



Mapping A Knowledge Map For Researching The Legal Framework Related To Maritime Transportation Supply Chain E-Contract.

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ABSTRACT

This study analyzed a reflection on a bibliometric approach to evaluate the importance and impact of the manuscripts that have been published with the title "Law of Maritime Transportation" during the period 1998-2024. It also reveals that the area of Law of maritime documents has received increased attention and interest from academicians, researchers, and research funding institutions. The paper aims to provide a wide range of maritime fields and to offer a representation of various areas and interdisciplinarity research. Furthermore, to find out how they are connected. Bibliometric analyses were used in this study to examine dominant subfields of maritime Law, mapping and clustering the keyword. The tool provided the authors' data, year of publication, country of origin, Journal of publication, and affiliated institutions. The findings show that the manuscripts regarding the legal framework of maritime transportation documents are divided into 6 clusters. The most prominent focus is the Law of the Sea, International Law, and Law of Legislation. The legal framework was an umbrella that covered shipping, maritime transportation, documentary framework, maritime policy, and sustainable development.



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INTRODUCTION

The topic of the legal framework of maritime transportation is very substantial and crucial. (Wagner, 2021). Sea transportation is demanding based on its function to stimulate and support economic function (Maruf & Supardi, 2019a). Maritime transport is also vital since almost every international trade in the past has consistently been over maritime routes. (Tsiulin et al., 2020). Throughout history, constitutional and economic tension has forced nations to choose their maritime policies, considering safeguarding their sea transportation interests (Cristina & Casaca, 2018).

The legal framework for maritime is more significant for archipelagic states. Thousands of commercial ships sail daily across the oceans, operated by companies in different jurisdictions, imposing duties and liabilities on all parties concerned (Lorenzon, 2020). Except for ships owned by the government, shipping interests can have specific rights and obligations under international Law. (Serdy, 2020) Some governments and institutions merely adhere to the relevant regulations, considering that shipping companies must comply with many international, regional, and national regulations) (Lorenzon, 2020) Many problems share other issues, such as the Law of the Sea, International Law, maritime industry, marine policy shipping, international cooperation, and pollution.

Some big archipelagic countries, significantly the most extensive and most developed in maritime transportation, adopt strategies that are more strictly regulated by International law, such as the International Maritime Organization (IMO) and (United Nations Convention On Law Of the Sea (UNCLOS).(Sahoo & Schönborn, 2020)(Wagner, 2021)

Marine Policy is a distinguished journal regarding maritime issues, resulting in complete coverage of the sea transport policy with the highest impact factor (Alonso et al., 2009). The predominance of the journal "Marine Policy" on MSP articles and the presence of notable writers

holding positions in the government (i.e., 11%, $n = 981$) suggest that MSP is linked to Governance and policy. (Chalastani et al., 2021). Another journal regarding Sea transportation is the World Maritime Journal. The Journal's reflection on the interdisciplinarity that characterizes the maritime field is the wide range of subjects (Sahoo & Schönborn, 2020). Problems including climate change, biodiversity loss, and ocean pollution link oceans and maritime research. The junction between ocean research and the maritime field naturally becomes an increasingly more significant aspect, and it is predicted to grow in relevance for the Journal as knowledge of the connection between human activities and environmental challenges rises. Several specialized institutions, including the military, immigration, customs, police, and so forth, had to be stationed there to deal with sources of threats and dangers near the country's borders because it is thought that the border area is a natural location for securing a country's sovereignty. (Abdullah & Ahmad, 2019)

Any innovations encouraging sea transportation comply with their business's legal framework. Many institutions promote their marine policy, security, boundary delimitation, and dispute resolution (Ahmad & Rachmawati, 2016). Several seaports use them in their strategies implemented toward maritime legislation. In addition to serving as a component of national security policy, legal frameworks are crucial for safeguarding the state's maritime borders and routes. In addition to serving members' national security policy, legal frameworks are essential for preserving the state's maritime borders and paths. (Suseto et al., 2018).

Sea transportation is part of economic activities that have long followed regional and national maritime Law to survive in the sea transportation business. They have advanced through many stages of evolution, from national to international and international to global. They participate in significant economic clusters that foster financial synergies and knowledge spillovers (Bullock et al., 2021). Federal and international rules safeguard commercial fishery zones that extend outside the country's borders, and the USCG is responsible for upholding these restrictions. (*Border, Boundary, and Frontier: Concepts*, n.d.)

This paper aims to identify dominant subfields from the legal framework of the maritime transportation practices research field and find out how they are connected. The bibliometric approach is applied to achieve that goal. In this way, it was possible to discover the research progress, the critical word of maritime transportation, and the research gaps in marine transport and its legal framework. Hence, this paper might help academicians and institutions in retrieving a comprehensive understanding of the existing condition and further readiness in the legal framework of maritime transportation.

RESEARCH METHODS



Figure 1 Research Procedure

Scopus and Web of Science (WoS) are the two most popular databases of research and academic publications (Zhu and Liu, 2020). The study only used Scopus since it has more citations than Web of Science (WoS) (Martín-Martín et al., 2018). Moreover, this research analyzes maritime transportation using the bibliometric approach. Applied research is presented in Figure 1.

The research was conducted using the Scopus database, which focused on 364 manuscripts on 19 June 2022. The focus was identified through preliminary research and a literature review. The author focused on the topic, article title, abstract, and keywords in Scopus. The following related fields were considered: maritime, legal framework, sea transportation, and maritime industry. Publications referring to regulations and shipping were considered as well. For general keywords such as "Law of the sea," "Law and legislation," and "International Law," which can be used both in "regulatory framework" and "legal framework." The authors limited the search to the following category: "legal framework," "maritime transportation." The investigation was not restricted to high-ranking periodical publications with these keywords. Besides journals, the Author also considered conference papers and book chapters.

The papers published from 1990-2023 are included in this study. The analyses were performed using Vos viewer software and the analytical tool available at Scopus. Vosviewer is the tool that was used to analyze the relevant papers. (Lau et al., 2017) Vosviewer was used to create visual knowledge maps, including nations, research categories, keywords, institutions, and author keywords, to recognize its features and capacity to aid in comprehending network and historical trends. (Chalastani et al., 2021).

