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BIBLIOMETRIC OVERVIEW OF CURRENT TRENDS IN MARITIME TRANSPORT: THE ISSUE OF A SPECIAL INTEREST IN DELIVERY OF A CONSIGNMENT AS A TOOL TO ACHIEVE SUSTAINABILITY OF INTERNATIONAL TRANSPORT

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Resume

The sustainability of international transport remains a critical topic of concern in both theory and practice. Ideally, scientific literature should align with practical needs, but such concurrence is not always present. This disparity is also evident in the specific issue of consignment delivery, which is currently of a great practical importance but lacks sufficient coverage in scientific literature. This paper aims to analyse current trends in maritime transport and their relevance to achieving global sustainability in international transportation. Additionally, it seeks to compare these findings with the practical needs and requirements of the industry, in order to provide constructive recommendations for further research. To accomplish this objective, a bibliometric analysis was conducted using scientific databases, including Web of Science and/or SCOPUS.

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1 Introduction

The basic construct of liability of contracting parties in maritime transport is included in the United Nations Convention on Contracts for the International Carriage of Goods (Wholly or Partly) by Sea, the so-called the Rotterdam Rules, which establish the liability mostly for the carrier in cargo transportation. The period of the carrier's liability starts at the moment when the carrier, or the performing party, accepts the cargo for transportation, and it ends at the moment when the cargo is delivered to its recipient. To determine the indemnification amount in the case of a loss or damage of the cargo, the value of the cargo in the place, and the time of delivery is crucial. The value of the cargo is

bound to its exchange value; if the cargo (goods) does not have an exchange value, then the value is bound to its market value; if none of these values can be identified the value of the cargo represents a common value of goods of the same kind and quality at the place of delivery. As for a delay in delivery, the claim to get the indemnification ceases if no complaint due to delay in delivery of the cargo is filed within 21 days from the cargo distribution. In the case the complaints are raised in relation to the performing party, which delivered the cargo, they have the same effect as if they were raised to the carrier themselves. This is true the other way around, too. The amount of the carrier's liability is restricted with this Convention to 875 SDR (a unit of special drawing rights) for a carried unit, or 3 SDR for

a kilogram of gross weight, depending on which amount is higher. The carrier has the ability to agree on a higher liability limit with the shipper; the shipper also has the right to declare a higher value of the consignment in the contract of carriage. The carrier's liability for losses due to delay in delivery of the cargo is limited to 2.5-times of the freightage. The issue of a special interest in delivery of a consignment does relate to this issue immanently. In modern times, the carriage of goods, mostly the international one, is built on a principle of restricting the carrier's liability, otherwise the carrier would not be willing to assume a risk related to the consignment carriage since the value of the consignment usually exceeds the value of the reward for providing this service several times. To carry a consignment of a certain mined raw material across a heavy sea presents a riskier activity than mining of the raw material itself. Without the carriage of goods to the shipper on the other side of the world there would no development of the world trade or general growth happen at all. Almost all international treaties on carriage of goods by any type of transport means, as well as national legislations of many countries do contain provisions restricting the carrier's liability for damages, which have occasioned due to a common and predictable risk related to the international carriage, the nature of the consignment and the transport means used, too. Even despite an indubitable practical relevance of this issue, the state of its working out is not satisfactory in the current scientific literature. The legal regulations themselves are paid only a partial attention within broader constructs of thoughts. This can be assumed from a pre-research realised in the environment of Web of Science, or SCOPUS platforms. Thus, it is relevant to analyse the current trends in the area of maritime transport in the context of their importance in more details, while achieving the global sustainability of international transport, and comparing the found state to needs and requirements of the practice, to constructively formulate recommendations in the area of a further orientation of the research so there occurs a synergic effect of the theory and the practice for the sake of achieving a sustainable development of the society in a long-term horizon. This also happens to become a goal of the paper introduced; to fulfil it a bibliometric analysis was realised with application of VOSviewer software support. It is a progressive scientific approach, featuring a postpositive character, based on the application of the best practices from other fields of study. The origins of a citation analysis development, as a separate discipline, are closely associated with the bibliometrics. In the beginning of the 20th century F. J. Cole and N. B. Eales published a paper for a research in anatomy, named "A Statistical Analysis of the Literature". The work aimed to map the interest in the discipline in different countries, using the methods of a statistical distribution. The citation analysis is one of the bibliometrics methods, which studies and quantifies relations

among documents, authors, scientific institutions, or scientific branches based on the bibliographic citations and bibliographic references. The citation analysis has its importance not only for the profiling of library's collections, but it is also a base for the citation mapping of the science with the construction of the so-called citation networks. Bibliometrics is a discipline, which is devoted to a quantitative analysis and measurement of documents used to spread the scientific knowledge. A mutual relation of bibliometrics, infometrics and scientometrics (which are related disciplines) comes out from relations between the system of science, the library science and the scientific communication. The field of study of these disciplines overlaps since all of them consider a document an important object of their own measurements. The citation analysis is closely associated with the "citation mapping" term. This term serves to indicate the visualisation of the citation analysis. A citation map is a graphical representation, which depicts relations built with citation references and cited articles. The most important data sources for the citation mapping are citation indices. The result of the citation mapping is the graphical representation of citation relations. The citation mapping has its significant place in the context of information representation. A complex and effective mapping of a certain scientific field is possible only based on the data generated from the citations usage. The mapping of the science is based on the formation of the so-called citation network, which best describes how specific areas of science and research are structured.

2 Theoretical background of research itself

International trade and shipping play crucial roles in fostering economic growth, job opportunities, innovation, and cultural interchange. They contribute to cooperation and stability between nations, promoting effective resource utilization and diversification [1].

