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# Trends and Topics on Trade and Transport – Research on Early Modern Logistics during the 2000s

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## Abstract

This article surveys international discussions of early modern maritime history appearing in major journals in economic, business, transport and maritime history. It analyses which topics were discussed or ignored, and suggests reasons for this. The article moreover aims to find out why Nordic scholars have shown a particular interest in the history of early modern trade and transport. We argue that although maritime history as a whole and early modern maritime history in particular may be considered niche areas, there is nevertheless lively discussion and streams of research ongoing in these fields. To a certain extent there has been a reawakening due to the opportunities for better access to sources afforded by digital history, thereby generating new interest in maritime history topics.

## Introduction

Trade and transport have traditionally been among the most debated topics in Nordic economic history. Between 1953 and 1989, the leading Nordic journal in the field, *Scandinavian Economic History Review* (SEHR), published no less than 79 articles on international trade and transport, amounting to over one quarter of all content published in the journal. Thereafter, the share of these topics declined. However, during the last decade or so, articles on trade and transport have made a comeback.<sup>1</sup> This renewed attention concentrates notably on the early modern era.

The same phenomenon of increasing scholarly interest in early modern trade and transport is also discernible more generally in international research. As Figure 1 shows, the annual number of articles on early modern trade and transport in a selection of journals in the fields of economic, business, transport and maritime history was relatively low throughout the 2000s: roughly 10 to 20 articles per year, which is less than 6 percent of published items in these journals during the time period. The annual variation in the number of articles is high, therefore the total numbers are shown as a three-year moving average which reflects an increasing trend in the figure. This resembles the phenomenon reported earlier in the case of SEHR: early modern trade and transport has recently become a more appealing topic for researchers.

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<sup>1</sup> Camilla Brautaset and Jari Ojala, “Research on international trade and transport – a generational shift?” *Scandinavian Economic History Review* 66, no. 3 (2018): 223-225.

Why, then, are researchers interested in early modern trade and transport? What topics and discussions are especially prominent in these publications? This article aims to answer these questions.

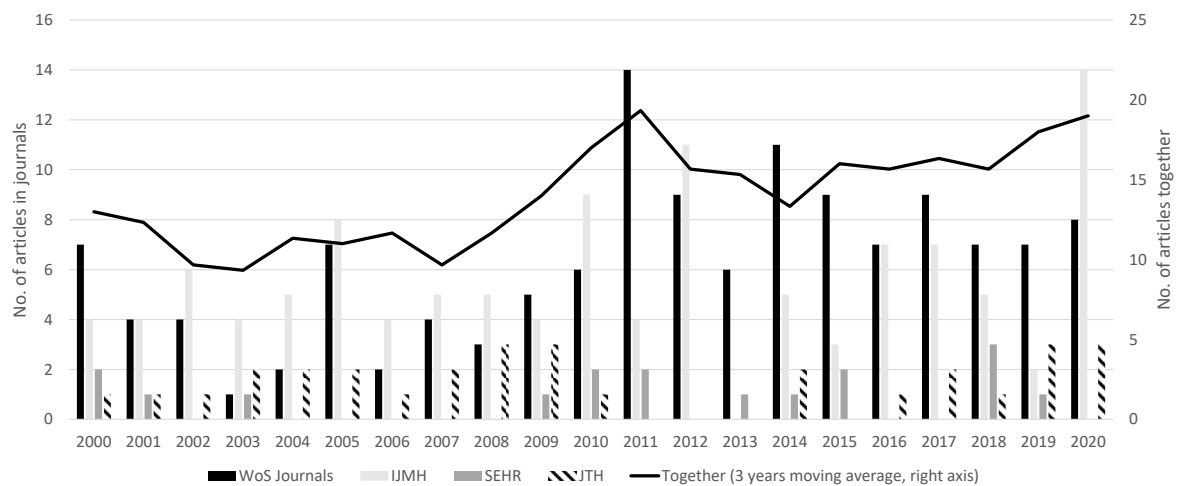


Figure 1. Number of articles dealing with early modern trade and transport in major economic, business, maritime and transport history journals 2000 – 2020

Source: Database compiled by the authors using data acquired from the Web of Science (WoS) and the Journals' Web pages. Note: JTP = *Journal of Transport History*; SEHR = *Scandinavian Economic History*; IJMH = *International Journal of Maritime History*.

The current trends in maritime history research in general and in the research on early modern maritime history in particular have been discussed recently by numerous scholars.<sup>2</sup> Jari Ojala and Stig Tenold have shown that maritime history as a field has grown substantially in recent decades, not only as reflected in the dedicated journal *International Journal of Maritime History* (IJMH), but also in other journals, monographs and anthologies (see, for example, the book series *Brill Studies in Maritime History* and the renewed *Research in Maritime History*, also journals like *Révue d'Histoire Maritime*, *Tijdschrift voor Zeegeschiedenis*, *The Great Circle* and *Mariner's Mirror*).<sup>3</sup> However, maritime history research in recent decades has focused on the developments of this industry during and after the 19<sup>th</sup> century: over 60 percent of the articles published in IJMH during its first two decades in existence, since 1989, have dealt with the 19<sup>th</sup> and 20<sup>th</sup> centuries. Roughly one third of the articles analysing the Baltic trades, however, dealt with 18<sup>th</sup> century developments.<sup>4</sup>

The research on early modern trade and shipping has focused especially on European empires and overseas territories, global trade – even though the bulk of the trade and shipping was

<sup>2</sup> See, for example, Gelina Harlaftis, “Maritime History: A new version of the old version and the true history of the sea,” *International Journal of Maritime History* 32 no. 2 (2020): 383-402.

<sup>3</sup> Jari Ojala and Stig Tenold, “What is Maritime History? A Content and Contributor Analysis of the *International Journal of Maritime History*, 1989–2012,” *International Journal of Maritime History* 25, no. 2 (2013): 17-34 and Jari Ojala and Stig Tenold, “Maritime history: A health check,” *International Journal of Maritime History* 29, no. 2 (2017): 344-354.

