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# *The Dutch Republic as Example of Maritime Transport Services Clusters in Preindustrial Europe (ca. 1650-1800)*

## INTRODUCTION

The distribution of commodities across long distances led to the emergence of maritime transport services clusters, i.e. spatially concentrated groups of rural and urban coastal communities within the same region, which specialized in the supply of transport services for the centres of preindustrial European trade. The historiography of local, regional and international trade networks tends to see such clusters as the logical result of the development of commercial networks rather than as a *condition sine qua non* for their emergence.[1] In a similar way, urban and regional historians pay attention to maritime transport only insofar as it provided employment and was part of the city or region's trades and industries.[2] It is, in fact, the history of preindustrial maritime labour, which has given the most significant impulses for research on the careers and employment patterns of sailors and shipmasters, their regions of origin, and the emergence of coastal communities with a primary focus on the maritime business.[3] Van der Woude and Faber, for example, have outlined the existence of a 'reservoir of shipmasters' that accounted for the carrying-trade between Amsterdam and northern/northeastern destinations in their broad social

[1] W. SCHELTJENS, *Dutch Deltas. Emergence, functions and structure of the Low Countries' maritime transport system ca. 1300-1850*, Leiden-Boston 2015, pp. 1-2.

[2] E.g.: R. WILLEMSEN, *Enkhuizen tijdens de Republiek: een economisch-historisch onderzoek naar stad en samenleving van de 16e tot de 19e eeuw*, Hilversum 1988, pp. 91-95.

[3] P. BOON, *Bouwers van de zee: Zeevarenden van het Westfriese platteland, c.1680-1720*, Den Haag 1996, pp. 81-140; K. DAVIDS, *Maritime labour in the Netherlands, 1570-1870*, in "*Those emblems of hell?" European sailors and the maritime labour market, 1570-1870*, P. VAN ROYEN, J. BRUIJN, J. LUCASSEN eds, St. John's 1997, pp. 41-71; R. GORSKI, *Maritime labour. Contributions to the history of work at sea, 1500-2000*, Amsterdam 2007; A. KNOTTER, *De Amsterdamse scheepvaart en het Noordhollandse platteland in de 16de en 17de eeuw. Het probleem van de arbeidsmarkt*, in "Holland", XVI, 1984, pp. 281-290; J. LUCASSEN, *Zeevarenden*, *Maritieme Geschiedenis der Nederlanden*, *Vol. 2: Zeventiende eeuw, van 1585 tot ca. 1680*, in L. AKVELD, S. HART, W.J. VAN HOBOKEN eds, Bussum 1978, pp. 126-158; J. LUCASSEN, *A Multinational and its Labor Force: The Dutch East India Company, 1595-1795*, in "International labor and working-class history", 66, 2004, pp. 12-39; J. VAN LOTTUM, *Accross the North Sea: The impact of the Dutch Republic on international labour migration c. 1550-1850*, Amsterdam 2007, pp. 126-159; P. VAN ROYEN, *Zeevarenden op de koopvaardijvloot omstreeks 1700*, Amsterdam 1987; P.C. VAN ROYEN, *The "National" Maritime Labour Market: Looking for common characteristics*, in *"Those emblems of hell?" European sailors and the maritime labour market, 1570-1870*, P. VAN ROYEN, J. BRUIJN, J. LUCASSEN eds, St. John's 1997, pp. 1-9.; J.L. VAN ZANDEN, *Arbeid tijdens het handelskapitalisme: Opkomst en neergang van de Hollandse economie 1350-1850*, Bergen 1991, pp. 55-74.