Nowadays, cargo is transported from one place to another in various ways, taking into account the conditions of the countries of origin and destination. The existence of transport contracts and relevant transport legislation is crucial. Legislators seek to organize relations between the transport entities through applicable legislation. Transportation contract, among other things, determine the mutual rights and obligations of the contract parties, i.e., the sender of goods and the transport operator. There is often a case of human failure during transport. This is the case, for example, when an operator, responsible for the safe transport and delivery of cargo, makes a mistake and the goods do not arrive at the place of delivery or are delivered damaged. There are certain rights and obligations associated with the performance of transport. One of the rights of the sender of goods, that are expected to be observed by the transport operator,

refers to loss and restitution of goods. This restitution includes all the costs of the sender.

Globally, there is a noticeable surge in the dynamic evolution of intermodal transportation. This progression is intricately linked to the rising demands for enhanced transport efficiency and sustainability. The heightened level of efficiency poses a challenge for participants in intermodal transport systems, necessitating a thorough examination of the factors that impact both efficiency and sustainability in this mode of transportation [2].

Transportation of goods are handled by the international transportation companies and organizations, with the bill of lading issued in all the cases. International maritime companies owned by the government must develop the culture of cooperation and share the interests achieved via activity with their staff. Moreover, international transportation companies owned by government, which have taken into economic emergencies, must be managed as the administrative arms based on the principle of cost and benefit [3].

There are inconsistencies in legal regulations for the issue of a special interest in delivery of a consignment, and even despite its practical relevance in the current scientific literature, it has not been worked out comprehensively [4]. At the same time we may state that the question of particularities of legal regulations disharmony in international transport can be characterised with an appropriate meaning from the point of view of practical needs. The issue of the legal regulations variance itself is coincidentally ascertained even from several aspects: 1) a threat of special-purpose manipulation in the context of a special-purpose suitable legislation; 2) the rigidity and absence of legal regulations for current issues; 3) a risk of bureaucracy and continual increase of the administrative severity of international transport; 4) a barrier to achieve goals of a global environmental policy.

According to DeSombre, the impact of globalization on international standards for environment, safety and labour, has reflected into the decisions of shipowners about the register their ships. Shipowners have moved registration of ships to low-standard states, while traditional national registries relaxed standards in an effort to keep ship registrations. As a result, recent successes in increasing standards have come from mechanisms of exclusion - ships that remain out of the international regulatory process are prevented from benefiting from their free riding by the imposition of trade restrictions, dockworker boycotts, and also by the inspection and detention processes [5].

In September 1959, the Nineteenth Conference of the International Maritime Committee (Comité Maritime International) was held in Rijeka, Croatia (former Yugoslavia). The Conference adopted a draft of a convention that aimed to address the issue of liability of the operators of nuclear ships (mainly in the terms of use nuclear reactors as a source of transportation both

civil and military ships). The draft convention reflected the fact that liability issues arising from the nuclear ships considerably differ from those issues, arising from the operation of land-based nuclear reactors. The draft of convention reflected the fact that issues of liability, arising from nuclear ships, considerably differ from those issues arising from the operation of land-based nuclear reactors. The Rijeka Draft became crucial for the later developments in the field of international nuclear law, in particular for the adoption of the Brussels Convention on the Liability of Nuclear Ships at the Eleventh Session of the Diplomatic Conference on Maritime Law in 1962. However, it also influences the content of another bilateral agreements.

The 60th anniversary of the Rijeka Draft represents significant opportunities - to revisit the principles provided by the draft convention, and to reconsider the impact of this draft on further development of international nuclear law, [6]. According to Yang et al., the issue of safety and environmental pollution liability insurance (SEPLI) is crucial in this case, too [7]. This new insurance product - SEPLI - has been recently developed as an important supplement to the current safety and environmental risk prevention and control system. In comparison with other common insurances, SEPLI extends the function of insurance - from the simple compensation function to the "process management + compensation" function [8].

Based on the work of Storkersen et al., and the analysis of empirical data from Norwegian fish farming and coastal transport, the paradoxical relationship between the governmental deregulatory measures and organizational overregulation have been revealed. The data confirms a rapid growth of number of internal rules and protocols, ill-fitting procedures, and pervasive, exaggerated safety management. Three basic mechanisms are detected that have driven internal overregulation: work auditability; managerial insecurity and liability; and audit practices. These mechanisms show how functional regulation can have unintended consequences when it meets other accountability expectations. Expectations of market doctrine, bureaucratic entrepreneurship and control can lead a company to transforming current simple governmental regulations into overcomplicated safety management systems [9-10].

Until the 20th century, most countries have focused on developing the benefits of maritime transport and paid little attention to oil pollution from ships. The development of marine transportation was the main trigger of marine pollution. Nowadays, marine pollution in general is considered to be a dangerous source of contamination of the marine environment, but the threat of oil pollution from ships draws the greatest concern. This concern is clearly felt by the BRICS countries, that are keenly interested in preserving and protecting the marine environment against pollution, including marine pollution caused by oil from ships.

The BRICS members are countries with extensive economies and significant influence on regional and global issues. In recent years, the BRICS countries represent a significant role in the world economy (in terms of total production, destinations for investment capital and potential consumer markets). Therefore, the improvement of legal framework, relating to civil liability for marine pollution damage, have a significant importance for the ensuring of environmental safety of these countries.

This paper explores the legal regime relating to civil liability for marine pollution damage at the international level and in the terms of BRICS member states. It compares the differences in the domestic legislation of the BRICS countries, pertaining to civil liability for marine pollution damage and results in recommendations for better implementation [11]. This paper follows the Fabriz and Quiroga Obregon research, that analyzes the current state of the marine environment, which is polluted by maritime transport in both national and international waters.

Addressing the inconsistencies in the regulation of international transport is dynamic and evident, especially in recent times. Moreover, Naevestad et al. have detected a considerable difference between the formal and informal aspects of safety by analyzing a significant report of coastal freight sector [12]. The research of regulatory inconsistencies in international transport will focus primarily on regional specificities, thus waiving the global reach of the issue. One of the most important issues in transportation is determination of the basis for determination of liability for each transportation body. In this regard, several theories have been proffered, such as the theory of fault, the theory of default in guarding objects, theory of guarantee, the theory of damage and the theory of risk or liability. Based on a critical evaluation of these theories and analysis of relevant legal provisions, particularly in the French, UAE and Egyptian jurisdictions, this paper argues that the theory of damage, as a basis for liability, is the most applicable to contracts for the passenger transportation. Its content is clear, specific and consistent with the general rules of guarantee adopted in domestic laws, such as the UAE Civil Transactions Law. Above all, it offers handicapped passengers the quickest access to justice and the opportunity to receive due compensation [13].

Although such an approach does often occur in the current scientific literature, it does not suit the particularities of the issue solved here [14].

In the scope of the above mentioned, the following research questions have been set:

- (1) What are the current trends in the scientific literature?
- (2) Do the current trends in the scientific literature reflect real needs of the practice in the context of the issue of a special interest in delivery of a consignment?

3 Methodological background

The individual formulated research questions can be answered primarily with the implementation of the bibliometric analysis into available secondary data included in reputable scientific databases of Web of Science, or SCOPUS. To realise such selected investigation methodology, the VOSviewer software platform has been selected. It is a freely available computing program, primarily designed for analysis of bibliometric networks. This program is standardly used to create citation maps of publications, authors and citation networks. A citation network is a guided chart usually of a big scope; it shows how researchers publish their works, or how they cooperate, and it points out works of outstanding authors. Objects in the citation map are the most frequently depicted as parts of the chart or the network. Citations networks can also be defined as a cluster of documents, which is linked through relations between its elements. The workflow of a scientific mapping comprises the following steps: 1) data search; 2) data pre-processing; 3) extraction of the citation map; 4) data standardisation; 5) citation mapping; 6) data analysis, and 7) data visualisation. The following is true: the quality of results and the relevance of the following interpretation are directly proportional to the quality of the processed data.

This tool can be used to analyse records and to create clusters, which are then visualised. The cluster analysis belongs to methods, which deal with a similarity of multi-dimensional objects and a classification of these objects into clusters [15]. Generally, a cluster analysis can be defined as a general logical method formulated as a procedure; it is used to merge objects into groups - clusters, based on their similarity and difference [16]. The cluster analysis can also be used to radically decrease the dimension of a task; the variables under consideration are replaced with a single variable, expressing the affiliation to such a defined cluster [17]. A cluster is a group of objects whose distance (dissimilarity) is less than the distance between objects not belonging to the cluster. A similarity measure of objects x_i and x_j is denoted as $S(x_i, x_j)$, or S_{ij} in its short form, and it is true that $S_{ij} = S_{ji}$. In an ideal case, the similarity measures take values from an interval, where 0 means the maximum dissimilarity of objects, and 1 means the maximum identity. A dissimilarity measure of objects x_i and x_j is noted as $D(x_i, x_j)$, or D_{ij} in its short form, and the following is true: 1) $D_{ij} \geq 0$; 2) $D_{ii} = 0$; 3) $D_{ij} = D_{ji}$ [18-19]. The similarity of objects can be measured with different methods, which can usually be categorised into the following basic groups: 1) association measures; 2) distance measures (metrics); and 3) correlation measures, where the coefficients of association and correlation represent measures of the object's similarity, and the metrics represent measures of the object's dissimilarity [20-21].

The observed records can be represented with

Table 1 Overview of relevant journals listed in Web of Science

| Journal Title | JCR Category | Quartile in Category | Impact Factor | Publication Years | Papers Totally |
|--------------------------------------|--------------------------------|----------------------|---------------|-------------------|----------------|
| Journal of Maritime Law and Commerce | International Relations Law | Q4 Q4 | 0.244 (2010) | 1974-2011 | 1,427 |
| Maritime Economics and Logistics | Transportation | Q3 | 1.703 (2019) | 2009-2020 | 333 |
| Maritime Policy and Management | Transportation | Q2 | 3.152 (2019) | 2009-2020 | 657 |
| Polish Maritime Research | Engineering, Marine | Q3 | 1.263 (2019) | 2007-2020 | 945 |

Table 2 Overview of relevant journals listed in SCOPUS

| Journal Title | JCR Category | Cite Score | H index | Publication Years | Papers Totally |
|--------------------------------------|---|------------|---------|-------------------|----------------|
| Journal of Maritime Law and Commerce | Social Sciences: Law Social Sciences: Political Science and International Relations | 0.5 (2019) | 10 | 1996-2020 | 504 |
| Maritime Economics and Logistics | Economics, Econometrics and Finance: Economics, Econometrics and Finance (miscellaneous) Social Sciences: Transportation Engineering: Ocean Engineering | 3.3 (2019) | 45 | 2003-2020 | 487 |
| Maritime Policy and Management | Social Sciences: Geography, Planning and Development Environmental Science: Management, Monitoring, Policy and Law | 5.8 (2019) | 53 | 1976-2020 | 1,598 |
| Polish Maritime Research | Social Sciences: Transportation Engineering: Ocean Engineering Engineering: Mechanical Engineering | 2.4 (2019) | 18 | 2007-2020 | 923 |
| Maritime Studies and Management | - | - | - | 1973-1976 | 87 |
| Maritime Business Review | Business, Management and Accounting: Management of Technology and Innovation Business, Management and Accounting: Business and International Management Social Sciences: Transportation | 0.6 (2019) | 3 | 2018-2020 | 72 |

journals concentrating on the issue of maritime transport, registered in reputable databases of Web of Science, or SCOPUS. An overview of relevant journals, listed in Web of Science, is summarised in Table 1.

Not all the journals, appearing in the Web of Science database, can be included into the analysis of trends in the studied field. Journal of Maritime Law and Commerce is excluded because it has been inactive in the database since 2011, which is in conflict with the research objective to identify the actual trends. Likewise, Polish Maritime Research journal is excluded due to its orientation towards the technical connections of the issue. With regard to the facts above the following Web of Science database journals come into consideration: Maritime Economics and Logistics, and Maritime Policy and Management; they focus on transport and they imply economic-managerial aspects of maritime transport. An overview of relevant journals listed in SCOPUS is summarised in Table 2.

Similarly, as in the case of Web of Science database, not all the journals appearing in SCOPUS database can be included into the analysis of trends in the studied field. Moreover, we can observe a duplicate evidence of journals in the studied databases, which would cause distorted results if the data is simply downloaded. In the case that a particular journal is present in both databases, the input analysis data will be taken from the database, containing a greater volume of articles in given journals. In particular, these are Maritime Economics and Logistics, and Maritime Policy and Management journals, which identically contain more articles indexed in SCOPUS database (487, or 1,598). Polish Maritime Research journal is excluded due to the same reason as in the case of Web of Science database. Due to the non-actual data, Maritime Studies and Management journal must be excluded, as well. This reason, however, is no truer in the case of SCOPUS database, when speaking about Journal of Maritime Law and Commerce. It has

still been a part of SCOPUS database (in contrast to Web of Science database, which it was excluded from in 2011). In the context of SCOPUS database, also Maritime Business Review journal can be taken into account as well besides the already identified journals. Ten appearances of a keyword in investigated records create a threshold for it being displayed. The following journals have been considered within the bibliometric analysis: 1) Journal of Maritime Law and Commerce; 2) Maritime Economics and Logistics; 3) Maritime Policy and Management; 4) Maritime Business Review. To ensure a more robust input data set, all these journals have been considered with their articles appearing in the SCOPUS database.

4 Results and discussion

The realised bibliometric analysis detected five basic trends in maritime transport, which are graphically represented in Figure 1.

The bibliometric map implies that there are the following current trends in the scientific literature in the field of maritime transport:

- 1) logistic optimisation (represented in purple colour);
- 2) economic efficiency (represented in blue colour);
- 3) ecologic severity (represented in red colour);
- 4) legislative-organisational security (represented in green colour), and

- 5) regional particularities (represented in yellow colour).

An interesting fact is that the issues of economic efficiency and ecologic severity are mutually related. A similar situation occurs in the case of legislative-organisational security and regional particularities. The issue of logistic optimisation forms a relatively autonomous cluster without any apparent relations to the other identified ones. The information mentioned above implies that the issue of legal regulations is one of the current trends in the study of international transport, but when compared to other identified trends it is a relatively incoherent cluster, which de facto comprises categories not classified into the other ones. Thus, it can be stated that, contrary to the needs of the practice, the issue of a special interest in delivery of a consignment is not paid any attention in the scientific literature; the ambition of the authors of this article was to eliminate that shortfall and to fill the identified gap in the scientific literature. Moreover, addressing this gap is crucial for a comprehensive understanding of the multifaceted challenges within the realm of international transport. This is the outcome of Figure 2.

The restrictions, which usually arise from the consignment's weight (in kg) and the value of the carried unit, bring a peace of mind to the carrier; provided the standard and carrier-required processes are observed during the carriage, then any potential damage, destroy and loss of the consignment, will not have any fatal consequences for the carrier in the form of a liquidation of their business and financial liquidation. Carriers may insure the liability risk and

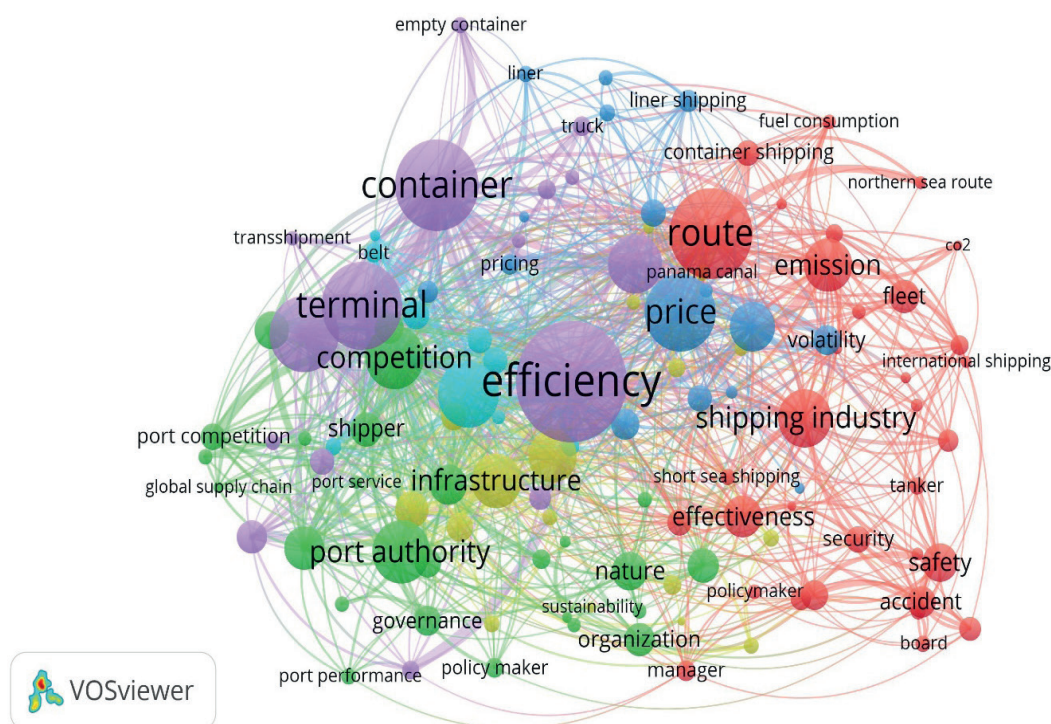


Figure 1 A bibliometric map identifying clusters of trends in maritime transport

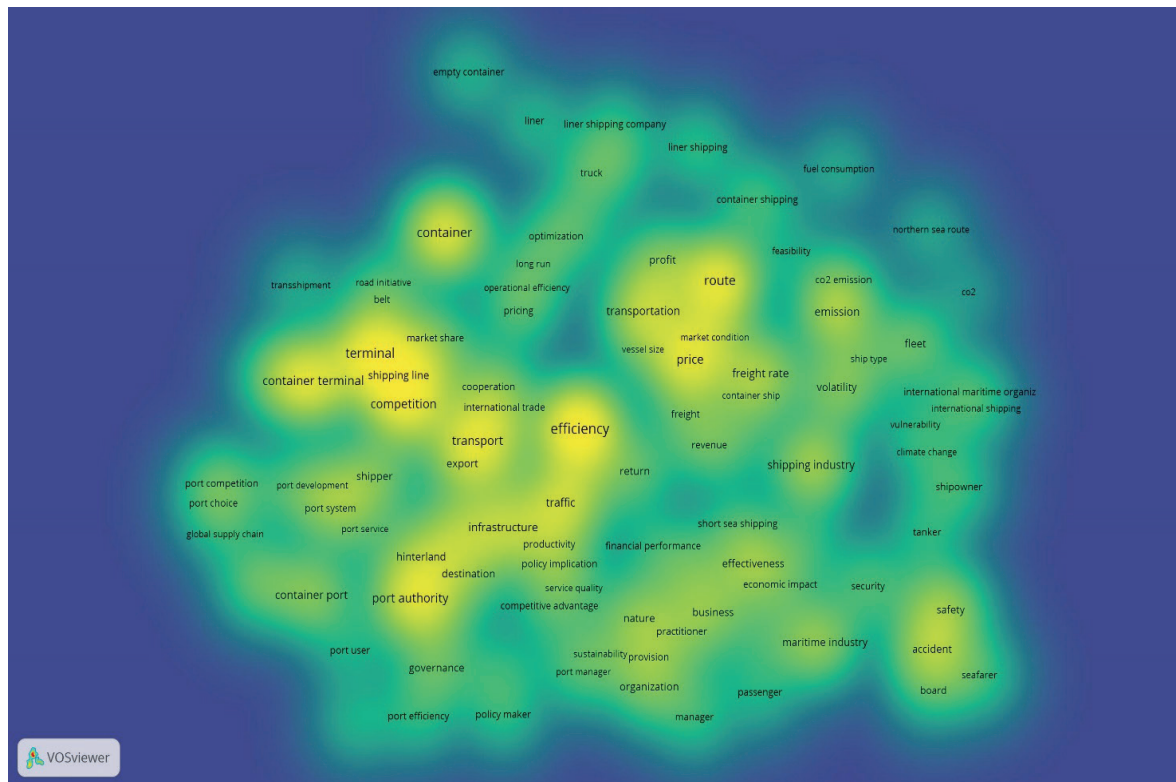


Figure 2 A bibliometric map identifying relevant partial issues within clusters of trends in maritime transport

thus create a sufficient protection against a potential indemnification, which arises in a direct relation to the carriage performance. Despite that, it can happen that the principle of the carrier's restricted liability is broken; the reason may lie in their non-standard behaviour, while handling the consignment during the carriage, or the carrier may decide to assume a higher liability than they are committed to under the current legislation. An example of an extended carrier's liability is first of all their intentional act, which leads to damage of the consignment, or their gross negligence, recklessness, gross organisation misconduct, etc.

An optional extension of the carrier's liability, based on an agreement between the carrier and the shipper, lies in determination of higher limits of liability in the case a certain event happens during the carriage; the carrier may also commit themselves to compensate bigger harm related to damage, destroy or loss of the consignment. A special interest in delivery of the consignment is expressed by the shipper towards the carrier in the case that loss, damage or exceeding the delivery time represents such a severe consequence for the shipper that they are willing to provide enhanced fulfilment for the carrier's services to ensure a better carrier's care of the consignment and its timely delivery, too. This interest may be evoked with the uniqueness of the carried goods, its irreplaceability, the commitment to timely delivery for the purpose of its usage in the place of destination, but also some prestigious reasons related to keeping awareness of a high reliability of the shipper's

products and ability to deliver them within the agreed time. However, it must be stated that agreements on a special interest in delivery of the consignment, as well as related agreements on the price of the consignment, are not overly prevalent and used by shippers in real life.

4.1 Agreement on a special interest in delivery

A significant number of international conventions on carriage of goods requires that the agreements between a shipper and a carrier on a special shipper's interest in delivery of the consignment in the case of loss, damage or exceeding the delivery time, should be made in writing, entered into the consignment note and that the carrier is paid a surcharge against the freightage (usually prior to the carriage). The entry into the consignment note on accepting the agreement on a special interest in delivery of the consignment, functions as a caution, not only for the carrier but for other subjects participating in the carriage and coming into contact with the consignment, as well. If applicable regulations (international conventions) require the acceptance of the agreement on a particular interest in delivery to be entered into the consignment note, then the agreement between the shipper and the carrier, mentioned for example in the contract of carriage, or e-mail communication, should be considered inadequate, thus invalid. Furthermore, there is much discussion about the question if the surcharge against the freightage

must be paid unconditionally, or if only the consent to its amount is sufficient. In addition, in this case it may be stated that the failure to pay the surcharge for a special interest in delivery of the consignment can be considered as a non-fulfilment of the fundamental prerequisite of the agreement, and such a breach does not allow for the shipper to demand a higher compensation from the carrier. The agreement, which would mean an unreasonably low surcharge against the freightage, in relation to possible consequences, could also be considered invalid. However, it cannot be ruled out for the surcharge to be included in an increased freightage. As a result of agreeing on a special interest in delivery, no value limits, set in individual conventions on carriage of goods, will be applied, but the carrier will be obliged to compensate the shipper for the damage up to the negotiated amount of the interest in delivery, usually declared in the consignment note (as already mentioned above). If damage of the consignment occasions or the delivery time is exceeded, it does not automatically mean that the carrier is liable to pay the amount negotiated as the (maximum) special interest in delivery of the consignment. In that case, the shipper would have to declare that the actual damage has arisen due to the consignment's carriage and the carrier would be obliged to compensate it up to the maximum amount of the interest agreed upon. Some international conventions, however, allow that the carrier themselves must prove that the claim made by the shipper is higher than their actual interest in delivery of the consignment, and thus they have impacted the amount of their compensation duty. For completeness' sake it must be stressed that insurance companies do not usually cover either the carrier's risk in relation to the agreement on a special interest in delivery of the consignment, or the related value agreements on the price of the consignment. Therefore, the fulfilment of the risk, resulting from the carriage of goods, and the agreement on a special interest in delivery of the consignment, will present a direct intervention into the carrier's financial stability.

4.2 Amendment of international conventions

To become more familiar with amendments of a special interest in delivery, and conditions for its arrangement, individual types of the international carriage were considered in more detail.

The Hague Rules, in the provision of Article 4 Paragraph 5, allow an extended liability of the carrier in the case of any loss or damage to or in connection with the goods if the nature and price of the goods have been declared by the shipper before shipment and inserted in the bill of lading. At the same time, the Hague Rules allow that by agreement between the carrier, captain or agent of the carrier and the shipper, another maximum amount different from that given as the limit of the carrier's liability, may be fixed, provided

that no maximum amount so fixed shall be less than the appropriate maximum set under the Hague Rules. That is, the Hague Rules rule out a reduction in the limit of the carrier's liability, however, they allow for the shipper to declare and enter into the bill of lading the nature of the consignment and its increased price in the case of its loss, damage or "damage related to the goods", hence for example damage resulting from delay in delivery of the consignment, prior to the shipment. Like the more recent Hague-Visby Rules, drafted in 1968, in their Article 2, which amends the provision of Article 4 Paragraph 5 of the Hague Rules, allow that the nature and value of the goods will be declared by the shipper before shipment and inserted in the bill of lading, which will result in the carrier's liability extended again over the limited threshold of liability.

Under the Hamburg Rules, the liability limit of the carrier for damage resulting from any loss, damage or delay in delivery of the consignment, may also be extended in compliance with the provision of Article 6 Paragraph 4 of the Hamburg Rules. The character of this agreement is, however, not determined under the Hamburg Rules, and the provision of Article 6 Paragraph 4 thus rather tends to a higher limit of the carrier's liability in connection with the consignment itself, than to the special interest in delivery of the consignment.

Under Article 59 Paragraph 1 of the Rotterdam Rules, the shipper may declare and include in the contract particulars a higher amount than the limited compensation up to which the carrier is liable for breaching their contractual duties.

Under the CMNI, a higher amount of liability may be agreed between the carrier and the shipper, though the CMNI misses a direct provision on the so-called special interest in delivery of the consignment. Pursuant to Article 20 Paragraph 4, the maximum amounts of the carrier's liability, set in the CMNI, do not apply where the higher value of the goods or transport equipment have been expressly specified in the transport document and the carrier has not refuted those specifications, or where the parties have expressly agreed to a higher amount of liability.

The Warsaw Convention on the international carriage by air enables to make the so-called "special declaration of interest in delivery at destination", in compliance with Article 22 Paragraph 2a. This declaration of interest in delivery at destination must be made by the shipper at the time when the consignment is handed over to the carrier, and a supplementary sum must be paid. Whether the sum is required depends on the carrier who decides if the sum is collected either immediately or later on. In this case, the carrier is obliged to reimburse any damage up to the set amount, if not declared that this amount is higher than the actual interest of the shipper in delivery of the consignment at destination. It is undeniable that the carrier will declare the so-called "actual interest of the shipper"

in delivery at destination in the case they will dispute the indemnification amount required by the shipper, resulting from a special declaration of interest in delivery. In addition, in this case, the carrier is liable not only for the damage, which has occasioned on the consignment itself, but for the delays in carriage by air as well.

The Montreal Protocol for the unification of certain rules for the international carriage by air, in its Article 22, allows for the shipper to make, at the time when the goods are handed over to the carrier, a special declaration of interest in delivery at destination and pay a supplementary sum if the case requires so. In that case, the carrier is liable for any damage occasioned to the shipper, up to the set amount, unless they prove that the sum is greater than the shipper's actual interest in delivery of the consignment at destination. The Montreal Protocol also applies the declaration of interest in delivery of the consignment at destination, not only to cases of destruction, loss, and damage of the consignment, but to delays in carriage by air, as well.

A special interest in delivery of the consignment is regulated in Convention on the Contract for the International Carriage of Goods by Road (CMR), in Article 26. Pursuant to this regulation, the shipper may, against the payment of the surcharge sum agreed upon for the freightage, fix the amount of a special interest in delivery of the consignment in the case of loss or damage or exceeding the delivery time, by entering such an amount in the consignment note. Thus, the CMR requires entering the value of the special interest in delivery directly into the consignment note, and paying the surcharge sum to the freightage, otherwise the agreement on higher liability of the carrier is invalid. If a declaration of a special interest in delivery has been made, compensation for the additional damage proved may be claimed from the carrier, up to the total amount of the interest in delivery declared. Under this regulation the limited compensation for damage, provided for in articles 23, 24 and 25 of the CMR, is exceeded. The term "additional damage proved" may be understood as a loss of profit, a compensatory purchase of a destroyed or lost machine, paid taxes and charges related to the destroy and loss of the goods, and to carriage, production outage, provision of compensatory fulfilment, exchange rate differences, etc. Furthermore, compensation for any damage in connection with the consignment's carriage, mainly if it means loss, delay in delivery of the consignment and resulting factual and legal consequences, may be claimed up to the amount of the interest in delivery of the consignment agreed upon. It is questionable whether in the case of application of a relevant national system of law, the claims to reimburse damage representing the so-called sentiment factors (a destroy of a favourite object, a unique object or an equipment), and the claims to reimburse price of "involvement" (death of a beloved animal during carriage, etc.), would be legally sustainable. Pursuant