<sup>4</sup> Ojala and Tenold, “What is Maritime History”.

centred on Europe. Klas Rönnbäck and Leos Müller have emphasised that even in Swedish historiography a lot of attention has been paid to Asian trade, notably the history of the Swedish East India Company, although its importance for the Swedish economy at the time was perhaps not extensive.<sup>5</sup> Moreover, following the seminal work of Eli F. Heckscher<sup>6</sup>, several studies have appeared during the last few decades addressing the role of Swedish trade and shipping during the French Revolutionary and Napoleonic Wars, focusing on the neutrality of shipping in particular.<sup>7</sup> The focus shifted towards intra-European trade especially after the introduction of the *Sound Toll Registers Online* (STRO) compilation.<sup>8</sup> The importance of the Baltic Sea in European trade and shipping is, of course, a topic that has traditionally attracted significant attention. The centuries-long significant grain exports from ports like Danzig and Königsberg has led to the Baltic trade becoming known in Dutch - and by extension European - historiography as the “mother of all trades”.<sup>9</sup> Further, the importance of Baltic trade has also been emphasised in Nordic historiography.<sup>10</sup>

In the following discussion of the trends and topics in current research on early modern trade and transport we will first introduce our data and methods for analysing selected major journals which covered the field, mainly for the first two decades of the 2000s. This is followed by analysing how and to what extent the subject is addressed by first conducting some bibliometric exercises and thereafter content analysis using some specific methods of digital humanities in a very basic format. We hope to use this information to present lacunae in our knowledge of early modern logistics as a whole.

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<sup>5</sup> Klas Rönnbäck and Leos Müller, “Swedish East India trade in a value-added analysis, c. 1730–1800,” *Scandinavian Economic History Review* 70, no. 1 (2020): 1-18.

<sup>6</sup> Eli F. Heckscher, E.F., *The Continental System: An Economic Interpretation* (Oxford: Clarendon Press; London: Humphrey Milford, 1922).

<sup>7</sup> See, for example, Leos Müller, *Consuls, Corsairs and Commerce: The Swedish Consular Service and Long-Distance Shipping, 1720-1815* (Uppsala: Acta Universitatis Upsaliensis, 2004); Leos Müller, “The forgotten age of Swedish shipping: The eighteenth century,” *International Journal of Maritime History* 24, no. 2 (2012): 1-18; Koen Stapelbroek (ed.), *Trade and War. The Neutrality of Commerce in the Inter-State System* (Helsinki: Helsinki Collegium for Advanced Studies, 2011); Jari Eloranta, Eric Golson, Peter Hedberg and Maria Cristina Moreira (eds.), *Small and Medium Powers in Global History. Trade, Conflicts, and Neutrality from the 18th to the 20th Centuries* (Abingdon: Routledge, 2019).

<sup>8</sup> Werner Scheltjens and Jan Willem Veluwenkamp, “Sound Toll Registers online: Introduction and first research examples,” *International Journal of Maritime History* 24, no. 1 (2012): 301-330.

<sup>9</sup> Mila Van Tielhof, *The ‘mother of all trades’: The Baltic grain trade in Amsterdam from the late 16<sup>th</sup> to the early 19<sup>th</sup> century* (Leiden: Brill, 2002). - The term ‘mother of all trades’, or in Dutch ‘moedernegotie’, dates back to the seventeenth century. As Lindblad has pointed out, the term was first coined by the Dutch Grand Pensionary Johann De Witt in 1671. See: JanThomas Lindblad, “Nederland en de Oostzee”, in *Goud uit Graan: Nederland en het Oostzeegebied, 1600-1850*, edited by Remmelt Daalder et al. (Zwolle: Waanders Uitgevers, 1998), 8-27.

<sup>10</sup> Sven-Erik Åström, *From Stockholm to St. Petersburg: commercial factors in the political relations between England and Sweden 1675-1700* (Helsinki: Suomen Historiallinen Seura, 1962); Sven-Erik Åström, *From cloth to iron: the Anglo-Baltic trade in the late seventeenth century* (Helsinki: Suomen Historiallinen Seura, 1963); Staffan Högberg, *Utrikeshandel och sjöfart på 1700-talet. Stapelvaror I svensk export och import 1738–1808* (Lund: Bonniers, 1969); Stefan Carlén, *Staten som marknadens salt: en studie i institutionsbildning, kollektivt handlande och tidig välfärdspolitik på en strategisk varumarknad i övergången mellan merkantilism och liberalism 1720–1862* (Stockholm: University of Stockholm, 1997); Chris Evans and Göran Rydén, *Baltic iron in the Atlantic world in the eighteenth century* (Leiden: Brill, 2007).

## Method and Data

This article combines a literature review with bibliometric analysis and methods of digital humanities. Bibliometric analysis differs from conventional literature review in that it takes into account all items published in a given publishing channel namely, journals.<sup>11</sup> Similar analysis with books is more difficult due to the lack of ready-made databases.<sup>12</sup> The fact that most bibliometric analyses concentrate on journal articles rather than books creates a bias, especially in humanities and social sciences, in which the bulk of publications are in book format (monographs or anthologies). This is evident especially in the case of citation counts and with small fields like maritime and transport history, simply because the field does not have sufficient critical mass to accumulate large numbers of citations<sup>13</sup>.

We accept this limitation, although the number of articles analysed in this particular article is high enough (N=348) to enable at least preliminary conclusions. Moreover, we can compare these topical articles to all the articles in our corpus (N=5,304) found in our selection of journals and, thus, discuss in more detail the role of early modern trade and transport as published topics. In addition to the citation impacts typical for bibliometric analysis we also analyse three other relevant journals that are not included in Web of Science (WoS)-ranked journal databases providing these metrics. Therefore, this article is based on a database compiled by the authors using a total of 12 journals, largely sourced directly from the Web of Science (WoS) Social Science Index database and elsewhere.<sup>14</sup>

The data collected consist solely of articles written in English and this undoubtedly affects our results. Moreover, the data compiled from the WoS journals and *Journal of Transport History* (JTH) only dates from the 2000s (2000 - May 2021). However, data from the *Scandinavian Economic History Review* (SEHR, 1953 - May 2021) and the *International Journal of Maritime History* (IJMH, 1989 - May 2021) spans the entire history of these journals. Where appropriate we use these extended databases for SEHR and IJMH although

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<sup>11</sup> Gianfranco Di Vaio, Daniel Waldenström and Jacob Weisdorf, "Citation success: Evidence from economic history journal publications," *Explorations in Economic History* 49, no. 1 (2012): 92-104; Jari Ojala, Jari Eloranta, Anu Ojala and Heli Valtonen, "Let the best story win—evaluation of the most cited business history articles," *Management & Organizational History* 12, no. 4 (2017): 305-333.

<sup>12</sup> For an attempt to include books in bibliometric analysis on historical research see, e.g. Juha-Antti Lamberg, Jari Ojala and Jan-Peter Gustafsson, "Strategy and business history rejoined: How and why strategic management concepts took over business history," *Business History* (2020): 1-29 (on line: <https://doi.org/10.1080/00076791.2020.1856076>).

<sup>13</sup> Alesia Zuccala, Ralf Guns, Roberto Cornacchia and Bod Rens, "Can we rank scholarly book publishers? A bibliometric experiment with the field of history," *Journal of the Association for Information Science and Technology* 66, no. 7 (2015): 1333-1347; Jari Ojala, Jari Eloranta, Anu Ojala and Heli Valtonen, "Let the best story win—evaluation of the most cited business history articles," *Management & Organizational History* 12, no. 4 (2017): 305-333; Ojala and Tenold, "Maritime history", 344-354.

<sup>14</sup> For most of the journals, the basic information on the articles was taken directly from the WoS database (*Journal of Economic History*, *Economic History Review*, *Business History*, *European Review of Economic History*, *Business History Review*, *Cliometrica*, *Explorations in Economic History*, *Enterprise & Society*, *Financial History Review*), and for those journals that are not included in the WoS Social Science Index, the information on the articles was collected from various (available) locations (*Journal of Transport History*, *Scandinavian Economic History Review*, *International Journal of Maritime History*).

we mainly concentrate on analysing developments during the first two decades of the third millennium.

For the present purposes, we have separated articles dealing with issues of early modern trade and transport from other articles. Relevant articles were on topics related to transport or (commodity) trade issues in the period roughly between 1600 and 1850. Apart from the basic information regarding these articles (e.g., on authors, titles, publishers, years of publication etc.), our database also includes further information on the contents of these articles. Accordingly, the research topics, essential arguments and broader historiographical frameworks of the articles were specified in a qualitative manner. Information on the time period and geographical area addressed in the articles was also added to the database. Further, it is specify whether the nature of transport discussed is inland or maritime. This data is used for the descriptive quantitative analysis of how and to what extent early modern trade and transport are dealt within the journals.

Our database is used in two complementary ways. On the one hand, our analysis focuses on the bibliographical information, keywords and metadata about each of the articles. On the other hand, we have experimented with an online tool for their quantitative content analysis and for visualization of texts, called *Voyant Tools*<sup>15</sup>. We used a corpus of abstracts from the articles in our selection of economic and business history journals to determine if any additional insights could be obtained in this way.

## Descriptive bibliometric analysis

### *Frequency and topics*

Although trade and transport form classic topics in economic historical research, only a handful of articles in the major journals deal with the issues of *early modern* trade and transport. Our findings show that roughly 5 percent of the articles in major economic history journals discuss the topics of early modern trade and transport, whereas this share is notably lower in business history journals (see Table 1 and Figure 1). The share of these topics is 18 percent in IJMH, and 6 percent in SEHR. Even though the number of early modern maritime history articles per journal is relatively low and annual variation is high, a clear rising overall trend is apparent in the three-year moving average in Figure 1: the number of these articles was roughly ten per year in the early 2000s and this number doubled by the early 2020s. One must note, however, that the overall quantity of published matter in this selection of journals increased during the 2010s when compared to the preceding decade.

*Table 1. Summary statistics on articles dealing with early modern trade and transport in major economic, business, transport and maritime history journals 2000 - 2021 (May)*

Journal (ABBREVIATION)	N all articles	N Early modern trade & transport	% early modern trade & transport
Business History (BH)	999	16	1.6 %

<sup>15</sup> Stéfan Sinclair and Geoffrey Rockwell, *Voyant Tools*. Web. <http://voyant-tools.org/> (2016).

Business History Review (BHR)	323	9	2.8 %
Cliometrica (CLIO)	220	4	1.8 %
Economic History Review (EHR)	755	34	4.5 %
Enterprise & Society (E&S)	410	5	1.2 %
European Review of Economic History (EREH)	329	15	4.6 %
Explorations in Economic History (EEH)	549	20	3.6 %
Financial History Review (FHR)	102	2	2.0 %
Journal of Economic History (JEH)	666	33	5.0 %
<b>TOTAL WOS JOURNALS</b>	<b>4,353</b>	<b>138</b>	<b>3.2 %</b>
Scandinavian Economic History Review (SEHR)	294	18	6.1 %
Journal of Transport History (JTP)	304	32	10.5 %
International Journal of Maritime History (IJMH)	657	119	18.1 %
<b>OVERALL TOTAL</b>	<b>5,304</b>	<b>348</b>	<b>5.8 %</b>

Source: Database compiled by the authors using data acquired from the Web of Science and Journals' Web pages.

The topics of early modern trade and transport articles in our sample were divided into rough categories of technology, labour, method/theory and institutions. To a certain extent, these categories might overlap; thus, technology and labour might be analysed in the same article. Our rough categorisation of topics revealed that articles dealing with institutions and technology were the most numerous.

From a technological point of view several scholars have, for example, analysed the speed of maritime transport during the early modern era. Morgan Kelly and Cormac O'Grada show how shipping technology witnessed gradual progress leading to faster sailing speeds in the late 18<sup>th</sup> and early 19<sup>th</sup> century,<sup>16</sup> whereas Klas Rönnbäck shows that the speed of ships increased significantly from the 16<sup>th</sup> century up to the early 19<sup>th</sup> century, potentially contributing to increasing productivity of ocean shipping.<sup>17</sup> Peter Solar and Luc Hens, in turn, claim that copper sheathing was the most important factor in reducing voyage durations for East Indian trade ships, working through two different channels – faster sailing speed and fewer stopovers.<sup>18</sup>

From an institutional perspective, an increasing amount of scholarly interest has recently focused on topics of marine insurance in the early modern era. Christopher Kingston, for

<sup>16</sup> Morgan Kelly and Cormac Ó Gráda, "Speed under sail during the early industrial revolution (c. 1750–1830)," *The Economic History Review*, 72, no. 2 (2019): 459-480.

<sup>17</sup> Klas Rönnbäck, "The speed of ships and shipping productivity in the age of sail," *European Review of Economic History*, 16, no. 4 (2012): 469-489.

<sup>18</sup> Peter Solar and Luc Hens, "Ship speeds during the industrial revolution: East India Company ships, 1770–1828," *European Review of Economic History* 20, no 1 (2016): 66-78.

example, notes that the risks involved in trade gave rise to institutional structures which persist to the present day, and how crises affected the existence of different organisational forms in insurance in the USA at the turn of the 19<sup>th</sup> century.<sup>19</sup> Kingston also studies the development and diffusion of market governance institutions in the marine insurance industry.<sup>20</sup> Jeroen Puttevils and Marc Deloof claim that the early modern insurance premiums reflected the underlying risk that agents were able to determine to effect of different contract parameters,<sup>21</sup> while Robin Pearson and David Richardson analyse relative cost of insurance for British slave traders.<sup>22</sup> Finally, Maria Fusaro and co-workers have concentrated especially on General Average as an institution in shipping insurance over a long period of time.<sup>23</sup>

Among the most debated topics in the research on early modern trade and transport are issues such as market integration and globalisation<sup>24</sup>, maritime labour<sup>25</sup>, and the slave trade<sup>26</sup>. Seamen's wages and earnings have been analysed, for example, from the context of how seamen were not simply wage-workers, but also independent participants in a venture economy<sup>27</sup>, and how low wages were a primary reason for desertion from Nordic vessels<sup>28</sup>. Jelle van Lottum and Jan Luiten van Zanden have shown that the increase in maritime labour productivity during the 18<sup>th</sup> century was based on a larger skilled workforce (in terms of

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<sup>19</sup> Christopher Kingston, "Marine insurance in Britain and America, 1720–1844: a comparative institutional analysis," *The Journal of Economic History* 67, no. 2 (2007): 379-409; Christopher Kingston, "Marine insurance in Philadelphia during the Quasi-War with France, 1795–1801," *The Journal of Economic History* 71, no. 1 (2011): 162-184

<sup>20</sup> Christopher Kingston, "Governance and institutional change in marine insurance, 1350–1850," *European Review of Economic History* 18, no. 1 (2014): 1-18.

<sup>21</sup> Jeroen Puttevils and Marc Deloof Puttevils, "Marketing and pricing risk in marine insurance in sixteenth-century Antwerp," *The Journal of Economic History* 77, no. 3 (2017): 796-837.

<sup>22</sup> Robin Pearson and David Richardson, "Insuring the transatlantic slave trade," *The Journal of Economic History* 79, no. 2 (2019): 417-446.

<sup>23</sup> Maria Fusaro Fusaro, "AveTransRisk-Average-Transaction Costs and Risk Management during the First Globalization (Sixteenth-Eighteenth Centuries)," *Impact*, no. 4 (2018): 36-38; Sabine C. Go, "Shared burdens: The General Average adjustment of the Jan Maria," *International Journal of Maritime History* 33, no. 2 (2021): 322-343.

<sup>24</sup> Giovanni Federico, Max-Stephan Schulze and Oliver Volckart, "European goods market integration in the very long run: from the Black Death to the First World War," *The Journal of Economic History* 81, no. 1 (2021): 276-308; Pim De Zwart, "Globalization in the early modern era: new evidence from the Dutch-Asiatic trade, c. 1600–1800," *The Journal of Economic History* 76, no. 2 (2016): 520-558; Maria Fusaro, "Cooperating mercantile networks in the early modern Mediterranean," *The Economic History Review* 65, no. 2 (2012): 701-718.

<sup>25</sup> Richard J. Blakemore, "Pieces of eight, pieces of eight: seamen's earnings and the venture economy of early modern seafaring," *The Economic History Review* 70, no. 4 (2017): 1153-1184; Jelle van Lottum and Jan Luiten van Zanden, "Labour productivity and human capital in the European maritime sector of the eighteenth century," *Explorations in Economic History* 53 (2014): 83-100; Jari Ojala, Jaakko Pehkonen and Jari Eloranta, "Deskilling and decline in skill premium during the age of sail: Swedish and Finnish seamen, 1751–1913," *Explorations in Economic History*, 61 (2016): 85-94.

<sup>26</sup> E.g. Angus Dalrymple-Smith and Ewout Frankema "Slave ship provisioning in the long 18th century. A boost to West African commercial agriculture?" *European Review of Economic History* 21, no. 2 (2017): 185-235.

<sup>27</sup> Blakemore, "Pieces of eight".

<sup>28</sup> Jari Ojala and Jaakko Pehkonen, "Not Only for Money: An Analysis of Seamen's Desertion in Nineteenth-Century Finland," *International Journal of Maritime History*, 18, no. 1 (2006): 25-54 and Jari Ojala, Jaakko Pehkonen and Jari Eloranta "Desertions in nineteenth-century shipping: modelling quit behaviour," *European Review of Economic History*, 17, no. 1 (2013): 122-140.

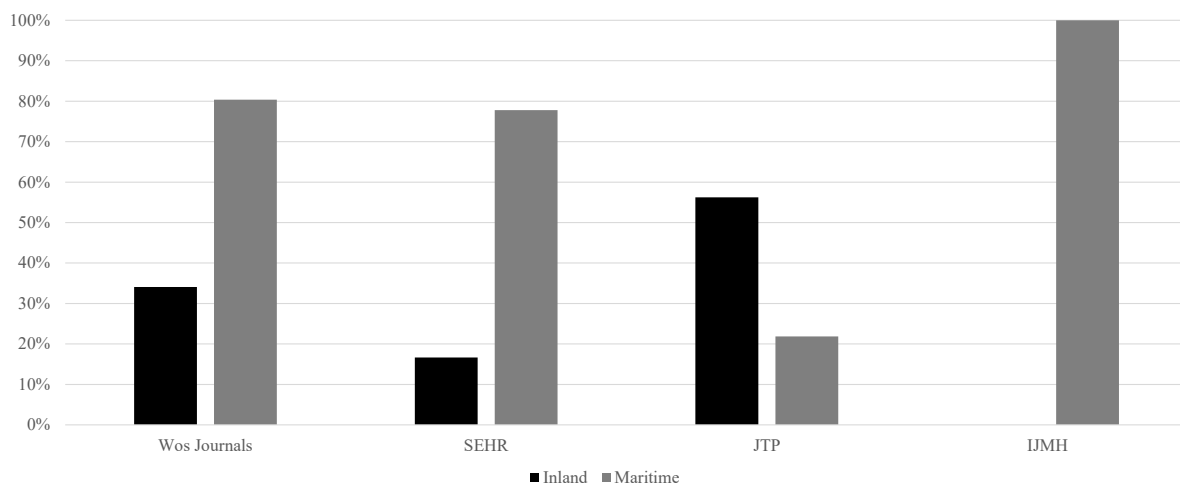


numeracy and literacy)<sup>29</sup>, whereas Ojala & al. have argued for a deskilling trend in shipping under sail from the late 18<sup>th</sup> century to the First World War<sup>30</sup>.

### ***Maritime or Inland Trade?***

One of our major targets was to work out whether early modern logistics are analysed as a combination of both maritime and inland trade and transport, or whether the maritime and inland worlds are (still) mainly separated. Articles that analyse *both* inland and maritime trade are rare – these tend to include papers discussing economic developments, such as market integration at a more general level<sup>31</sup>, but do not analyse e.g. trade and transport networks in detail. Some articles, however, analyse the impact of international trade on local development<sup>32</sup>, or local operators (such as banks) in international businesses<sup>33</sup>.

Figure 2 summarises the shares of inland and maritime trade and transport articles in our selection of journals. This figure clearly shows that maritime trade and transport dominate the discussions in international journals; only one tenth of the articles addressed inland trade and transport. Obviously, all the articles in IJMH analysed maritime trade and transport, whereas in JTH inland trade and transport predominated. Both WoS-ranked journals and SEHR contained a majority of articles on maritime trade and transport during the early modern era.



*Figure 2. Inland and maritime topics in articles dealing with early modern trade and transport in the selected journals, 2000 – 2021 (May)*

<sup>29</sup> van Lottum and van Zanden, “Labour productivity”.

<sup>30</sup> Ojala, Pehkonen and Eloranta, “Deskilling”.

<sup>31</sup> E.g., Şevket Pamuk and Jeffrey G. Williamson “Ottoman de-industrialization, 1800–1913: assessing the magnitude, impact, and response,” *The Economic History Review*, 64, no. S1 (2011): 159-184; Paul Sharp and Jacob Weisdorf, “Globalization revisited: Market integration and the wheat trade between North America and Britain from the eighteenth century,” *Explorations in Economic History* 50, no. 1 (2013): 88-98.

<sup>32</sup> E.g., Jon Stobart, “Making the global local? Overseas goods in English rural shops, c. 1600–1760,” *Business History* 59, no. 7 (2017): 1136-1153; Anne E. McCants, “Poor consumers as global consumers: the diffusion of tea and coffee drinking in the eighteenth century,” *The Economic History Review* 61, no. S1 (2008): 172-200.

<sup>33</sup> E.g., Manuel Llorca-Jaña, “Shaping globalization: London's merchant bankers in the early nineteenth century,” *Business History Review*, 88, no. 3 (2014): 469-495.

Source: Database compiled by the authors. The data were acquired from the Web of Science and Journals' Web pages.

The focus of early modern transport has, thus, been on international shipping, although there are some recent studies on overland transports, Dan Bogart and his co-authors have been especially active in this subject area<sup>34</sup>. There is also a growing interest in studying canal networks<sup>35</sup>, and coastal *cabotage* shipping<sup>36</sup>. Moreover, some of the articles focusing more on inland transport sometimes use maritime sources, like the article by Charles W. Calomiris and Jonathan B. Pritchett that uses ship manifests carrying slaves for sale in New Orleans to study traders' incentives and pricing of slaves<sup>37</sup>.

### ***Target areas and periods***

Researchers studying the topics of trade and transport in different countries have concentrated their research on time periods that are especially relevant for their respective national histories. As Ojala and Tenold state in their analysis of articles published in *IJMH*<sup>38</sup>:

...the time span of the articles demonstrates that there has been a tendency to concentrate primarily on the 'glorious' periods of their national fleets. The most common time frame for Dutch authors, for example, was from the late seventeenth to the turn of the nineteenth century, with a main focus on politics and business, while for Norwegian scholars the twentieth century was the most frequently covered.

Such a trend is also discernible in the early modern trade and transport articles analysed in this article: those areas and countries that dominated trade at the time are especially

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<sup>34</sup> Dan Bogart, "Turnpike trusts and the transportation revolution in 18th century England," *Explorations in Economic History* 42, no. 4 (2005): 479-508; Dan Bogart, "Did turnpike trusts increase transportation investment in eighteenth-century England?" *The Journal of Economic History*, 65, no. 2 (2005): 439-468; Dan Bogart "Investing in early public works: financial risks and returns in English and Welsh turnpikes, 1820-82," *The Economic History Review* 72, no. 3 (2019): 848-868; Dan Bogart, "Clio on Speed. A Survey of Economic History Research on Transport", in *Handbook of Cliometrics. Second edition*, edited by Claude Diebolt and Michael Hauptert (Berlin: Springer, 2019), 1453-1478; Dorian Gerhold, "The development of stage coaching and the impact of turnpike roads, 1653-1840," *The Economic History Review* 67, no. 3 (2014): 818-845; Federico Pablo-Martí, Ángel Alañón-Pardo and Angel Sánchez, "Complex networks to understand the past: the case of roads in Bourbon Spain," *Cliometrica* 15, no. 3 (2021): 477-534.

<sup>35</sup> Dan Bogart, "Did the Glorious Revolution contribute to the transport revolution? Evidence from investment in roads and rivers," *The Economic History Review* 64, no. 4 (2011): 1073-1112; Dan Bogart, Michael Lefors and A. E. M. Satchell, "Canal carriers and creative destruction in English transport," *Explorations in Economic History* 71 (2019): 1-24; Peter Maw, Terry Wyke and Alan Kidd, "Canals, rivers, and the industrial city: Manchester's industrial waterfront, 1790-1850," *The Economic History Review* 65, no. 4 (2012): 1495-1523.

<sup>36</sup> Simon Ville, "Total factor productivity in the English shipping industry: the north-east coal trade, 1700-1850," *Economic History Review* 39, no. 3 (1986): 355-370; John Armstrong, "Coastal Shipping: The Neglected Sector of Nineteenth-Century British Transport History," *International Journal of Maritime History* 6, no. 1 (1994): 175-188; John Armstrong (ed.), *Coastal and Short Sea Shipping, Studies in Transport History* (Aldershot: Scolar Press, 1996); John Armstrong and Andreas Kuntz (eds.), *Coastal Shipping and the European Economy 1750 - 1980* (Mainz: Verlag Philipp von Zabern, 2002); Dan Bogart, Oliver Dunn, Eduard E. Alvarez-Palau and Leigh Shaw-Taylor, "Speedier delivery: coastal shipping times and speeds during the Age of Sail," *The Economic History Review* 74, no. 1 (2021): 87-114.

<sup>37</sup> Charles W. Calomiris and Jonathan B. Pritchett, "Preserving Slave Families for Profit: Traders' Incentives and Pricing in the New Orleans Slave Market," *The Journal of Economic History* 69, no. 4 (2009): 986-1011.

<sup>38</sup> Ojala and Tenold, "What is Maritime History", 2013, 27.

emphasised. Table 2 compiles the percentage shares of articles analysing early modern trade and transport in Atlantic and Baltic areas in general, and in the UK and Sweden in particular in our set of journals. Not surprisingly, anglophone countries are emphasised in articles on early modern trade and transport published in WoS-ranked journals. The United Kingdom dominates as the most common target area of analysis both in WoS-ranked journals (27 percent of items), JTH (50 percent), and in IJMH (21 percent). Moreover, there are few articles even in SEHR analysing the British cases (11 percent). The Atlantic area, in turn, is more prominent in articles on early modern trade and transport with roughly half of the cases in both WoS-ranked journals and in IJMH, and almost three-fourths in the case of JTH. Even in SEHR over one fourth of the articles on early modern trade and transport analyse the Atlantic World.

*Table 2. Share of different target areas analysed in early modern trade and transport articles in different journals during the 2000s (percentage shares)*

	WoS	JTP	IJMH	SEHR
Atlantic area	52	72	46	28
Baltic area	4	3	14	56
UK	27	50	21	11
Sweden	1	0	3	33

Source: Database compiled by the authors

Although the majority of the articles focus specifically on Atlantic trade, Mediterranean<sup>39</sup>, Asian<sup>40</sup>, African<sup>41</sup> and Baltic<sup>42</sup> trade has gained more attention recently.

Similarly unsurprisingly, the Baltic Sea (56 percent) and Sweden (33 percent) predominate as target areas in the articles published in SEHR on early modern trade and transport topics. In WoS-ranked journals the Baltic Sea region as a whole is to some extent underrepresented, with a share of only four percent. The same applies to JTH, whereas IJMH does have more

<sup>39</sup> Antonio Iodice and Luisa Piccinno, “Whatever the cost: Grain trade and the Genoese dominating minority in Sicily and Tabarka (16th-18th centuries),” *Business History* (online): 1-19; Fusaro, “Cooperating mercantile”.

<sup>40</sup> David Chilosi and Giovanni Federico “Early globalizations: The integration of Asia in the world economy, 1800–1938,” *Explorations in Economic History* 57 (2015): 1-18; Huw V. Bowen, “‘So Alarming an Evil:’ Smuggling, Pilfering and the English East India Company, 1750–1810,” *International Journal of Maritime History* 14, no. 1 (2002): 1-31.

<sup>41</sup> Dalrymple-Smith and Frankema, “Slave ship”; David Eltis, Frank D. Lewis and Kimberly McIntyre, “Accounting for the traffic in Africans: transport costs on slaving voyages,” *The Journal of Economic History* 70, no. 4 (2010): 940-963.

<sup>42</sup> Dimitrios Theodoridis, Klas Rönnbäck and Werner Scheltjens, “Factor endowments and international trade: a study of land embodied in trade on the Baltic Sea region, 1750–1856,” *European Review of Economic History* 24, no. 4 (2020): 716-735; Fredrik Andersson and Jonas Ljungberg, “Grain market integration in the Baltic sea region in the nineteenth century,” *The Journal of Economic History* 75, no. 3 (2015): 749-790; Chris Evans, Owen Jackson and Göran Rydén, “Baltic iron and the British iron industry in the eighteenth century,” *The Economic History Review* 55, no. 4 (2002): 642-665.

content on Baltic Sea area. Swedish cases, in turn, are analysed only rarely in the anglophone journals.

We also analysed which time period the articles addressed. Quite a few spanned lengthy periods, meaning that even though we defined “early modern” as roughly from the early 17<sup>th</sup> to the mid-19<sup>th</sup> century, a number of articles dealing with medieval era and extending up to the early modern, and even the modern era, cropped up, like Federico & al., analysing market integration in Europe from the Black Death to the First World War<sup>43</sup>, or Li & al. studying market integration in the Ottoman Empire and Europe between 1469 and 1914<sup>44</sup>. The most “popular” time period in early modern trade and transport articles was, nevertheless, the 18<sup>th</sup> century with 91 articles, followed by the 19<sup>th</sup> (69 articles) and the 17<sup>th</sup> century (37 articles).

### *Citation analysis*

What is the impact of the articles dealing with early modern maritime trade and transport? This can be analysed with citations to WoS-ranked journals, but unfortunately not with the three other journals in our sample (SEHR, JTP and IJMH). Table 3 shows that early modern trade and transport articles get more citations overall than articles on average in the WoS-ranked journals used in this study, namely, on average there were ten citations per article in WoS-ranked journals, whereas topics on early modern trade and transport got over 14 citations per article. Interestingly, early modern trade and transport topics tend to get more citations in all journals, with the exception of the *Economic History Review* (EHR) and *Financial History* (FH).

Yet these average numbers are slightly misleading as there is a notable difference between frequently cited articles and the average: the top 10 most-cited articles on early modern topics gained over one third of all citations. However, of all articles in these WoS journals during the time period the top 10 articles only got four percent of all citations. This therefore shows that citations are far more polarized in the case of early modern trade and transport than in the fields analysed in general.

The most cited trade and transport article in our sample, the canonical article on the origins of globalisation by Kevin O’Rourke and Jeffrey Williamson<sup>45</sup>, was also the second most cited article in our whole sample of WoS. The second most cited article in our sample likewise analyses more generally the early origins of globalisation<sup>46</sup>. Four other articles in our sample analysed the effect of international trade on early modern economic growth more generally<sup>47</sup>.

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<sup>43</sup> Federico, Schulze and Volckart, “European goods”.

<sup>44</sup> Zhuo Li, Laura Panza and Yong Song, “The evolution of ottoman–European market linkages, 1469–1914: Evidence from dynamic factor models,” *Explorations in Economic History* 71 (2019): 112-134.

<sup>45</sup> Kevin O’Rourke and Jeffrey G. Williamson, “When did globalisation begin?” *European Review of Economic History* 6, no. 1 (2002): 23-50.

<sup>46</sup> Jan de Vries, “The limits of globalization in the early modern world,” *The Economic History Review* 63, no. 3 (2010): 710-733.

<sup>47</sup> Kevin O’Rourke and Jeffrey G. Williamson, “After Columbus: explaining Europe’s overseas trade boom, 1500–1800,” *The Journal of Economic History* 62, no. 2 (2002): 417-456; David S. Jacks, “What drove 19th century commodity market integration?” *Explorations in Economic History* 43, no. 3 (2006): 383-412; C. Knick Harley and Nicholas N.F. Crafts, “Simulating the two views of the British Industrial Revolution,” *The Journal*

The other top 10 articles focused especially on the infrastructure of trade and transport, such as roads and insurance companies<sup>48</sup> and on the effects of war on international trade<sup>49</sup>.

There are, however, notable differences between (different) journals in citation counts. Articles published in influential economic history journals (EHR, *Journal of Economic History* (JEH), *Explorations in Economic History* (EEH) and *European Review of Economic History* (EREH)) gained more than 80 percent of all citations on early modern trade and transport topics in the WoS sample. The share of business and financial historical journals is roughly over 15 percent. Although we do not have comparable figures for SEHR, JTH or IJMH, we can assume that the citation impact of these three journals definitely does not equal that of the economic history journals, nor that of the business history journals.

Table 3. Citation analysis of articles analysing early modern trade and transport

Journal	All citations (N)	Citations to early modern t&t articles (N)	Citations per article, all	Citations per article, early modern t&t
BH	6,231	155	6.2	9.7
BHR	2,645	134	8.2	14.9
CLIO	1,545	29	7.0	7.3
EHR	9,198	401	12.2	11.8
E&S	2,237	34	5.5	6.8
EREH	4067	385	12.4	25.7
EEH	6,659	293	12.1	14.7
FHR	151	1	1.5	0.5
JEH	10,611	538	15.9	16.3
Total	43,344	1,970	10.0	14.3

Source: Web of Science.

## Content Analysis

This section involves a more detailed content analysis of the articles using digital humanities methods to analyse unstructured text. The following is based on a visual analysis of paper abstracts dealing with early modern trade and transport in eight scientific journals between 2000 and 2021. The number of journals analysed was limited to eight with more content on

*of Economic History* 60, no. 3 (2000): 819-841; David Eltis and Stanley L. Engerman, "The importance of slavery and the slave trade to industrializing Britain," *The journal of economic history* 60, no. 1 (2000): 123-144.

<sup>48</sup> Germá Bel, "Infrastructure and nation building: The regulation and financing of network transportation infrastructures in Spain (1720–2010)," *Business History* 53, no. 5 (2011): 688-705; Bogart, "Turnpike trusts"; Kingston, "Marine insurance".

<sup>49</sup> Silvia Marzagalli, "Establishing transatlantic trade networks in time of war: Bordeaux and the United States, 1793–1815," *Business History Review* 79, no. 4 (2005): 811-844.

early modern trade and transport, namely SEHR, JTH, JEH, Business History (BH), EHR, EREH, EEH and Business History Review (BHR).

The corpus of all abstracts has eight journals with a total word count of 545,081 and 22,188 unique word forms. The 25 most frequently occurring words are unsurprising given the economic and business history focus over certain periods of time, concentrating on markets, growth, firms, industries, capital and finances. These 25 most frequent words are: article (2,463); economic (1,941); century (1,686); new (1,516); market (1,395); growth (1,168); period (1,161); business (1,159); data (1,004); trade (982); history (924); early (923); industry (919); war (904); development (856); using (834); study (825); firms (807); paper (786); time (762); industrial (749); capital (736); evidence (706); financial (705); social (703).

When analysing the same trends in each journal, certain differences emerge. Business historical journals (obviously) focus more on business enterprises and organisations, whilst economic history journals do have a more diverse set of topics. SEHR, in turn, has a higher frequency of national issues (such as names of countries) in the abstracts.

Analysing the abstracts of articles dealing with early modern trade and transport reveals even more interesting differences. This subset contains 8 documents with 27,988 total word counts and 4,794 unique word forms. The longest file contains the abstracts taken from SEHR. In most cases, the vocabulary density is reversely related to the length of the abstracts file. Only JTH has a higher vocabulary density than one would expect given the length of the abstracts file. Interestingly, the abstracts in SEHR also have the highest average number of words per sentence (27.4). On average, each sentence is up to five words longer than in EREH (22.5) and EEH (22.6), but we concede that this permits no significant conclusions.

Looking at the most frequent words in the corpus of abstracts of articles on early modern trade and transport, there are hardly any surprises. The 25 most frequently occurring words in the corpus are: trade (231); century (148); article (106); market (95); economic (81); transport (81); period (74); new (70); slave (59); British (56); eighteenth (56); early (55); long (52); European (51); markets (51); company (50); price (50); east (49); history (47); growth (45); merchants (44); Swedish (44); India (43); data (42); Europe (42). At the same time, this simple word frequency list also provides an indication of the geographical and thematic focus of papers dealing with early modern trade and transport. The focus on the east (49) India (43) company (50), Swedish (44), British (56) and more generally European (51) trade (231) in the eighteenth (56) century (148) seems obvious.

Table 4 summarises the results of comparing distinctive words in trade and transport articles with the corpus of all articles appearing in business history and economic history journals. We see that in all articles (without early modern topics) rather general concepts are more apparent, while in articles on early modern trade and transport even case-oriented concepts are more pronounced. As the number of cases is low, even some individual scholars with several articles on one topic may suffice to increase the topical visibility in this exercise.

In BH and BHR it is apparent that abstracts as a whole address rather general issues such as management, finances, companies, corporations, investments, credits and banks. The abstracts of trade and transport articles tend to be more case-oriented, which may reflect the fact that only a handful of articles in these journals analysed early modern trade and transport.

*Table 4. Most frequently (top-5) used concepts in the abstracts of business and economic history journals (numbers of mentions in parentheses)*

	Top-5 concepts in abstracts without early modern trade and transport	Top-5 concepts in abstracts of articles analysing early modern trade and transport
BH	management (245), financial (238), war (223), firm (180), corporate (173)	dyes (4), shopkeepers (3), ponchos (3), Philadelphia (3), navies (3), Cuban (3)
BHR	industry (106), companies (95), company (80), world (63), corporate (58)	<i>vemen</i> <sup>50</sup> (3), navies (3), Livorno (3), Indies (2), broke (2)
EHR	war (149), inequality (118), women (93), rural (83), historical (83)	turnpike (9), speeds (9), indigo (9), coffee (8), coaches (5), Carolina (5)
EREH	industrial (75), exchange (71), financial (63), bank (62), wage (57)	slave (6), desertion (4), Baltic (4), intercontinental (3), freight (3)
JEH	capital (105), income (98), firms (89), financial (84), production (76)	marine (5), sea (4), privateering (4), tonnages (3), fur (3), enslaved (3)
SEHR	consumption (70), wage (68), wages (58), case (56), firms (55), agricultural (55)	Greenland (12), sailors (7), postage (6), expeditions (5), brass (5)

Similarly, in economic history journals topics other than trade and transport are rather general in nature, such as war and inequality (top concepts in EHR), industrial and exchange (top concepts in EREH), capital and income (top concepts in JEH) and consumption and wages (top concepts in SEHR). In economic history journals the concepts in articles analysing early modern trade and transport are also more case-oriented, such as turnpikes and speed (top concepts in EHR) and slave and desertion (top concepts in EREH). Some more general topical concepts can be found, such as marine and sea (top concepts in JEH) or sailors (among the top concepts in SEHR).

## Conclusions and discussion

This article aimed to analyse how and to what extent scholars have studied early modern trade and transport in the recent literature in the field published in international journals. Despite the obvious weakness of not including material published in book format this preliminary study does, however, provide a good starting point for more exhaustive work to be done in the future.

<sup>50</sup> *Vemen* is the plural of the Dutch word *veem*, which is “(...) a subcategory of warehousing companies specializing in third-party storage of commodities in Dutch seaports.” See: Jeroen Kuilman and Hugo van Driel, “You too, Brutus? Category demise in Rotterdam warehousing, 1871–2011,” *Industrial and Corporate Change* 22, no. 2 (2013): 513.

In spite of a vast amount of historiography in previous decades and even centuries analysing early modern trade and transport, there are at least some signs of a “comeback” of studies on early modern trade during the 2000s. This is attributable to two, partly overlapping reasons. First, new methods and databases have enabled scholars to (re)enter the fields of early modern and especially Baltic trade, most notably thanks to the introduction of the STRO database<sup>51</sup>. Secondly, there has been a growing interest in discussing the early origins of industrialisation. Was there something occurring specifically in (European) economies on the eve of industrialisation that boosted the economy? Recent research has shown that the expansion of international trade and shipping may have played a role in these processes<sup>52</sup>, although, as Robert Allen has noted, perhaps indirectly, by hastening urbanisation<sup>53</sup>. In this way, the importance of maritime transport to early modern economic growth, and thus, to the prelude of industrialisation, remains one of the classic topics of economic history literature.<sup>54</sup>

Little research, however, is available that explores the complex structure of preindustrial combined maritime and overland trade and transport logistics in a scientifically sound manner. In the literature on early modern trade and transport, logistics issues are often recognised, but rarely examined in depth. The distinction between trade and transport on the one hand and logistics on the other may initially seem trivial but is nevertheless significant. To put it bluntly, studies on trade examine the buying and selling of commodities; studies of transport focus on the infrastructure and means of transportation employed to deliver traded goods and commodities to their final destinations. The study of logistics addresses the strategic decisions of both traders and transporters with regard to the storage, packaging, transportation and delivery of goods and is therefore informed by - but not limited to - the study of early modern trade and transport.

We argue that with proper methods we can derive significant knowledge about early modern logistics from the vast body of literature in the field of early modern economy in general and

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<sup>51</sup> Scheltjens and Veluwenkamp, “Sound Toll”; Werner Scheltjens, *Dutch Deltas: Emergence, Functions and Structure of the Low Countries’ Maritime Transport System, ca. 1300-1850* (Leiden: Brill, 2015); Werner Scheltjens, “Tetradas. Dataset of Tonnage Estimates of Trade through the Danish Sound, 1670-1856,” *Vierteljahrschrift für Sozial-und Wirtschaftsgeschichte* 108, no. 3 (2021): 373-394; Jan Willem Veluwenkamp, Werner Scheltjens and Siem Van der Woude, “Sound Toll Registers Online,” *The Low Countries Journal of Social and Economic History* 18, no. 1 (2021): 147-160.

<sup>52</sup> E.g. Alexandra M. de Pleijt and Jan Luiten Van Zanden, “Accounting for the ‘Little Divergence’: What drove economic growth in pre-industrial Europe, 1300–1800?” *European Review of Economic History* 20, no. 4 (2016): 387-409; Patrick O’Brien, “Historiographical traditions and modern imperatives for the restoration of global history,” *Journal of global history* 1, no. 1 (2006): 3-39; Jan de Vries, J., “The industrial revolution and the industrious revolution,” *The Journal of Economic History* 54, no. 2 (1994): 249-270; Jan Luiten Van Zanden and Mila Van Tielhof, “Roots of growth and productivity change in Dutch shipping industry, 1500–1800,” *Explorations in Economic History* 46, no. 4 (2009): 389-403; Klas Rönnbäck, “New and old peripheries: Britain, the Baltic, and the Americas in the Great Divergence,” *Journal of Global History* 5, no. 3 (2010): 373-394.

<sup>53</sup> Robert C. Allen, “Progress and poverty in early modern Europe,” *The Economic History Review* 56, no. 3 (2003): 403-443; Robert C. Allen, *The British industrial revolution in global perspective* (Cambridge: Cambridge University Press, 2009).

<sup>54</sup> Douglass C. North, “Ocean freight rates and economic development 1730-1913,” *The Journal of Economic History* 18, no. 4 (1958): 537-555; Patrick O’Brien, “Mercantilism and Imperialism in the Rise and Decline of the Dutch and British Economies 1585-1815,” *De Economist* 148, no. 4 (2000): 469-501; Richard W. Unger (ed.), *Shipping and economic growth 1350-1850* (Leiden: Brill, 2011).



transport and trade in particular. Elaborating on the methods outlined in this paper, we should be able to extract scattered insights on early modern logistics from a corpus of relevant articles and start developing a framework for early modern logistics based thereon.