The Author considered geospatial collaboration patterns, worldwide collaboration, and the identification of high-growth thematic areas, among other factors.

Bibliometric studies of maritime applications have been conducted on explainable transportation research (Alonso et al., 2018), engineering (Shukla et al., 2019), health and medicine (Tran et al., 2019), and national security (Wamba et al., 2019). There have been a few bibliometric studies related to the maritime industry (Chen et al., 2018a; Davarzani et al., 2016; Lau et al., 2017; Munim et al., 2020), but none focused exclusively on legal framework or recent changes in the Law regarding maritime.

RESULTS AND DISCUSSION

1. Number of papers per year

The number of manuscripts published each year shows the Journal's academic impact. The annual number of publications from 1981 to 2020 is illustrated in Figure 2. The Figure shows the development of a legal framework in maritime transportation on the publication scale. There is a trend that increases over time in the number of articles published commensurate with the increasing intensity of research and activity in the field of transportation over time seen in e-documents.

The authors released the initial article in 1981, and its publication schedule remained irregular until 2022. Following 1995, there was a growing trend of researchers engaging in studies within this domain, resulting in a significant surge in publications in recent years. The peak year for the publication of articles among the top 50 was 2005. It's noteworthy that all the mentioned articles were published in the English language.

As shown in Figure 1, from 1980 to 2022, the manuscript of the legal framework in sea transportation law could be classified into three classes: shortage of manuscript class, increasing class, and decreasing class. Shortage class occurred at the beginning of the enactment of the Electronic Data Interchange as the basis for electronic data in transport from 1980–to 1995. There was only one manuscript on this subject each year in this class. As a result, there were only five manuscripts in this class. Data shows that between 1995 and 2005, there was a significant increase in data of about 50 papers, 35 manuscripts (2009 – 2011), 40 manuscripts (2016-2019); and ten

manuscripts (2020-2021). The situation is due to the implementation of electronic data in several countries. Meanwhile, people declined between 2005-2009 and 2016 - 2020. The decline happened due to switching the system from e-document to blockchain systems in several countries.

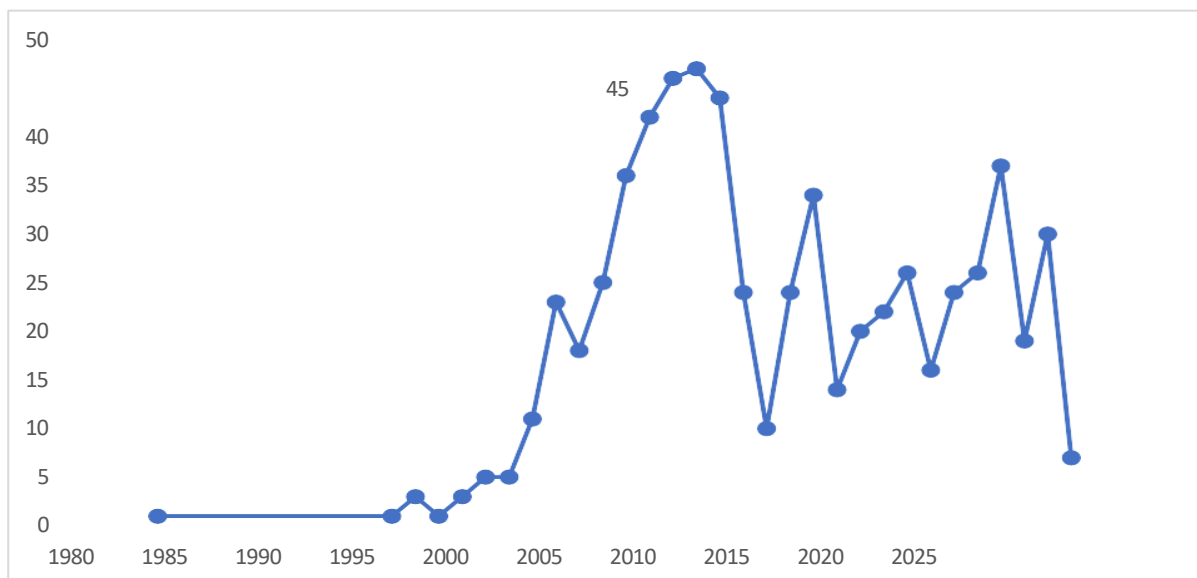


Figure 2 Number Of Publication

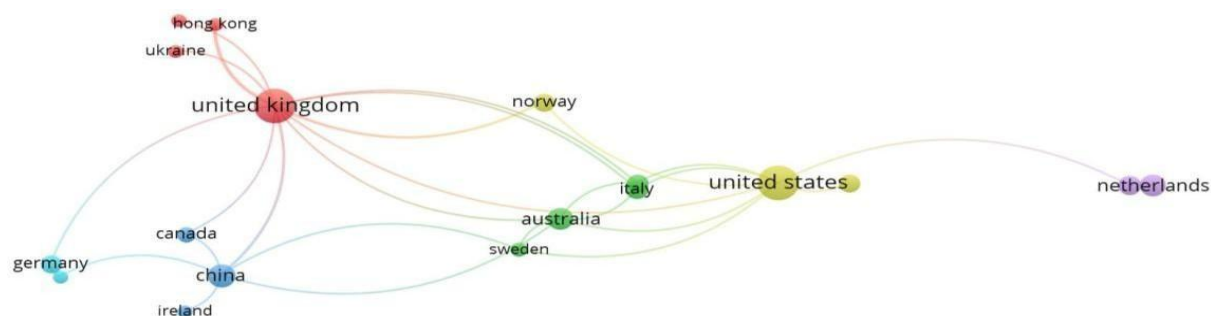


Figure 3 Bibliographic Coupling Countries.

2. Countries.

The country cooperation network is shown in Figure 2. The size of the letter indicates the presence of the affiliation of the Author in the worldwide countries, while the larger red circles indicate higher centrality. The Authors from the United Kingdom and United States affiliation country published the most significant number of academic papers in Scopus on this subject (32 articles for both of them), followed by the authors from China (15 papers), Australia (14), and the Netherlands (13 papers). The centrality of the United Kingdom indicates that they had a wide range.

The Figure shows the distribution of authors and their affiliations in the publication of academic papers related to maritime research. Authors affiliated with institutions in the Netherlands, the United Kingdom, and the United States emerged as the most prolific contributors, indicating a significant presence and contribution to the scholarly discourse in this field. This observation suggests these

countries likely possess robust academic and research infrastructures, fostering a conducive environment for maritime studies and collaboration among researchers across borders.

Furthermore, the sentence indicates a pattern of extensive cooperation between authors with affiliations in Denmark and those from their respective countries. This collaborative approach underscores the importance of international collaboration and knowledge sharing in advancing research agendas, promoting interdisciplinary perspectives, and addressing complex challenges in maritime policy and practice. Such cooperation likely enhances the breadth and depth of research outcomes, facilitating a more comprehensive understanding of maritime issues and solutions.

2. Authors

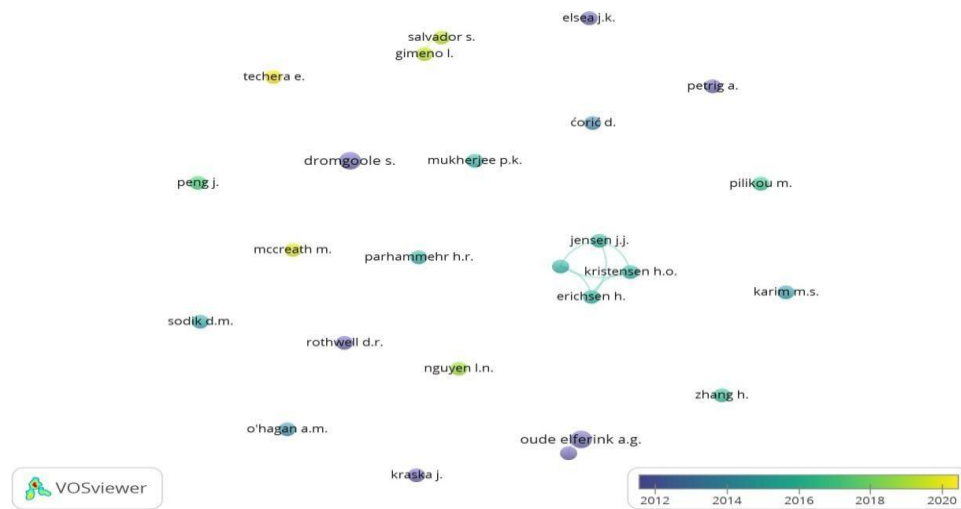


Figure 4 Author

The authors had to be categorized into two groups from the Scopus databases: document and citation papers. The first is ranked based on the most documents, and the second is ranked based on the most citation paper. Of the 418 authors, there are top ten ranked authors, and only 25 have more than two documents mentioned in Table 1. Hence, the most cited paper was not from the top ten authors, as in Table 2. Petrig A is the Author with the most citations (77), followed by Oude Elferink (42) and Droomgoole (41). Meanwhile, Oude Elferink A.G. is the author of most maritime law papers. Another unique fact is that the Author has no collaboration among them, as described in Figure 2.

Author	Document	Citation
Oude elferink a.g.	3	42
Droomgoole S	3	41
Ercihsen H	2	3
Jensen J.J.	2	3
Kristensen H.O.	2	3
Tvedt e.i.	2	3
Gimeno	2	30
Salvador	2	30
Drankier P	2	39
ElseaJ.K.	2	0

Figure 5 The Top Ten Document's Author.

The methodology and findings of the analysis were conducted using the Scopus database, focusing on examining the most cited papers and contributors within a specific research domain, likely maritime Law or related fields. The author had to analyze the most cited articles and contributors separately due to various reasons potentially related to the scope or objectives of the study. Additionally, discrepancies in citation numbers between different databases were observed for the same articles, highlighting the complexities and challenges inherent in bibliometric analyses. The author had to analyze the most cited papers and contributors separately for several reasons, namely the most influential authors and their respective contributions, as evidenced by citation counts. Notably, the author's documents received consistent citations across 2-3 documents, indicating their impact and relevance within the research community and focusing on maritime delimitation between Denmark/Greenland and Norway. In addition, the citation numbers between the two databases differed in all cases for the same article. The author's documents have the same number within 2-3 documents. Among the top contributors, Oude Elferink, a.g., stands out with two highly cited papers (Figure 5) entitled Maritime Delimitation Between Denmark/Greenland and Norway and Maritime Delimitation Between Denmark/Greenland and Norway.

Author	Citation.	Document
Petrig A	77	2
Oude elferink a.g.	42	3
Droomgoole S	41	2
Drankier P	39	2
Zhang H	34	2
Gimeno	30	2
Salvador	30	2
O'hagan	17	2
Pilikou M	16	2
Rothwell d.r.	14	2

Figure 6 The Top 10 Citations

Figure 6 lists the top 10 authors based on citation counts, showcasing their credentials and the number of documents they have contributed to. Notably, Petrig A. emerges as a prominent figure in a book entitled Piracy and Armed Robbery at Sea: The Legal Framework for Counter- Piracy Operations in Somalia and the Gulf of Aden, particularly noted for their work on piracy and armed robbery at Sea, underscoring the significance of their contributions to the field. This analysis of citation classics provides valuable insights into the scholarly landscape and the key players shaping discourse and research in maritime Law and related areas. The authors and their credentials have been recognized as significant contributors within their respective fields, as evidenced by their citation counts. The citation implies that other scholars have extensively cited their works, indicating their influence and impact on the academic community. Being featured in citation classics signifies that their research has stood the test of time and continues to be highly regarded within the scholarly discourse. Pertig A., as one of the top 10 authors of citation classics, underscores the notable impact of their work within the field under study. The Figure indicates that Pertig A.'s contributions have garnered significant attention and recognition, likely due to the quality and relevance of their research output. Their inclusion among the top authors of citation classics suggests that their scholarly endeavors have made substantial contributions to advancing knowledge and understanding within their area of expertise.

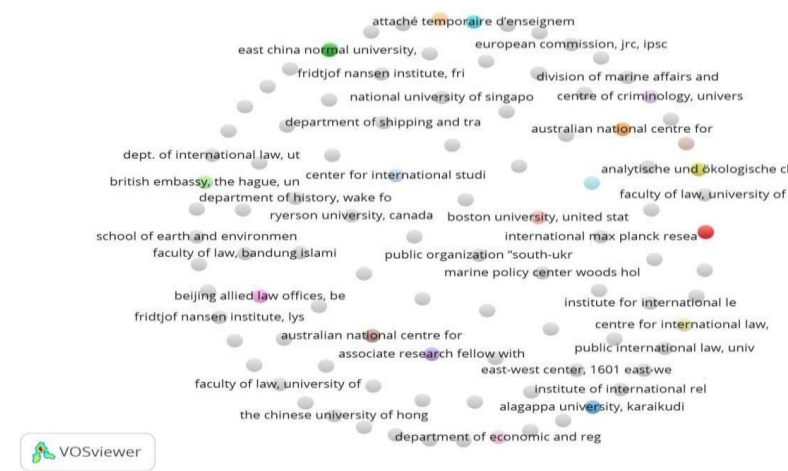


Figure 7 Institution And Research Funding.

3. Institutions.

Figure 7 highlights the involvement of various research centers in the publication of academic works on e-documents. The Figure reveals that 158 institutions actively participate in research and contribute to publications within this domain. Notably, the paragraph emphasizes the presence of ten prominent institutions that have made substantial contributions, particularly from the United Kingdom and the United States. Among these ten notable institutions are esteemed entities such as the University of Leicester, the Hague British Embassy, and King's College Cambridge, indicating the caliber of academic institutions involved in e-document research. Additionally, including institutions like the Netherlands Institute for Law and the law school of Korea University underscores the international scope of collaboration in this field. While these institutions have contributed significantly to the literature on e-documents, each has only published one document and lacks any direct links to the other. This link suggests diverse perspectives and approaches within the academic community, with various institutions contributing to advancing knowledge in this area.

Figure 8 also illustrates the annual trends of publications related explicitly to green shipping, a critical aspect of maritime Law and Environmental Law. The heat map featured in the visualization emphasizes the newest serials, with brighter colors indicating more recent contributions to the field. This visual representation aids in understanding the evolving landscape of research on green shipping, highlighting areas of active inquiry and potential opportunities for further exploration.

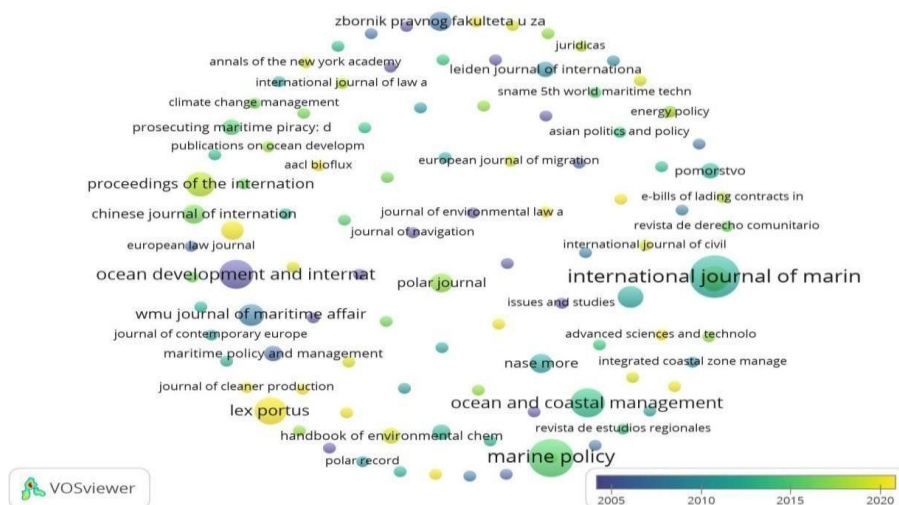


Figure 8 Published Journal

Figure 6 illustrates the number of articles per Journal publisher to identify the core of the field journal. Another crucial element of the bibliometric analysis involves determining the number of journal citations to recognize the primary research areas about legal frameworks in sea transportation. The documents examined in this study originated from 177 journals focused on e-documents in maritime Law. The most noteworthy publication was found in the International Journal of the Marine Academy, garnering 131 citations, followed by Marine Policy with 110 citations and Ocean and Coastal Management with 74 citations. Generally, the prominent journals in the realm of e-documents in maritime Law exhibit a multidisciplinary or interdisciplinary nature, encompassing various research fields such as Law, policy, computer science, border policy, and economics.

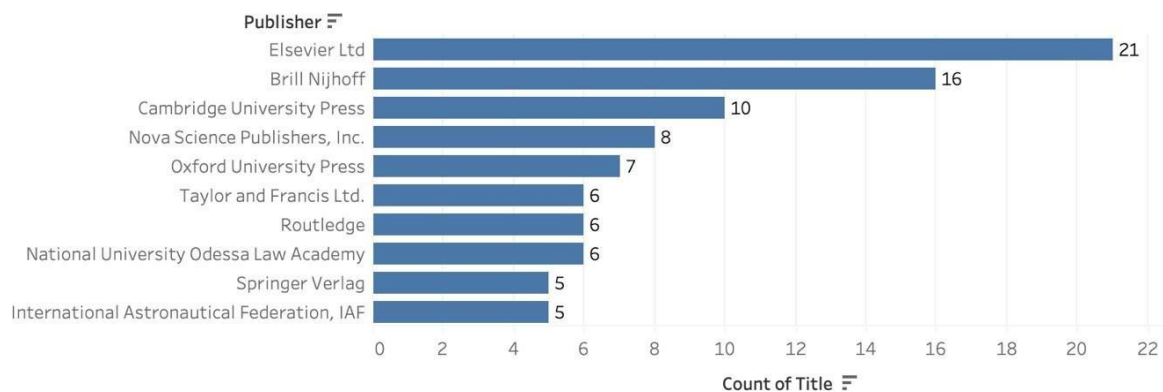


Figure 9 The Top 10 Publisher Journal

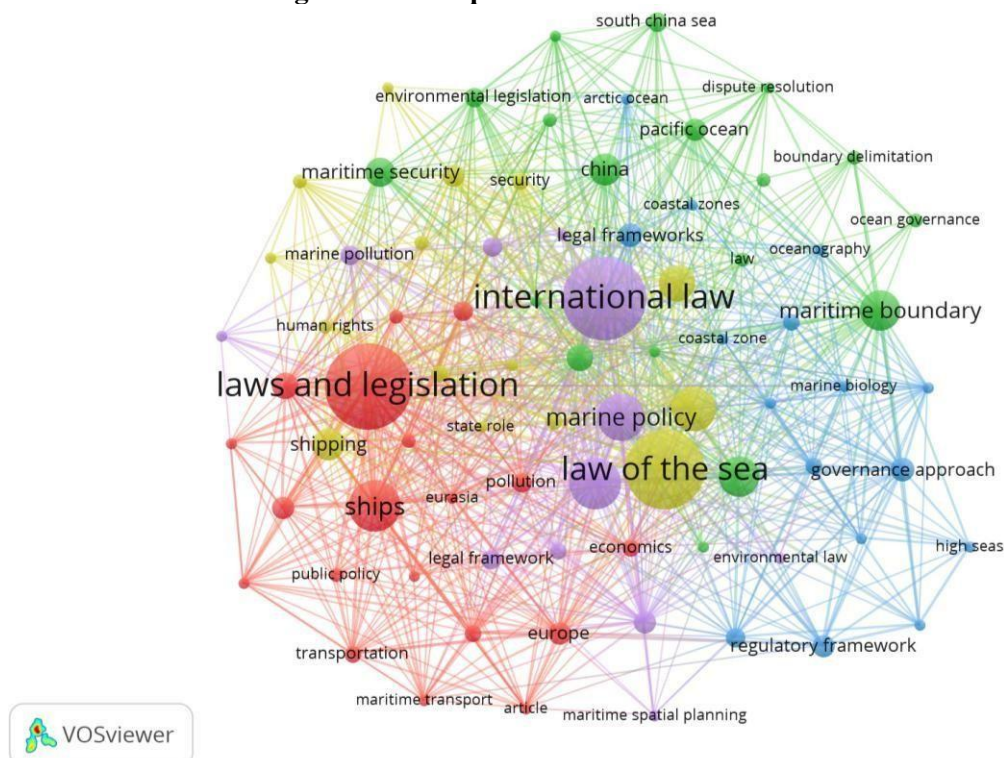


Figure 10 Analysis of keywords

4. Author Keywords

In the analysis, the Figure was derived from 364 manuscripts of Scopus data. Based on the papers, there were 1554 keywords regarding the legal framework of e-document maritime transportation. Only 80 keywords meet the requirement, with seven co-occurrences. The data were selected from the Author's keyword. The reasons for choosing the keyword are to be precise in the data analysis, be more specific on the subject, and know the Author's aim. This analysis is critical to point out the main topic of every cluster. Regarding the data, there were 5 clusters as the central topic of the research subject, innovation, and development. Cluster and its members mentioned the three sciences of this subject based on specific manuscripts research.

The 5 clusters are red, green, blue, purple, and yellow. The map in the Figure also shows the overlapping theme, e.g., International Law, laws and legislation, and the Law of the Sea.

The top five categories in Figure 9 include Law and legislation, international Law, the Law of the Sea, ships, and environmental protection. The distribution of types suggests that issues in Law and legislation, international Law, the Law of the Sea, ships, and environmental protection were highly prioritized in research.

The prevalence of legal frameworks and legislation is evident in the red clusters, as they encompass the majority of nodes in the keywords. Consequently, Law and legislation emerge as the predominant keywords in the authors' research, exemplified by studies such as those conducted by Elferink et al. (2018). The keywords are associated with various topics, covering accident prevention, articles, economics, energy efficiency, Eurasia, Europe, the European Union, international maritime, regulations, and legislation. Additionally, they encompass aspects such as maritime transport, pollution, public policy, risk assessment, ships, societies, institutions, strategic planning, transportation, and waterway transportation.

Petrig consistently emphasizes the Law of the Sea as the most significant term in a yellow cluster. As a prominent author, Petrig's associated keywords in this cluster include the legal system, legislation, maritime Law, shipping, and vessels. Additionally, the term maritime boundary holds secondary importance within this context, while international trade, law enforcement, and maritime emerge as essential words within this thematic area. Moving to the blue cluster, the regulatory framework stands out as the most prominent node, connecting to legal frameworks. This cluster also delves into marine resources and their impact on the ocean, coastal areas, high seas, and sustainability. International Law characterizes the purple cluster as the primary author's keyword. Governance, governance approach, legal frameworks, and regulatory framework are intricately linked, all relating to specific regulations as the focal point of the study. Concluding with the green cluster, maritime boundary and environment emerge as more significant nodes than the other 18 items. Maritime security, shipping, and Unclos are prominent in this thematic cluster.

The most prominent keyword in the legal framework of maritime Law was the term "laws and legislation" (37). (as mentioned in figure 7. It was followed by the keywords "international law" (36) and the Law of the Sea (34). In terms of the legal framework, nine frequencies appeared. Many authors mentioned regulatory framework as the synonym for the occurrence of seven frequency. Maritime Law appears in only four frequencies. However, "e- document" was not one of the chosen keywords in the legal framework of maritime Law. The explanation of the statement before could be: The majority of authors have looked at the effects of a specific technology or solution on maritime transport and seaports (Zerbino et al., 2019) from the point of view Because the cargoes have a large number of data attributes, the information flow that is engaged in port freight transportation activities is particularly data- intensive(Kia et al., 2000) [14,15]. Due to this, such processes are ideal for business analysis. For instance, a case study in a mid-sized port backed by a Port Community System was established by Aloini et al. to analyze the role of process coordination dynamics and information exchanges in marine logistics.

Figure 11 discusses the annual trends in publication topics related to maritime Law, ocean governance, public international Law, and environmental Law within the Law of the Sea realm. The overlay visualization provides insights into emerging themes and areas of focus within these legal domains. Notably, maritime Law, ocean governance, public international Law, and environmental Law are highlighted as the newest themes, indicating a growing interest and research activity in these areas. This suggests a shift in scholarly attention towards addressing contemporary challenges and issues within maritime Law and ocean governance, particularly concerning environmental sustainability and international legal frameworks.

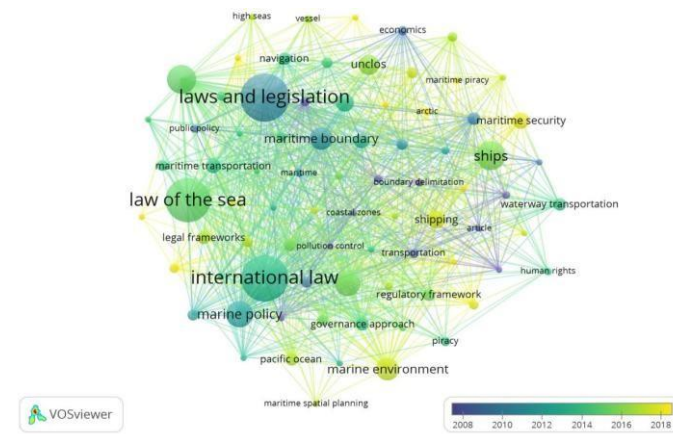


Figure 11 Annual Trend Publication

The overlay visualization shows that maritime Law, ocean governance, public international Law, and environmental Law are the newest themes for the Law of the Sea. Figure 11 plots the annual trends of publications related to green shipping. The most important is to show a heat map that the brighter one shows the newest one.

Forming the node size of Maritime law shows that not many authors are researching these matters. Since the subject was still new, the theme had a chance to elaborate more on the legal framework of maritime Law.

DISCUSSION

The sentence highlights a study conducted to comprehend the frequency of publication within a specific field, likely maritime Law or maritime transportation. The analysis involved examining the number of papers published each year to discern patterns and trends. Notably, the maximum number of selected articles was observed in 2005, suggesting a potential peak in scholarly activity or interest within the subject area. This spike in publications may indicate significant developments or events within maritime Law or related fields, prompting increased scholarly attention and research output.

Moreover, the research findings shed light on the accelerating pace of maritime transport and the growing focus of researchers on various legal aspects related to it. Specifically, there's an increasing emphasis on Law and legislation, international Law, the Law of the Sea, ships, and marine policy. This indicates a shift in scholarly attention toward examining and understanding the legal frameworks, regulations, and procedures governing maritime activities. The heightened interest in these areas suggests their critical importance in addressing contemporary challenges and ensuring the sustainable and effective management of maritime transportation systems on a global scale.

- a. the keyword “ law of the sea” connected to the International Maritime Organization, security governance, Law of the Sea Convention

- b. the keyword “shipping” is connected to sustainable development, public international Law, Unclos, Maritime Law, coastal state, and the Law of the Sea
- c. the keyword “legal framework” connected to maritime transport and carriage of goods
- d. the keyword “international Law” is connected to shipping, legal framework, International Maritime Organizations, ships, regulations, and IMO official documents.
- e. The keyword “ maritime transport connections to shipping, legal framework, transportation document (connected with legal from the legal framework)

The distinction between Maritime Law and the Law of the Sea reflects the complex legal landscape governing maritime activities worldwide. While the Law of the Sea primarily focuses on the relationships between coastal states and the regulation of their territorial waters, maritime Law and admiralty law serve distinct functions within this framework. (P Hoagland et al., 2001) The Law of the Sea differs from two closely related bodies of Law: maritime Law and admiralty law. (Force et al., 2005) Maritime Law, often considered the private Law governing ships and commercial shipping operations, delves into various aspects of maritime commerce, including contracts, insurance, and liability. Admiralty law, on the other hand, pertains to navigation and shipping laws applicable to both inland and oceanic waters, addressing issues such as collisions, salvage, and maritime liens. (Porter. Hoagland et al., 2019) Maritime Law is the private Law that governs ships and the commercial shipping business. Admiralty law, often used interchangeably with naval Law, regulates the private Law of navigation and shipping in both inland and ocean waters..(Porter. Hoagland et al., 2019). Within the Law of the Sea, there is a pronounced emphasis on international relations and the delineation of rules governing interactions between countries. Key issues addressed include state sovereignty over specific territories, establishing and using exclusive economic zones and maritime boundaries, and preserving the marine environment. This focus underscores the international nature of maritime Law and its significance in facilitating cooperation and resolving disputes among nations in matters related to ocean governance. It's important to note the distinction between the Law of the Sea and other related legal domains, namely maritime Law and admiralty law. Maritime Law primarily governs the private aspects of shipping and commercial maritime activities, while admiralty law deals with navigation and shipping laws applicable to inland and ocean waters. This differentiation clarifies the multifaceted nature of legal frameworks governing maritime affairs, each serving distinct but interconnected roles regulating maritime operations and commerce.

Moreover, the Law of the Sea extensively regulates relationships between nations. It addresses critical issues such as state sovereignty over designated territories, delineating and utilizing exclusive economic zones and maritime boundaries, and preserving marine ecosystems. This emphasis underscores the international character of maritime Law and its essential role in fostering collaboration and resolving conflicts among nations in matters of ocean governance. However, it's necessary to distinguish the Law of the Sea from closely related legal fields such as maritime Law and admiralty law. While naval Law primarily governs the private aspects of ship operation and commercial maritime enterprises, admiralty law encompasses navigation and shipping regulations applicable to both inland and oceanic waters. This distinction underscores the multifaceted nature of legal frameworks guiding maritime activities, with each domain serving distinct yet interconnected functions in regulating maritime operations and commerce, ensuring compliance with international standards, and safeguarding marine environments.

While the Law of the Sea primarily focuses on the relationships between coastal states and the regulation of their territorial waters, maritime Law and admiralty law serve distinct functions within this framework. Maritime Law, often considered the private Law governing ships and commercial shipping operations, delves into various aspects of maritime commerce, including contracts, insurance, and liability. Admiralty law, on the other hand, pertains to navigation and shipping laws applicable to both inland and oceanic waters, addressing issues such as collisions, salvage, and maritime liens.

Within the Law of the Sea, there is a notable emphasis on international cooperation and establishing rules governing interactions between nations. Key issues, such as state sovereignty over specific territories, delineating exclusive economic zones, and preserving marine ecosystems, underscore the global significance of maritime Law in promoting sustainable ocean governance. As maritime activities continue to evolve and expand, the interplay between these legal domains becomes increasingly crucial in navigating complex challenges, resolving disputes, and ensuring the effective regulation of maritime operations on a global scale.

Meanwhile, the scope of maritime Law is more emphasized on the use of the Sea for transportation and international trade and its consequences. (McLaughlin, 2016) Unlike the Law of the Sea, which only concerns public matters, maritime Law can refer to the issues of public and private affairs. (Kite-Powell & Countryman, 2019). Maritime Law belongs to the public domain and includes navigation, pilotage, and harbor. (Bullock et al., 2021). Private maritime Law is more towards personal rules so that disputes arising from the implementation of its laws will be resolved privately by the parties to the dispute. Undeniably, marine and any state's economic growth are related (Cristina & Casaca, 2018). Thus, it can be said that all the provisions governing activities relating to the Sea and not concerning international Law in a public manner are maritime Law.

Maritime Law, often called admiralty law, is a complex and evolving field that intersects with various legal disciplines, including public international Law, Environmental Law, and ocean governance. As such, understanding the newest themes within these related legal domains provides valuable insights into the evolving landscape of maritime Law and the regulatory frameworks that govern maritime activities.

Figure 11 notes that the node size of Maritime Law indicates that fewer authors are currently researching these matters. However, it also suggests that since the subject is relatively new, there is ample opportunity for further elaboration on the legal framework of maritime Law. This observation underscores the dynamic nature of academic research and the potential for expanding and deepening knowledge within emerging study areas. Overall, the paragraph provides valuable insights into the evolving trends and areas of focus within maritime Law and related legal disciplines, shedding light on current research trajectories and future directions in the field.

By identifying these newest themes, scholars and policymakers can better understand the contemporary challenges and opportunities within the legal framework of maritime Law. This knowledge can inform efforts to develop effective regulations, policies, and governance structures that promote the responsible and sustainable use of the oceans while ensuring compliance with international law and standards.

Maritime Law provides the legal framework within which maritime documents transportation operates. Maritime document transportation involves the handling, transfer, and authentication of various documents essential for moving goods and vessels in maritime trade. These documents include bills of lading, cargo manifests, certificates of origin, and other legal instruments that prove ownership, compliance, and contractual obligations.

Maritime Law governs the rights, duties, and liabilities of parties involved in maritime transactions and activities, including the transportation of documents. It provides the legal principles and regulations that guide the creation, execution, and enforcement of maritime documents, ensuring their validity, legality, and enforceability in maritime trade transactions. Maritime transport encompasses the shipping industry, including many vessels, container ships, tankers, bulk carriers, and cargo ships. These vessels transport goods ranging from raw materials to finished products, pivotal in international trade and commerce. Crucially, maritime transport is intricately linked to a robust legal framework governing various shipping operations. This legal framework, often called maritime or admiralty law, encompasses many regulations at its core, conventions, and agreements that regulate maritime activities. These include rules related to vessel registration, maritime safety, navigation, environmental protection, liability, and dispute resolution, among others. Within maritime transport, transportation documents play a crucial role in facilitating and documenting the movement of goods.

These documents, which include bills of lading, charter parties, shipping manifests, and cargo manifests, serve as legal instruments that evidence the contract of carriage between parties, detail the nature and quantity of goods being transported, and provide instructions for the delivery and handling of cargo. They are essential for ensuring the smooth flow of goods through the supply chain, facilitating customs clearance, and resolving disputes in case of loss or damage during transit.

CONCLUSION

According to the result, the manuscripts concerning the legal framework of maritime transportation are divided into six clusters. The most prominent emphasis is on marine, international, and legislative Law. The legal framework covered shipping, maritime transport, documentary framework, maritime policy, and sustainable development. Maritime Law governs the rights, duties, and liabilities of parties involved in maritime transactions and activities, including the transportation of documents. It provides the legal principles and regulations that guide the creation, execution, and enforcement of maritime documents, ensuring their validity, legality, and enforceability in maritime trade transactions. Maritime transport encompasses the shipping industry, including many vessels, container ships, tankers, bulk carriers, and cargo ships. These vessels transport goods ranging from raw materials to finished products, pivotal in international trade and commerce. Crucially, maritime transport is intricately linked to a robust legal framework governing various shipping operations. This legal framework, often called maritime or admiralty law, encompasses many regulations at its core, conventions, and agreements that regulate maritime activities. These include rules related to vessel registration, maritime safety, navigation, environmental protection, liability, and dispute resolution, among others. Within maritime transport, transportation documents play a crucial role in facilitating and documenting the movement of goods. These documents, which include bills of lading, charter parties, shipping manifests, and cargo manifests, serve as legal instruments that evidence the contract of carriage between parties, detail the nature and quantity of goods being transported, and provide instructions for the delivery and handling of cargo. They are essential for ensuring the smooth flow of goods through the supply chain, facilitating customs clearance, and resolving disputes in case of loss or damage during transit.

REFERENCES

Books

- Elferink, A. G. O., Henriksen, T., & Busch, S. V. (2018). *Maritime boundary delimitation: The case law: Is it consistent and predictable?* Cambridge University Press.
- Force, R., Yiannopoulos, A. N., & Davies, M. (2005). *Admiralty and maritime law* (Vol. 1). Beard Books.
- Hoagland, P., Jacoby, J., & Schumacher, M. E. (2001). Law of the sea. In J. H. Steele (Ed.), *Encyclopedia of Ocean Sciences* (pp. 1481–1492). Academic Press. <https://doi.org/10.1006/rwos.2001.0415>
- Hoagland, P., Jacoby, J., Schumacher, M., & Burns, C. (2019). Law of the sea☆. In J. K. Cochran, H. J. Bokuniewicz, & P. L. B. Yager (Eds.), *Encyclopedia of Ocean Sciences* (3rd ed., pp. 526–537). Academic Press. <https://doi.org/10.1016/B978-0-12-409548-9.11344-2>
- Kia, M., Shayan, E., & Ghotb, F. (2000). The importance of information technology in port terminal operations. *International Journal of Physical Distribution & Logistics Management*, 30(3/4), 331–344. <https://doi.org/10.1108/09600030010326118>
- Kite-Powell, H. L., & Countryman, C. E. (2019). Shipping and ports☆. In J. K. Cochran, H. J. Bokuniewicz, & P. L. B. Yager (Eds.), *Encyclopedia of Ocean Sciences* (3rd ed., pp. 570–578). Academic Press. <https://doi.org/10.1016/B978-0-12-409548-9.11525-8>

Lorenzon, F. (2020). International trade and shipping documents. In *Maritime Law* (pp. 106–127). Informa Law from Routledge.

Journal With DOI

- Alonso, S., Cabrerizo, F. J., Herrera-Viedma, E., & Herrera, F. (2009). *h-Index: A review focused on its variants, computation, and standardization for different scientific fields*. *Journal of Informetrics*, 3(4), 273–289. <https://doi.org/10.1016/j.joi.2009.04.001>
- Border, Boundary and Frontier: Concepts. (n.d.). In B. Warf (Ed.), *The Handbook of Geographic Information Science* (pp. 1–21). Elsevier. <https://doi.org/10.1016/B978-0-444-64002-4.00001-5>
- Bullock, J. A., Haddow, G. D., & Coppola, D. P. (2021). Chapter 6 – Border security, immigration, and customs enforcement. In J. A. Bullock, G. D. Haddow, & D. P. Coppola (Eds.), *Introduction to Homeland Security* (6th ed., pp. 305–357). Butterworth-Heinemann. <https://doi.org/10.1016/B978-0-12-817137-0.00006-7>
- Chalastani, V. I., Tsoukala, V. K., Coccossis, H., & Duarte, C. M. (2021). A bibliometric assessment of progress in marine spatial planning. *Marine Policy*, 127, 104329. <https://doi.org/10.1016/j.marpol.2020.104329>
- Cristina, A., & Casaca, P. (2018). Protectionist vs liberalised maritime cabotage policies: A review. *Maritime Business Review*. <https://doi.org/10.1108/MABR-03-2018-0011>
- Lau, Y., Ducruet, C., Ng, A. K. Y., & Fu, X. (2017). Across the waves: A bibliometric analysis of container shipping research since the 1960s. *Maritime Policy & Management*, 44(6), 667–684. <https://doi.org/10.1080/03088839.2017.1311425>
- McLaughlin, R. (2016). Authorizations for maritime law enforcement operations. *International Review of the Red Cross*, 98(902), 465–490. <https://doi.org/10.1017/S1816383117000340>
- Suseto, B., Othman, Z., & Razalli, F. M. (2018). An overview of Indonesia's maritime strategy. *Indonesian Journal of Geography*, 50(2), 145–153. <https://doi.org/10.22146/ijg.27954>
- Tsiulin, S., Reinau, K. H., & Karam, A. (2020). Blockchain-based applications in shipping and port management: A literature review towards defining key conceptual frameworks. *Review of International Business and Strategy*, 30(2), 201–224. <https://doi.org/10.1108/RIBS-04-2019-0051>
- Wagner, N. (2019). Bibliometric analysis of research on green shipping practices. In M. Suchanek (Ed.), *Challenges of Urban Mobility, Transport Companies and Systems (TranSopot 2018)* (pp. 323–332). Springer, Cham. https://doi.org/10.1007/978-3-030-17743-0_27

Journal Without DOI

- Abdullah, K., & Ahmad, M. Z. (2019). Border security problems in the waters of the Natuna Islands: Between national boundaries and illegal fishing. *AEGIS: Journal of International Relations*, 3(2), 94–114.
- Ahmad, R., & Rachmawati, I. (2016). Implementing protection and indemnity for Indonesian ships in compliance with a common law system. *International Journal of Applied Business and Economic Research*, 14(6), 4781–4799.
- Maruf, I. R., & Supardi, E. J. (2019a). Marine pollution as a weak factor in Indonesian ship business activity. *Journal of Advanced Research in Dynamical and Control Systems*, 11(5 Special Issue), 933–941.

- Maruf, I. R., & Supardi, E. J. (2019b). Marine pollution as a weak factor in Indonesian ship business activity. *Journal of Advanced Research in Dynamical and Control Systems*.
- Sahoo, S., & Schönborn, A. (2020). A bibliometric overview of WMU Journal of Maritime Affairs since its inception in 2002. *WMU Journal of Maritime Affairs*, 19(1), 5–25.
- Serdy, A. (2020). Public international law aspects of shipping regulation. In *Maritime Law* (pp. 334–373). Informa Law from Routledge.
- Zerbino, P., Aloini, D., Dulmin, R., & Mininno, V. (2019). Sustainability towards analytics-enabled efficiency improvements in maritime transportation: A case study in a Mediterranean port.