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analysis of the rural area North of Amsterdam (Noorderkwartier) and the province of Friesland.[4] The geographical concentration of this 'reservoir' changed in the course of the early modern period from the Noorderkwartier to Friesland around 1650 and Groningen around 1750. Maritime historians have explained this geographical shift as the result of increasing demand for smaller ships in Amsterdam, which were supplied by masters from Friesland and - later - Groningen. Alternatively, Van Zanden has explained this geographical shift in economic terms as the outcome of structural changes in the organisation of labour, arguing that the rise of wage labour opened the door for the development of a services sector as part of the local (rural) economy.[5] To inhabitants of the coastal areas in the Low Countries, where water transportation was a vital part of everyday life in the peat-digging industry, the fisheries or the domestic carrying trade, the supply of maritime transport services was a logical choice.[6]

Although research into the maritime labour market and its spatial dynamics continues to produce valuable insights into this important aspect of the maritime transport sector,[7] the rise and decline of maritime transport services clusters cannot be studied based on maritime labour market analysis alone.[8] Recruitment patterns of seafarers to man the merchant fleet varied with the size of the ship and the routes sailed, and could include the immediate geographical surroundings of the shipmaster (captain) as well as distant places with an excess supply of labour. The geographical shift in the maritime labour market is not identical to that of the location of maritime transport services clusters. So, how can the rise and decline of maritime transport services clusters be explained? Could it be done perhaps in economic terms, as the result of changes in the cost of services or the cost of capital? The cost of services-model would argue that the enduring search for cheaper transportation forced the spatial development of the 'reservoir of shipmasters' from the Noorderkwartier in the sixteenth century to Groningen after 1750. But it cannot explain the presence of cheaper transporters in some ports and their absence in others. The cost of capital-model would assume that investors with their greater financial means would prefer to invest in larger ships than their 'less fortunate' colleagues in Friesland and the Province of Groningen. But it cannot explain why investors from Amsterdam would not invest in smaller ships themselves in order to

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[4] A.M. VAN DER WOUDE, *Het Noorderkwartier: Een regionaal historisch onderzoek in de demografische en economische geschiedenis van westelijk Nederland van de late middeleeuwen tot het begin van de negentiende eeuw*, Wageningen 1972, pp. 362-398; J.A. FABER, *Drie Eeuwen Friesland: Economische en sociale ontwikkelingen van 1500 tot 1800*, Leeuwarden 1973, pp. 264-292. The same line of reasoning can be found in: P. VAN ROYEN, *Zeevarenden*, cit.; J.L. VAN ZANDEN, *Arbeid*, cit.; P. BOON, *Bouwers van de zee*, cit.; M. VAN TIELHOF, *The 'Mother of all Trades': The Batlic Grain Trade in Amsterdam from the Late 16th to the early 19th Century*, Leiden-Boston-Köln 2002.

[5] J.L. VAN ZANDEN, *Arbeid*, cit. 52; J. DE VRIES, *The Dutch Rural Economy in the Golden Age, 1500-1700*, New Haven and London 1974.

[6] W. SCHELTJENS, *Dutch Deltas*, cit. p. 15. Indeed, the sectors in which the division of labour caught on, were not only the agrarian sector and the textile industry, as De Vries seems to suggest. See: J. DE VRIES, *Rural Economy*, cit. pp. 119-174; J.L.VAN ZANDEN, *Arbeid*, cit. pp. 44-46.

[7] E.g. J. VAN LOTTUM, *Across the North Sea*, cit.

[8] The rest of this section is based on W. SCHELTJENS, *Dutch Deltas*, cit. pp. 6-7.

keep the services sector in their own hands. In short, mainstream models do not pay enough attention to the space in which the carrying trade developed. The intimate link between the regional economy and the emergence of international transport services clusters is taken for granted rather than analysed.

## 1. THE 'DUTCH CASE'

A recent case-study on the Dutch maritime transport sector in preindustrial times[9] – further referred to as the 'Dutch case' – has put space back in the front seat, showing that the structure of the regional economy and the size and scope of international trade networks determined the rise and decline of maritime transport services clusters in the Age of Sail.

Before 1400,[10] rural coastal communities were interested for the most part in transporting their local produce to (potential) buyers in nearby centres of trade. Whether they were located directly at the waterfront or further inland, rural coastal communities had a simple social structure, completely centred on their own, local production. Sometimes these communities are depicted with the term *occupational community* to indicate that the entire local society was orientated on one single branch of industry.[11] Such communities – not more than settlements in their earliest form – developed in the Low Countries at places where sea or land offered the possibility to gain an income and thus to survive. Fishing communities were an obvious form of *occupational communities*, but settlements of peat-cutters could also be mentioned. Before 1400, shipmasters in such coastal communities hardly participated in the international goods trade.

Gradually (mostly after 1400), an increase in transport services for estuarine and coastal shipping can be observed in villages where the local production of fish, dairy or peat was the main occupation. A similar rise also occurred in a growing number of urban centres, where the economy was driven by the local production of goods and the development of regional distribution functions.[12] A process of labour division in the local community, facilitated by regional economic development, on one hand, and the rise of international maritime trade, on the other, formed the basis of these developments. In the case of *occupational communities* with an intrinsic transport need, such as the aforementioned fishing communities and settlements in peat-digging areas, the emancipation of the transport function was a logical possible outcome of the division of labour. Paraphrasing De Vries, one could describe this process as the transition from *subsistence* transport, which merely existed for the benefit of the local community, to *commercial* transport, that was not

[9] W. SCHELTJENS, *Dutch Deltas*, cit.

[10] The following sections are a based on *Ibid.*, pp. 27-65; W. SCHELTJENS, *Het ontstaan van een geïntegreerde maritieme transportruimte in de Lage Landen, ca. 1300-1800*, in "Revue belge de la Philologie et d'Histoire", 92, 2014, pp. 293-365.

[11] Based on: A. DE WIT, *Leven, werken en geloven in zeevarende gemeenschappen: Schiedam, Maassluis en Ter Heijde in de zeventiende eeuw*, Amsterdam 2008, p. 15.

[12] Cf. H.J. SMIT, *Het Kamper Pondtolregister van 1439-1441*, in "Economisch-historisch Jaarboek: bijdragen tot de economische geschiedenis van Nederland", 5, 1919, pp. 209-296 there 211-212.

only at the disposal of the local community, but could also be hired by 'third parties'. However, this outcome must not be understood in black-and-white terms. For centuries to come, the professional activities of commercial transporters would still be characterised by *pluriactivité*, or the combination of different income-seeking economic activities in the course of the year.[13]

Due to the emerging economic interaction with the surrounding areas, gradually the rural coastal communities became part of larger societal structures, which in turn facilitated the emergence of new 'central places', striving to confirm their regional dominance in the form of city rights. The emerging 'central places' brought about population growth and the development of a merchant class. For the most part, these merchants employed carriers from their own communities to execute interregional goods trade. However, geographical and technological circumstances allowing (i.e. if they had ships to do so), carriers from surrounding rural communities could participate in the interregional goods trade as well. Thus, rural communities could develop into full-fledged services suppliers.[14]

The period of urban development in the Low Countries in the late Middle Ages was followed by a period of infrastructural development. Cities remained the catalysts for the infrastructural changes. In the course of the sixteenth century, they started to function more and more as *gateways* for information,[15] facilitating the establishment of more complex transport routes, which could be sailed by an increasing number of competing suppliers from the city and its rural surroundings. More and more, information and knowledge about markets and prices (of goods and services), as well as about the supply and quality of transport services, accumulated in cities. The informative function of cities had significant impact on the further evolution of the relationship between cities and rural areas and of the Dutch maritime transport sector. Maritime transporters from rural coastal communities, which had been attracted to cities in the wake of increasing demand for the rural area's produce, now became active on shipping routes, which were no longer linked to their domicile. The ties between trade networks and transport systems loosened and an 'autonomous' maritime transport market started to emerge.

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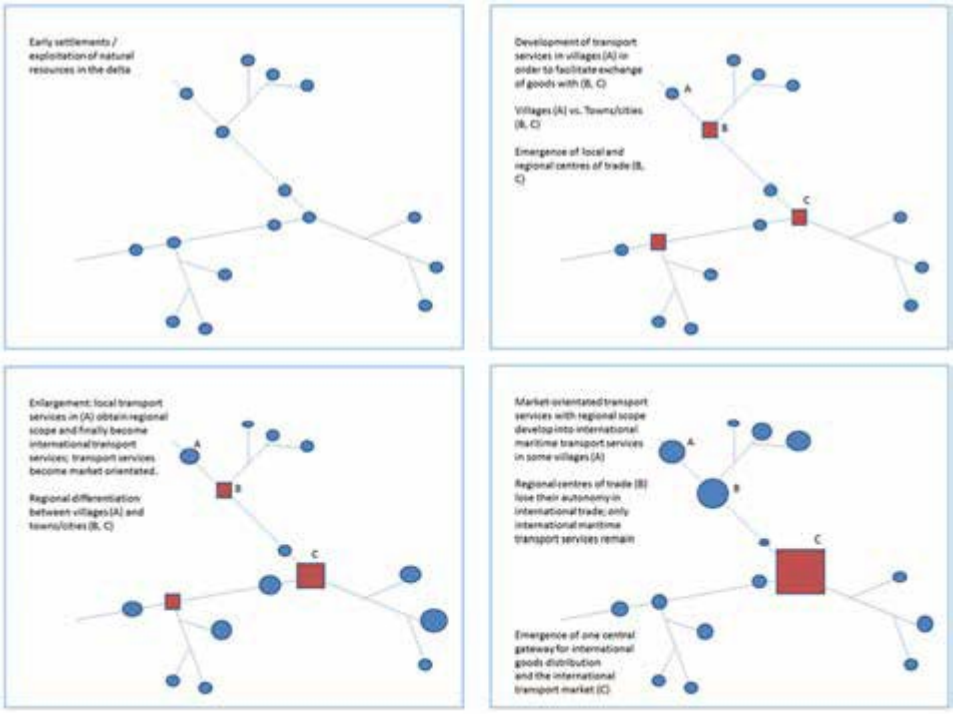
[13] On the notion *pluriactivité* and its meaning in maritime-historical research, see: *Entre terre et mer. Sociétés littorales et pluriactivités (XVe – XXe siècle)*, G. LE BOUËDEC, F. PILOUX, C. CÉRINO, A. GEISTDOERFER eds, Rennes 2004; T. SAUZEAU, *La pluriactivité des marins du long cours au XVIIIe siècle*, in "Annales de Bretagne et des Pays de l'Ouest", 120, 2013, pp. 65-78.

[14] F. KETNER, *Handel en scheepvaart van Amsterdam in de vijftiende eeuw*, Leiden 1946, pp. 97-100.

[15] C. LESGER, *Handel in Amsterdam ten tijde van de Opstand. Kooplieden, commerciële expansie en verandering in de ruimtelijke economie van de Nederlanden ca. 1550-ca. 1630*, Hilversum 2001, pp. 209-249; P. STABEL, *Dwarfs among Giants: the Flemish urban network in the Late Middle Ages*, Leuven-Apeldoorn 1997, pp. 137-175.

Fig. 1. **Model for the emergence of a maritime transport sector**




Based on: W. SCHELTJENS, *Dutch Deltas*, cit., pp. 33, 37, 42 and 51

The period of infrastructural development reached its peak around 1650. Amsterdam and Rotterdam started to dominate the urban relations in the Dutch Republic and "many functions previously executed by the whole urban area" now shifted to these centres.[16] The continuous development of Amsterdam and later Rotterdam into centres of European freight distribution found expression in population growth and in the increasing accessibility of these cities.[17] Because of the dominance of Amsterdam and Rotterdam, rural communities and secondary cities in the same region gradually lost their autonomy in the organisation of international trade.[18] This led to the final division between transport systems and trade networks. