 21st century. A growing body of research examines the impact of geopolitical risk on the macroeconomic environment and on companies' financial decision-making. No previous studies have investigated the effect of geopolitical risk on the effectiveness of corporate investment in shipping. This distinction is crucial because the success of business investments determines a company's value, economic growth, and overall economic health. Managers need to understand how geopolitical risk influences a company's investment decisions, allowing them to develop flexible strategies that mitigate risks and optimize resource use. This study aims to explore recent developments and identify research gaps related to geopolitical risk and real investments in shipping companies. The goal is to gain a comprehensive understanding of geopolitics, a relatively new field that has gained interest over the last five years due to rapid and recurring geopolitical events. This growing interest is reflected in the number of published articles: only 11 articles appeared between 2018 and 2021, while 23 articles related to this topic were published in 2022, marking a significant rise. The number of published articles has grown exponentially, reaching 36 in 2024. This study conducted a thorough review of international literature on the subject using the Web of Science database. An extensive bibliometric analysis was performed utilizing the R language and the bibliometric package. Visualization tools were used to provide an overview of the field and to clarify key thematic areas. The results highlight the progress of research on "Geopolitical Risk and Real Investments in Shipping Companies," emphasizing major contributors, countries, and institutions. The paper explores various categories systematically used to classify the selected documents, including areas such as shipping companies, economics, finance, transportation and logistics, and international relations and geopolitics (called "geopolitical risk").

1. INTRODUCTION

Bibliometrics is a quantitative analysis of literature that provides insights into the expansion of academic publications. It is essential for identifying the most prominent authors, journals, and publications within a particular discipline (Costa et al., 2023). Global shipping faced a series of

challenges in 2024 and the first half of 2025, including the ongoing disruption of critical shipping routes, trade policy shifts and tariffs, and geopolitical tensions. While trade growth in certain markets has declined, new ship capacity is still being delivered, particularly in the container segment. This is reigniting some apprehensions regarding the potential for a fleet capacity surplus and asset underutilization during the eventual normalization of distance-adjusted demand, which had absorbed surplus capacity over the past few years. These issues are further complicated by the ongoing uncertainty surrounding navigation in the Red Sea. Shipping continues to circumvent the Suez Canal, with tonnage transit levels remaining approximately 70% below the 2023 average as of early May 2025. If the geopolitical tensions affecting the Red Sea subside, distance-adjusted demand is anticipated to decrease. This demand is bolstered by rerouting around the Cape of Good Hope (Review of Maritime Transport 2025: Staying the Course in Turbulent Waters 2025). Geopolitical risk (GPR) is defined as "the risk associated with wars, terrorist activities, and interstate tensions that impede the normal and peaceful advancement of international relations." The inquiry is structured into eight classifications: War Threats (Category 1), Peace Threats (Category 2), Military Buildups (Category 3), Nuclear Threats (Category 4), Terrorism Threats (Category 5), Outset of War (Category 6), Escalation of Conflict (Category 7), and Acts of Terrorism (Category 8). Caldara and Iacoviello additionally developed two subindexes based on the search groupings. The Geopolitical Threats (GPRT) encompasses terminology from categories 1 to 5. The Geopolitical Acts (GPRA) index comprises terms from categories 6 to 8 (Caldara and Iacoviello, 2019). GPR is linked to the financial decisions within the global shipping sector, inducing uncertainty that results in a decline in global industrial production, which impacts shipping demand and the income streams of shipping **companies**. Consequently, the cash flow and earnings of shipping companies may be challenging to forecast, resulting in a "wait and see" approach that postpones their decision-making, particularly about future investments (Kotcharin and Maneenop, 2020). In a related context, entrepreneurs, market participants, and central bank officials regard geopolitical risks as significant determinants affecting investment choices and stock market dynamics. 2017 Gallup research involving over 1,000 investors indicated that 75% of respondents expressed concern about the economic consequences of global military and diplomatic crises, placing greater emphasis on geopolitical risk than on political and economic uncertainty (Mark Carney, 2016).

2. METHOD

Collecting and reviewing prior studies is essential for developing a deep, comprehensive understanding of existing research. It helps identify what has already been established, what remains unclear, and where future work can contribute. Because scientific knowledge is cumulative, researchers build on earlier studies to extend and refine the field. The Web of Science (WoS) database is considered one of the most important sources used by researchers to collect all studies related to a specific field, so data were extracted through it for analysis. Relevant studies were identified using seven key search terms: geopolitical risk, shipping industry, shipping companies, maritime transport, shipping finance, investment decision, and real investment, in conjunction with the selection of research areas, namely business finance, economics, and international relations. This study is based on academic publications retrieved from the Web of Science (WoS) Core Collection, which was selected as the primary database due to its broad coverage of high-quality scholarly journals. The search process targeted publications in which the selected keywords appeared in the title, abstract, or author keywords. To maintain consistency and relevance, the analysis was limited to journal articles written in English and published during the period 2018–2025, which corresponds to a phase of intensified geopolitical instability and growing scholarly interest in geopolitical risk. After collecting the initial set of records, a structured screening procedure was applied. Duplicate entries were removed first. The remaining studies were then reviewed

by examining their titles and abstracts to confirm their relevance to geopolitical risk and investment-related issues within the shipping and maritime sectors. In a final screening step, articles that did not address economic, financial, or investment aspects, or that fell outside the shipping and maritime transport context, were excluded. Following this process, 131 articles were selected for inclusion in the analysis. The selected publications were analyzed using R and the bibliometrix package via the Biblioshiny interface. This approach made it possible to examine publication trends, journal contributions, citation relationships, and collaboration patterns across authors, institutions, and countries. The primary source of data for this study is the bibliometric profile of studies on geopolitical risk and real investments, which can be found in various types of documents. Table 1 shows the data sources and types of papers that were looked at. It shows the bibliometric profile of geopolitical risk research done around the world from 2018 to 2025. The data sources were obtained through bibliometrics and encompass 131 distinct types of documents, gathered from 28 different sources, resulting in 4901 references contributed by 319 authors/researchers. As demonstrated, among the 28 documents evaluated for the study, there are 14 single-authored and 14 multi-authored documents. In terms of author collaboration, each document has an average of 2.89 co-authors, with international co-authorships accounting for 33.59% of the total, as highlighted in Table 1. While bibliometric analysis does not evaluate causal relationships at the firm level, it provides a structured and objective overview of how the literature has evolved, where it is concentrated, and which research areas remain underexplored—particularly with respect to real investment behavior in shipping companies under geopolitical risk.

Table 1. Data Sources

Description	***Results***
MAIN INFORMATION ABOUT DATA	
Timespan	*2018-2025*
Sources (Journals, Books, etc.)	*28*
Documents	*131*
Annual Growth Rate %	*65.49*
Document Average Age	***1.61***
Average citations per doc	***35.79***
References	***4901***
DOCUMENT CONTENTS	
Keywords Plus (ID)	***331***
Author's Keywords (DE)	***483***
AUTHORS	
Authors	***319***
Authors of single-authored docs	***13***
AUTHORS COLLABORATION	
Single-authored docs	***14***
Co-Authors per Doc	***2.89***
International co-authorships %	***33.59***
DOCUMENT TYPES	
article	***131***

Note: Table created by the author

3. RESEARCH OVERVIEW

3.1 Number of publications by year

It is critical for the researcher in a particular topic to be guided by the trends of previous research and its development over the years, which serve as guiding signs that show them the right path and course. Figure 1 illustrates the evolution of academic interest in geopolitical risk and actual investments within the shipping sector from 2018 to 2025. The data indicate a clear upward trend. In the first few years, the number of publications was low, with only 1 to 5 from 2018 to 2021. There was a significant increase in 2022, and the number of publications rose to 23. This period marks a noticeable increase in academic engagement with the topic. This trend of growth kept going strong, reaching its highest point in 2024 with 36 publications. It stayed at 34 publications in 2025. Interestingly, most of the literature (120 out of 131 publications during this time, or more than 90%) was written in the last four years (2022–2025). This focus shows how new and important this area of research is, showing how the academic community is responding to a changing global political landscape and how it affects investment decisions in shipping. The sharp rise in publications after 2021 suggests that geopolitical risk is no longer treated as a secondary background issue. Instead, it has become a central factor used to explain financial and investment-related behavior in maritime research, especially after repeated disruptions and conflict-driven shocks to supply chains. The fact that most studies were published between 2022 and 2025 also indicates that this is a young research stream that is still taking shape, which helps explain why later sections show concentrated themes and recurring contributors.

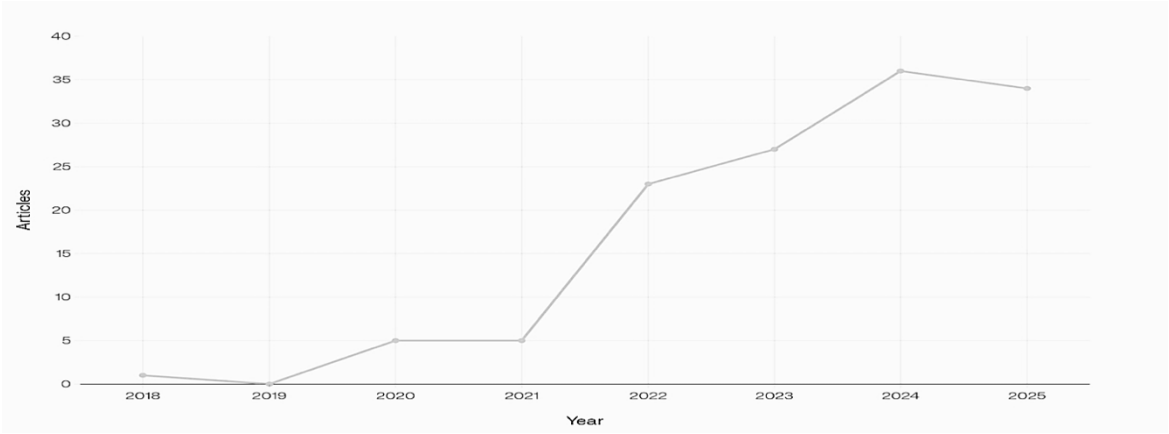


Figure 1. Number of publications by year

Note: Figure created by the author

Year	2018	2019	2020	2021	2022	2023	2024	2025
Articles	1	0	5	5	23	27	36	34

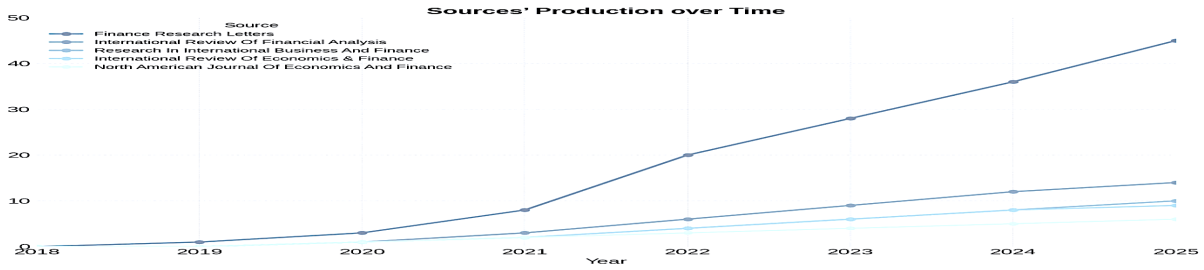
3.2 Source of publication

Table 2 demonstrates the foremost 10 sources of bibliometrics; these leading 10 sources had collectively generated 102 documents, which constituted 77.86 % of the total recovered documents. "Finance Research Letters" was recorded as the most prolific journal with 45 publications (34.35%), followed by "International Review of Financial Analysis" with 14 (10.68%), "Research in International Business and Finance" with 10 (7.6%), "International Review of Economics \& Finance" with 9 (6.87%), "North American Journal of Economics and Finance" with 6 (4.58%), "Journal of Commodity Markets", and "Journal of Multinational Financial Management", and "World Economy" with 4 (3.05%). "Borsa Istanbul" Review and "European Financial Management" each contributed 3 documents, accounting for 2.29 percent of the total recovered documents. The fact that most studies appear in finance-focused journals shows that this line of research is being shaped mainly by financial thinking rather than by operational shipping analysis. As a result, researchers tend to pay more attention to how geopolitical risk affects markets such as returns, volatility, and hedging behavior, while much less attention is given to how these risks influence actual investment decisions within shipping companies themselves. Taken together, the citation pattern shows that the most influential references in this stream come from journals that specialize in financial market behavior. This indicates that the core logic of the field is still largely shaped by risk, uncertainty, and asset-pricing perspectives. In practical terms, the literature appears stronger on market-level effects than on firm-level evidence about how geopolitical risk changes the efficiency of real investments in shipping companies, highlighting a clear area where future research can be more direct.

Table 2. Source of publication

Journal Name	No. of articles	%
Finance Research Letters	45	34.35
International Review of Financial Analysis	14	10.68
Research in International Business and Finance	10	7.6
International Review of Economics & Finance	9	6.87
North American Journal of Economics and Finance	6	4.58
Journal of Commodity Markets	4	3.05
Journal of Multinational Financial Management	4	3.05
World Economy	4	3.05
Borsa Istanbul Review	3	2.29
European Financial Management	3	2.29

Note: Table created by the author



3.3 Source citations.

According to the most frequently cited sources, Figure 2: an analysis within the research domain of geopolitical risk and real investments in shipping companies reveals a distinct hierarchy of influential publications. The accompanying figure shows that the "International Review of Financial Analysis" is the most cited source, with 1430 citations. "Finance Research Letters" is close behind with 1424 citations. Other key references include the "Pacific Basin Financial Journal (277 citations), the "Journal of Banking & Finance" (238 citations), and the "Research in International Business and Finance" (216 citations), "Research of International Financial Management" (156 citations), "the North American Journal of Economics and Finance" (121 citations), the "Borsa Istanbul Review" (113 citations), and the "Journal of International Financial Market Institutions & Money" (106 citations).

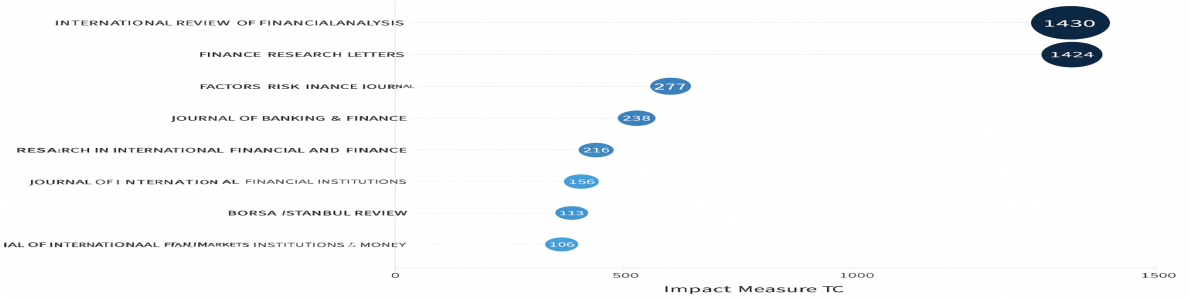


Figure 2. Source citations

Note: Figure created by the author

3.4 Author influence

The defining feature is high levels of specialization within the academic world. This present situation is different from ancient times, when scholars often worked in many different fields. Abu Bakr al-Razi is a well-known example. He was mostly a doctor, but he also made important contributions to chemistry, philosophy, math, and astronomy. As knowledge has grown and fields have become more connected, modern scholars have tended to become more knowledgeable and focused in their areas of study. So, to define the intellectual framework of a certain field, it is common to look at the people who are most often cited in that field. Figure 3 shows that the ten most productive authors in the field of geopolitical risk and real investments in shipping companies have written 28 papers together, which is about 21.37% of the 131 papers in our dataset. Some of these authors are well-known scholars, such as Bouri E., whose work includes Zhang et al. (2025), Bouri et al. (2023), and Foglia et al. (2025). Tiwari, A.K., is recognized for his contributions in (Abakah et al., 2022) and (Dam et al., 2025), among other publications. The fact that these important authors have different levels of productivity but publish regularly shows that a new or specialized field is maturing. This regularity in research output shows that there is a lively academic conversation, led by a diverse group of scholars working together to expand the boundaries of what we know in this field.

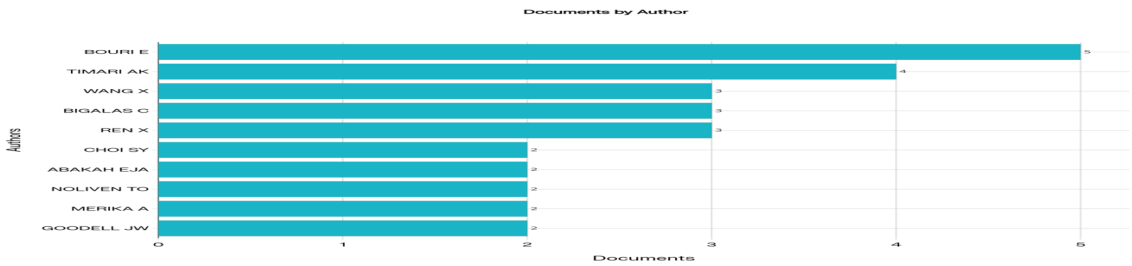


Figure 3. Most Relevant Authors

Note: Figure created by the author

3.5 Three-fields plot (Authors – Keywords - Sources)

For a deeper understanding of previous studies, the nature of the human brain makes it easy to understand images and tends to link things together to understand a complete picture. This three-field plot offers a detailed view of the research domain in geopolitical finance, highlighting the connections among authors, their thematic focuses indicated by keywords, and the publication sources of their contributions. The connecting bands link authors to keywords and sources, indicating key topics of interest and areas of expertise. Some authors, for example, seem to be strongly linked with keywords such as "geopolitical risk" and "predictability," and their publication is often found in finance research letters journals. This pattern highlights key research areas and reveals the dominant themes shaping academic discussion in the field. Arranging the words "corporate investment" and "shipping finance" alongside academic sources like "Pacific Basin Journal" and "The Asia-Pacific Journal" also indicates that the research is aimed at working-level applications in geopolitics and finance. The overlap between "geopolitical risk" and "finance research letters" also implies there is a historic element to the research, indicating that a section of the academic community is working on the understanding of the principles, evolution, and forecasting of the shipping industry.

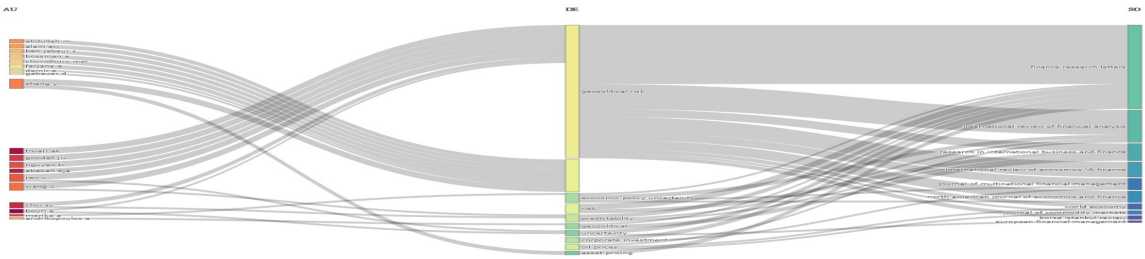


Figure 4. Three-fields plot (Authors – Keywords - Sources)

Note: Figure created by the author

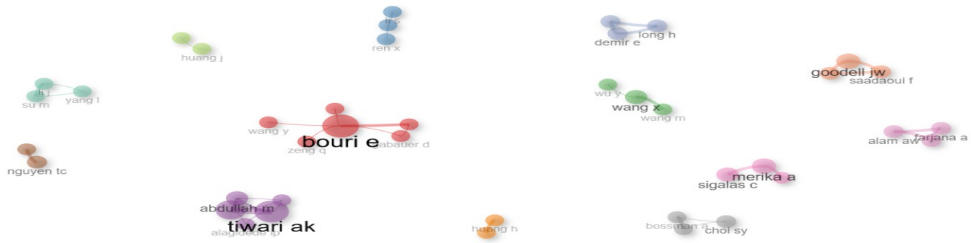
3.6 Author collaboration network analysis

The co-authorship network analysis identifies several strong research clusters that are influencing the field of geopolitical risk and real investment in shipping companies. These working groups represent the fundamental intellectual connections that facilitate knowledge creation in this domain. The largest

cooperative network clusters the authors Wang Y, Zeng Q, Gupta R, Bouri E, and Zhang, where Bouri E and Zhang participated in (Zhang et al. 2025) and (Zhang et al. 2022), and Bouri E and Gupta D also participated in (Bouri et al. 2023) and (Foglia et al. 2025). This highly connected group probably presents the tighter co-authorship relationships and reflects long-standing research collaborations. The strong links among these scholars may indicate that they are a nucleus of research working together in the field of geopolitical risk analysis, financial markets, and shipping investments. Another significant research group includes Abakah A.k, Abdullah M, and Tiwari EJA, who participated in (Abakah et al. 2025) and (Chowdhury et al. 2025). Although less tightly linked than the main cluster, this group is a decisive research alliance that makes a strong contribution to the literature. Their cooperative behavior indicates complementary knowledge in different areas of specialization. A high degree of similarity is observed in the first cluster, which means that the research goals and methods are the same. The inclusion of authors from China, India, Lebanon, Turkey, Malaysia, and Indonesia shows that research in this field is done all over the world.

Figure 5. Author collaboration network analysis

Note: Figure created by the author



3.7 Influential papers

This table offers a thorough overview of important academic publications that have had a significant impact on the current discussion regarding the geopolitical risk and finance in the shipping industry. Using citation metrics, it provides a succinct summary of the most important papers. The most cited paper was (Sharif et al. 2020). It received an impressive 1034 global citations, indicating its significant influence and applicability in the field, especially in relation to the US, geopolitical risk, and real investments. The subsequent study (Baur and Smales 2020) centers its attention on the geopolitical risk within financial hedging. It maintains a continued pertinence with an impressive count of 208 global citations. This reflects the close link between geopolitical risks and financial decisions, while the high citation count underscores the growing scholarly trend in this field. Subsequent studies, Wang et al. (2022), examine major geopolitical shocks and their effects on commodity markets, highlighting how rapidly unfolding events can influence multiple economic sectors, which shows the importance of successive and rapid geopolitical events and their strong impact on all aspects of life, receiving 189 citations. The subsequent article offers a viewpoint on geopolitical risk and stock markets (Kannadhasan and Das 2020), thereby implying that fundamental practices of geopolitical risks and economics possess enduring importance, with a count of 171 citations. Lastly, the research article (Lee and Wang 2021). has fewer citations worldwide, but it has been cited 166 times, which shows that it has a strong impact on the reference network, where financial constraint and decisions are linked to geopolitical risks in a direct link. Overall, the most cited studies suggest that research has primarily examined geopolitical risk through macro-financial and market channels—such as asset returns, volatility, hedging, and commodity-market spillovers. While that work provides a strong foundation, it also points to a gap: far fewer studies directly test how geopolitical risk affects real investment decisions inside shipping companies, especially in terms of timing and investment effectiveness at the firm level. This helps explain why a shipping-focused investment perspective remains underrepresented compared to market-based interpretations.

Table 3. Influential papers

#	GC	DOI	Title	Author/s	Year
1	1034	10.1016/j.irfa.2020.101496	COVID-19 PANDEMIC, OIL PRICES, STOCK MARKET, GEOPOLITICAL RISK AND POLICY UNCERTAINTY NEXUS IN THE US ECONOMY: FRESH EVIDENCE FROM THE WAVELET-BASED APPROACH	Arshian Sharif , Chaker Aloui , Larisa Yarovay	2020
2	208	10.1016/j.jbankfin.2020.105823	Hedging geopolitical risk with precious metals	Dirk G. Baur, Lee A. Smales	2020
3	189	10.1016/j.frl.2022.103066	GEOPOLITICAL RISK AND THE SYSTEMIC RISK IN THE COMMODITY MARKETS UNDER THE WAR IN UKRAINE	Yihan Wang , Eli Bouri , Zeeshan Fareed , Yuhui Dai	2022
4	171	10.1016/j.frl.2019.08.024	DO ASIAN EMERGING STOCK MARKETS REACT TO INTERNATIONAL ECONOMIC POLICY UNCERTAINTY AND GEOPOLITICAL RISK ALIKE? A QUANTILE REGRESSION APPROACH	M. Kannadhasan , Debojyoti Das	2020
5	166	10.1016/j.pacfin.2020.101480	FIRMS' CASH RESERVE, FINANCIAL CONSTRAINT, AND GEOPOLITICAL RISK	Chien-Chiang Lee , Chih-Wei Wang	2021
6	123	10.1016/j.frl.2022.103103	CAUSALITY OF GEOPOLITICAL RISK ON FOOD PRICES: CONSIDERING THE RUSSO–UKRAINIAN CONFLICT	Foued Saâdaoui a b, Sami Ben Jabeur c, John W. Goodell d	2022
7	123	10.1016/j.frl.2022.102991	DOES GEOPOLITICAL RISK MATTER FOR GLOBAL ASSET RETURNS? EVIDENCE FROM QUANTILE-ON-QUANTILE REGRESSION	Zaghum Umar , Ahmed Bossman , Sun-Yong Choi c, Tamara Teplova	2022
8	115	10.1016/j.irfa.2023.102597	GEOPOLITICAL RISK, CLIMATE RISK AND ENERGY MARKETS: A DYNAMIC SPILLOVER ANALYSIS	Yi Jin , Hang Zhao , Lin Bu , Dayong Zhang d	2023
9	108	10.1016/j.bir.2020.05.001	GLOBAL AND COUNTRY-SPECIFIC GEOPOLITICAL RISK UNCERTAINTY AND STOCK RETURN OF FRAGILE EMERGING ECONOMIES	Mohammad Enamul Hoque , Mohd Azlan Shah Zaidi	2020
10	106	10.1016/j.frl.2021.102453	GEOPOLITICAL RISK AND BANK STABILITY	Dinh Hoang Bach Phan , Vuong Thao Tran , Bernard Njindan Iyke	2022

Note: Table created by the author

3.8 Influential Affiliation

Analyzing the affiliations implicated in geopolitical risk and real investments in shipping Companies, a total of 253 institutions were found to publish 131 documents, out of which 3 have contributed singularly to the publication. Figure 6 demonstrates the top 10 most prolific institutions based on the number of publications. The compilation consists of five institutions located in China. This once again emphasizes the notion that China is actively involved in the field of geopolitical risk and shipping finance. The other institutions hail from countries such as Vietnam, Lebanon, Australia, and South Africa. Each of these nations is associated with at least one institution on this list.

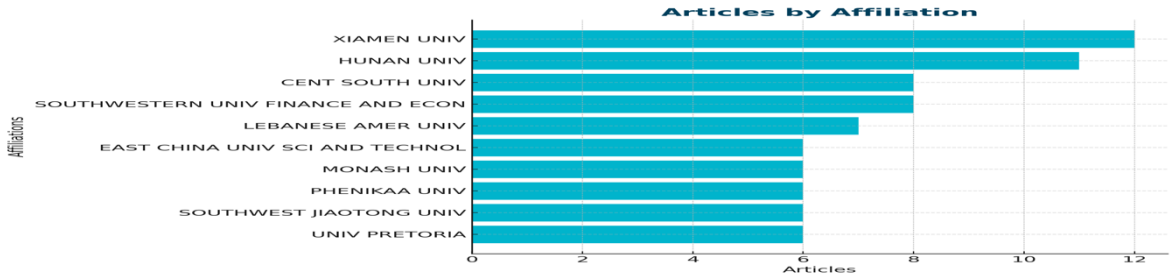


Figure 6. Influential Affiliation

Note: Figure created by the author

3.9 Three-fields plot (Affiliations-Countries-Sources)

When we are close to finishing the research, it is best to draw an explanatory diagram that links the research elements together to understand the whole picture. This map, which contains three fields, provides a clear representation of the global academic landscape regarding geopolitical risk in shipping companies and research. It shows how institutions, their countries, and the places where their research is published are all connected. The leftmost column (AU_UN) lists universities and research centers, whereas the middle column (AU_CO) lists the nations where these places are located. The rightmost column (SO) shows the journals or other sources that were used to publish the work. The plot shows how marine finance research is done all around the world by showing institutions from different countries that publish a wide range of specialized works. For instance, the presence of 'International Review of Economics & Finance,' a strong link to the 'finance research letters, ' suggests that the research outputs of this institution are frequently published in that source. Similarly, 'European financial management' exhibits a relationship with 'Journal of Commodity Markets', which appears in the research published by it, linking financial decisions and the geopolitical sector to shipping companies. The visualization also indicates that certain countries, namely China and the USA, have multiple institutions contributing to the field. This is seen from the many bands that go from these countries to different periodicals. The wide variety of journals, from "Maritime Policy & Management" to "Journal of Coastal Research," also shows how studies are done in many different fields.

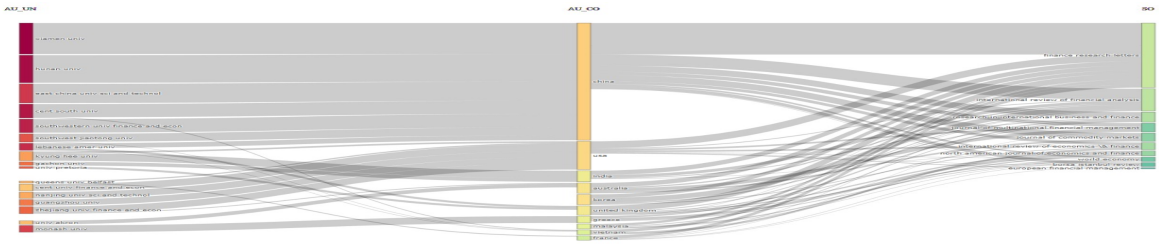


Figure 7. Three-field plot (Affiliations-Countries-Sources)

Note: Figure created by the author

3.10 Influential countries

With the assistance provided by Biblioshiny, it has been ascertained that a multitude of organizations hailing from 32 different countries have undertaken the task of publishing scientific articles on the subject matter of geopolitical risk and real investments in shipping companies. In Table 4, the ten most productive countries have been listed based on the overall number of publications. China has become the top country in terms of total publications as determined by the country of the institution, encompassing both collaborative and non-collaborative works. This can be attributed primarily to the proactive and enduring maritime policies implemented by the Chinese government, which have propelled them into the position of leadership within the geopolitical risk and real investments in the shipping companies' domain. Additionally, it is imperative to acknowledge that the United States of America has also demonstrated productivity. Moreover, Table 4 further emphasizes the significance accorded to research pertaining to geopolitical risk and real investments in shipping companies. Asia demonstrates a significant lead in global research output, comprising a total of 66 articles, with China contributing the majority at 47 articles. This is followed by North America with 14 articles, led by the United States (11 articles). Europe, with 13 articles (the United Kingdom 7 articles, Greece 4 articles, and Denmark 2 articles), and finally Oceania (Australia only) with 8 articles. This distribution reflects the growing research interest in the topic of "geopolitical risks and investments in shipping companies" in Asian countries, especially China, followed by developed Western nations.

Table 4. Influential countries

Country	*Articles*
CHINA	*47*
USA	*11*
AUSTRALIA	*8*
KOREA	*8*
INDIA	*7*
UNITED KINGDOM	*7*
GREECE	*4*
VIETNAM	*4*
CANADA	*3*
DENMARK	*2*
OTHER COUNTRIES	*30*

Note: Table created by the author

3.11 Country collaboration network analysis

This network diagram illustrates how countries collaborate in the field of geopolitical risk and real investments in shipping companies.

Each node represents a single country, and the size of the node shows how much research has been done or how many collaborations there are in this area. Larger nodes represent countries like China and the United States, which are important centers of scientific research where scientists from all over the world collaborate extensively. This suggests a strong commitment to maritime research and that their academic work has an impact all around the world. The United States appears as a central hub in this

network, reflecting its pivotal role in the development of this research field. This means that most countries are tied to each other in some way. On the other hand, smaller nodes like Australia and Canada may mean that these countries are relatively new to this area or only work with a few other countries on projects. Their involvement in the network shows that maritime research is done all around the world, with contributions coming from many different places and economies. The picture shows that there are global clusters, with countries like Ghana, Russia, India, and Malaysia working together in a single network. For understanding how marine research collaborations affect geopolitics, this kind of network analysis is very important. It helps find the best countries in this sector, possible partners for future research projects, and ways to share information across different fields. It also stresses how important it is for countries to work together to reduce geopolitical risk and make real investments in maritime businesses.

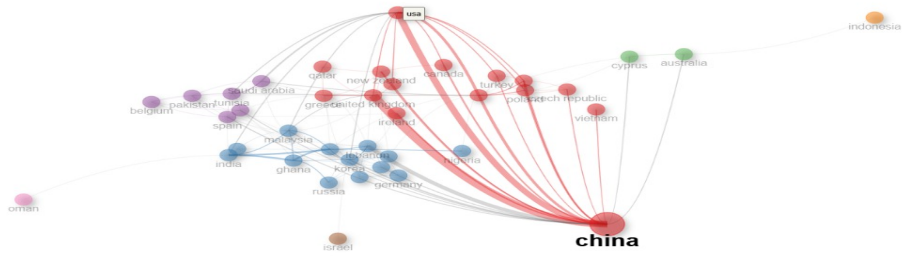


Figure 8. Country collaboration network analysis

Note: Figure created by the author

4. CONCLUSIONS

This research article included a bibliometric analysis of the pertinent literature concerning geopolitical risk and real investments in shipping companies. A bibliometric analysis clearly demonstrated the trends in research, leading research institutions, prominent authors, research subjects, and focus areas within the domain of geopolitical risk and real investments in shipping. The quantity of published papers has seen an exponential rise. The principal conclusions can be encapsulated as follows:

1. Primary Subjects: The ongoing research concerning geopolitical risk and real investments in shipping companies primarily focuses on geopolitical risk and investment decisions, and the shipping industry.
2. Publication Sources: 253 institutions have actively published research on geopolitical risk and real investments in shipping companies. "International Review of Financial Analysis," "Finance Research Letters," and "Pacific Basin Financial Journal" are the most productive journals.
3. Influential Institutions: The study highlights the prominent role of certain institutions, such as Xiamen University (China), Hunan University (China), Central South University (China), and Southwestern University of Finance and Economics (China), in researching geopolitical risk and real investments.
4. Influential Authors: The study identifies the most influential authors in this field, including Bouri E, Tiwari A.k, Bigalas C, and Wang X.

The research provides valuable insights for marine businesses seeking to enhance their competitive advantage, educational institutions updating maritime curricula, and policymakers developing industry-specific regulations. The study highlights the importance of collaborative research efforts by identifying leading institutions and authors active in the field of geopolitical risk and real investments. Overall, the bibliometric evidence suggests that the field is expanding quickly, but it remains heavily driven by financial-market outcomes. As a result, firm-level and sector-specific evidence on how geopolitical risk shapes the effectiveness of real investments in shipping companies still appears limited and should be treated as a priority direction for future work.

The study identifies critical knowledge gaps requiring thorough investigation, including:

- Developing financial strategies to mitigate projected geopolitical risks
- Implementing preventive measures for financial decision-making
- Analyzing and categorizing the impact of geopolitical threats across all economic sectors
- Examining how geopolitical threats influence financial decisions in both developing and developed nations
- Investigating the effects of geopolitical threats on international relations
- Assessing the influence of artificial intelligence technologies on geopolitical risks
- Exploring financial hedging strategies and associated risk prediction/mitigation approaches

These research areas can be systematically subdivided for in-depth study, serving as essential directions for future scholarly inquiry.

5. DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES:

During the preparation of this work, the authors used ChatGPT to support language editing and clarity improvement. After using this tool, the authors reviewed and edited the content as necessary and take full responsibility for the content of the publication.

6. REFERENCES

[1] Abakah, E. J. A., Abdullah, M., Akinsomi, O., & Tiwari, A. K. (2025). Geopolitical Risk and Real Estate Stock Crash. *Finance Research Letters, 80*. https://doi.org/10.1016/j.frl.2025.107333
[2] Abakah, E. J. A., Tiwari, A. K., Alagidede, I. P., & Gil-Alana, L. A. (2022). Re-Examination of Risk-Return Dynamics in International Equity Markets and the Role of Policy Uncertainty, Geopolitical Risk and VIX: Evidence Using Markov-Switching Copulas. *Finance Research Letters, 47*, 102535.
[3] Baur, D. G., & Smales, L. A. (2020). Hedging Geopolitical Risk with Precious Metals. *Journal of Banking and Finance, 117*. https://doi.org/10.1016/j.jbankfin.2020.105823
[4] Bouri, E., Gabauer, D., Gupta, R., & Kinateder, H. (2023). Global Geopolitical Risk and Inflation Spillovers across European and North American Economies. *Research in International Business and Finance, 66*. https://doi.org/10.1016/j.ribaf.2023.102048
[5] Caldara, D., & Iacoviello, M. (2019). *Measuring Geopolitical Risk*. Retrieved from http://www.businesswire.com/news/home/20170613005348/en/
[6] Carney, M. (2016). *Uncertainty, the Economy and Policy*. [Speech].
[7] Chowdhury, M. A. F., Abdullah, M., Abakah, E. J. A., & Tiwari, A. K. (2025). Geopolitical Risk and Energy Market Tail Risk Forecasting: An Explainable Machine Learning Approach. *Journal of Commodity Markets, 39*. https://doi.org/10.1016/j.jcomm.2025.100478