to Article 6 Paragraph 1 of the CMR Convention, the consignment note shall contain basic data, and pursuant to Article 4 Paragraph 2, if needed, the contractors shall include the following particulars: the price of the consignment and the amount representing the special interest in delivery. The consignment note shall be the evidence of making the contract of carriage, and, at the same time, the receipt of the goods by the carrier. The loss, destroy or irregularity of the consignment note of the CMR, shall not affect the existence or the validity of the contract of carriage, which shall remain subject to provisions of the CMR Convention. It may be stated that the consignment note confirms the contract of carriage, however, it does not make it. The CMR Convention allows for contracting parties to increase the set limit if there, in the consignment note, the value of the goods has been fixed or if the special interest in delivery of the consignment requires so. A counter value for extending the carrier's liability is usually represented with the surcharge against the freightage.

Under the Convention Concerning International Carriage by Rail (COTIF/CIM), the carrier may be requested the indemnity beyond the limited compensation for damage. Under the provision of Article 35 of the CIM, the shipper may enter into agreement with the carrier that the shipper will record the calculated amount of their special interest in delivery of the goods in the consignment note, for the case of any loss, damage or exceeding the delivery time agreed upon. Thus, the COTIF/CIM does not directly require paying both the increased freightage and the surcharge sum against the freightage. If a declaration of interest in delivery of the goods is made, then, besides indemnities predicted in Articles 30, 32 and 33 of the CIM, it is possible to demand compensation for additional damage proved, up to the amount of the declared sum. It is necessary to highlight that the eligible party is obliged to prove the damage occasioned, thus the claim to a higher indemnity is not made automatically. If the consignment note is lost, then the shipper must prove that they have recorded a calculated amount of their special interest in delivery of the goods, in the note. Pursuant to Article 44 Paragraph 5 of the CIM the burden of proof, i.e., the obligation to prove the consignment note is missing or lost, lies on the shipper.

5 Conclusions

The goal of the paper was to analyse the current trends in the area of maritime transport in the context of their importance, while achieving global sustainability of international transport, and comparing the found state to needs and requirements of the practice, to constructively formulate recommendations in the area of a further orientation of the research, so there occurs a synergic effect of the theory and the practice for the sake of achieving a sustainable development of

the society in a long-term horizon. By employing the bibliometric analysis to identify trends, it was observed that the issue of legal regulations stands out as a current trend in the field of international transport studies. However, in comparison to other identified trends, it forms a relatively disjointed cluster, encompassing categories not classified elsewhere. Consequently, it can be asserted that, despite the practical significance, the specialized interest in consignment delivery lacks attention in the scientific literature. The intent of the collective authorship of this article was to address this gap and contribute to the existing body of knowledge.

The primary source of complications in international goods carriage lies in the fact that the relationships involved extend beyond the borders of a single state, introducing an element connected to another state. This “international element” shifts the regulation of goods carriage from domestic legal systems to the realm of international law. The imperative to coordinate, integrate, and unify principles governing international carriage is not a novel concern. Despite the significant disparities in the original sources of private law, regulating carriage between countries, with continental and Anglo-American legal systems, the international unification process in the field of carriage can be deemed successful. The international carriage of goods belongs to the most unified areas from the normative aspect. It must, however, be stated that one must remain critical in evaluation of individual conventions and treaties and one must not settle for their current form, since definitely they are not the perfect tools for the regulation of complex processes, accompanying the international carriage of goods. When we look at the carriage of goods in different parts of the world, we can see noticeable differences. While the carriage by sea is still dominant

world-wide, while within the European Union the carriage by road is the number one. However, there exist certain characteristics or concepts, which are identical, despite the efforts to specialise individual contracts of carriage across the entire typological sector of the carriage. An effective application of rules regulating the carriers’ liability is one of the pillars the entire structure of carriage law depends on. The liability of the carrier for destroying, loss, damage or delay, is perhaps the most pressing problem not only from the point of view of the customer, but of the carrier themselves, as well. There, in the analysis of the legislation, the primary aim was to find out the group of issues, which can be resolved generally, regardless of particularities of individual systems of law and types of carriage. Costs of carriage represent one of the most significant expense items of business entities. The higher these costs are, the more they are reflected, either into a decreased profit of businessmen, or into increased consumer prices, which under standard conditions naturally evokes a fall of demand for such goods of a higher price.

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Conflicts of interest

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References

- [1] RODRIGUEZ, S. Maritime accidents affect the environment. *Cognitive Sustainability* [online]. 2023, **2**(3). ISSN 2939-5240. Available from: <https://doi.org/10.55343/cogsust.69>
- [2] FILINA-DAWIDOWICZ, L., STANKIEWICZ, S., CIZIUNIENE, K., MATIJOSIUS, J. Factors influencing intermodal transport efficiency and sustainability. *Cognitive Sustainability* [online]. 2023, **1**(1). ISSN 2939-5240. Available from: <https://doi.org/10.55343/cogsust.9>
- [3] TSOLOEV, T. S., BOGATYREV, A. Z., ISAKOV, A. R., NAHUSHEVA, I. R. Review the responsibilities of international shipping companies for the international carriage of goods by sea. *Journal of Organizational Behavior Research*. 2018, **3**(1), p. 330-342. ISSN 2528-9705.
- [4] OLAH, J., SADAF, R., MATE, D., POPP, J. The Influence of the management success factors of logistics service providers on firms’ competitiveness. *Polish Journal of Management Studies* [online]. 2018, **17**(1), p. 175-193. ISSN 2081-7452. Available from: <https://doi.org/10.17512/pjms.2018.17.1.15>
- [5] DESOMBRE, E. R. Globalization, competition, and convergence: shipping and the race to the middle. *Global Governance* [online]. 2008, **14**(2), p. 179-198. ISSN 1075-2846, eISSN 1942-6720. Available from: <https://doi.org/10.1163/19426720-01402005>
- [6] HANDRLICA, J. The Rijeka draft of a convention on the liability of operators of nuclear ships: a very late requiem. *Collected papers of the Law Faculty of the University of Rijeka / Zbornik Pravnog Fakulteta Sveucilista U Rijeci* [online]. 2019, **40**(3), p. 1153-1173. ISSN 1330-349X, eISSN 1846-8314. Available from: <https://doi.org/10.30925/zpfsr.40.3.8>

- [7] YANG, Y., LAN, Q., LIU, P., MA, L. Insurance as a market mechanism in managing regional environmental and safety risks. *Resources Conservation and Recycling* [online]. 2017, **124**, p. 62-66. ISSN 0921-3449, eISSN 1879-0658. Available from: <https://doi.org/10.1016/j.resconrec.2017.04.004>
- [8] SUKALOVA, V., CENIGA, P. Customer protection in the field of life insurance. In: 2017 7th ESE International Conference on Sports, Health and Management ESE-SHM 2017: proceedings [online]. Vol. 3. 2017. p. 17-22. Available from: <https://doi.org/10.26602/lnms.2017.73.17>
- [9] STORKERSEN, K., THORVALDSEN, T., KONGSVIK, T., DEKKER, S. How deregulation can become overregulation: an empirical study into the growth of internal bureaucracy when governments take a step back. *Safety Science* [online]. 2020, **128**, 104772. ISSN 0925-7535, eISSN 1879-1042. Available from: <https://doi.org/10.1016/j.ssci.2020.104772>
- [10] LINH, D. T. M. Civil liability for marine oil pollution damage in the BRICS countries. *BRICS Law Journal* [online]. 2020, **7**(3), p. 29-51. ISSN 2409-9058, eISSN 2412-2343. Available from: <https://doi.org/10.21684/2412-2343-2020-7-3-29-51>
- [11] FABRIZ, D. C., QUIROGA OBREGON, M. F. The fundamental duty for the protection of the marine environment as a consequence of maritime and port breach. *Quaestio Iuris* [online]. 2018, **11**(2), p. 1287-1301. eISSN 1516-0351. Available from: <https://doi.org/10.12957/rqi.2018.23494>
- [12] NAEVESTAD, T.-O., STORKERSEN, K. V., PHILLIPS, R. O. Procedure negligence in coastal cargo: What can be done to reduce the gap between formal and informal aspects of safety? *Safety* [online]. 2018, **4**(3), 34. eISSN 2313-576X. Available from: <https://doi.org/10.3390/safety4030034>
- [13] KADHUM, M., HASSAN, K. H. Basis of the land transporter's liability. *Journal of Organizational Behavior Research*. 2019, **4**(1), p. 89-103. ISSN 2528-9705.
- [14] LIZBETINOVA, L. The quality of communication in the context of regional development. *DETEUROPE - the Central European Journal of Regional Development and Tourism*. 2014, **6**(3), p. 22-38. ISSN 1821-2506.
- [15] LIZBETINOVA, L., STARCHON, P., LORINCOVA, S., WEBEROVA, D., PRUSA, P. Application of cluster analysis in marketing communications in small and medium-sized enterprises: an empirical study in the Slovak Republic. *Sustainability* [online]. 2019, **11**(8), 2302. eISSN 2071-1050. Available from: <https://doi.org/10.3390/su11082302>
- [16] POPADIC, I., BOROCKI, J., RADISIC, M., STEFANIC, I., DUSPARA, L. The challenges while measuring enterprise innovative activities - the case from a developing country. *Tehnicki Vjesnik-Technical Gazette* [online]. 2018, **25**, p. 452-459. ISSN 1330-3651, eISSN 1848-6339. Available from: <https://doi.org/10.17559/TV-20180507100421>
- [17] GAJANOVA, L., NADANYIOVA, M. Specifics in brand value sources of customers in the banking industry from the psychographic point of view. *Central European Business Review* [online]. 2020, **9**(2), p. 1-18. ISSN 1805-4854, eISSN 1805-4862. Available from: <https://doi.org/10.18267/j.cebr.232>
- [18] KRIZANOVA, A., GAJANOVA, L., NADANYIOVA, M. Design of a CRM level and performance measurement model. *Sustainability* [online]. 2019, **10**(7), 2567. eISSN 2071-1050. Available from: <https://doi.org/10.3390/su10072567>
- [19] STOPKA, O., CHOVANCOVA, M., LIZBETIN, J., KLAPITA, V. Proposal for optimization of the inventory level using the appropriate method for its procurement. *Nase More* [online]. 2016, **63**(3), p. 195-199. ISSN 0469-6255, eISSN 1848-6320. Available from: <https://doi.org/10.17818/NM/2016/SI22>
- [20] STOPKA, O., KAMPF, R., KOLAR, J., KUBASAKOVA, I. Identification of appropriate methods for allocation tasks of logistics objects in a certain area. *Nase More*. 2014, **61**(1-2), p. 1-6. ISSN 0469-6255, eISSN 1848-6320.
- [21] GROBARCIKOVA, A., SOSEDOVA, J. Carrier's liability under the international conventions for the carriage of goods by sea. *Transport Problems*. 2014, **9**(3), p. 75-82. ISSN 1896-0596, eISSN 2300-861X.