[8] Costa, A. P., Moresi, E. D., Pinho, I., & Halaweh, M. (2023). Integrating Bibliometrics and Qualitative Content Analysis for Conducting a Literature Review. *2023 24th International Arab Conference on Information Technology (ACIT)*. https://doi.org/10.1109/ACIT58888.2023.10453680
[9] Dam, M. M., Altıntaş, H., & Tiwari, A. K. (2025). Novel Approaches to Model Decomposed Oil Shocks, Geopolitical Risk, Clean and Fossil Fuel Stocks. *Borsa Istanbul Review, 25*(3), 468–496. https://doi.org/10.1016/j.bir.2025.02.002
[10] Foglia, M., Plakandaras, V., Gupta, R., & Bouri, E. (2025). Rare Disasters and Multilayer Spillovers between Volatility and Skewness in International Stock Markets over a Century of Data: The Role of Geopolitical Risk. *International Review of Economics and Finance, 101*. https://doi.org/10.1016/j.iref.2025.104183
[11] Hoque, M. E., & Zaidi, M. A. S. (2020). Global and Country-Specific Geopolitical Risk Uncertainty and Stock Return of Fragile Emerging Economies. *Borsa Istanbul Review, 20*. https://doi.org/10.1016/j.bir.2020.05.001
[12] Jin, Y., Zhao, H., Bu, L., & Zhang, D. (2023). Geopolitical Risk, Climate Risk and Energy Markets: A Dynamic Spillover Analysis. *International Review of Financial Analysis, 89*. https://doi.org/10.1016/j.irfa.2023.102597
[13] Kannadhasan, M., & Das, D. (2020). Do Asian Emerging Stock Markets React to International Economic Policy Uncertainty and Geopolitical Risk Alike? A Quantile Regression Approach. *Finance Research Letters, 34*. https://doi.org/10.1016/j.frl.2019.08.024
[14] Kotcharin, S., & Maneenop, S. (2020). Geopolitical Risk and Corporate Cash Holdings in the Shipping Industry. *Transportation Research Part E: Logistics and Transportation Review, 136*. https://doi.org/10.1016/j.tre.2020.101862
[15] Lee, C. C., & Wang, C. W. (2021). Firms' Cash Reserve, Financial Constraint, and Geopolitical Risk. *Pacific Basin Finance Journal, 65*. https://doi.org/10.1016/j.pacfin.2020.101480
[16] Phan, D. H. B., Tran, V. T., & Iyke, B. N. (2022). Geopolitical Risk and Bank Stability. *Finance Research Letters, 46*. https://doi.org/10.1016/j.frl.2021.102453
[17] *Review of Maritime Transport 2025: Staying the Course in Turbulent Waters*. (2025). United Nations Conference on Trade and Development (UNCTAD). Retrieved from https://shop.un.org
[18] Saâdaoui, F., Ben Jabeur, S., & Goodell, J. W. (2022). Causality of Geopolitical Risk on Food Prices: Considering the Russo–Ukrainian Conflict. *Finance Research Letters, 49*. https://doi.org/10.1016/j.frl.2022.103103
[19] Sharif, A., Aloui, C., & Yarovaya, L. (2020). COVID-19 Pandemic, Oil Prices, Stock Market, Geopolitical Risk and Policy Uncertainty Nexus in the US Economy: Fresh Evidence from the Wavelet-Based Approach. *International Review of Financial Analysis, 70*. https://doi.org/10.1016/j.irfa.2020.101496
[20] Umar, Z., Bossman, A., Choi, S.-Y., & Teplova, T. (2022). Does Geopolitical Risk Matter for Global Asset Returns? Evidence from Quantile-on-Quantile Regression. *Finance Research Letters, 48*. https://doi.org/10.1016/j.frl.2022.102991
[21] Wang, Y., Bouri, E., Fareed, Z., & Dai, Y. (2022). Geopolitical Risk and the Systemic Risk in the Commodity Markets under the War in Ukraine. *Finance Research Letters, 49*. https://doi.org/10.1016/j.frl.2022.103066
[22] Zhang, J., Zeng, Q., Bouri, E., & Gozgor, G. (2025). Newly-Constructed Chinese Geopolitical Risk Index and Trade Stock Returns. *Research in International Business and Finance, 74*. https://doi.org/10.1016/j.ribaf.2024.102705
[23] Zhang, Z., Bouri, E., Klein, T., & Jalkh, N. (2022). Geopolitical Risk and the Returns and Volatility of Global Defense Companies: A New Race to Arms? *International Review of Financial Analysis, 83*. https://doi.org/10.1016/j.irfa.2022.102327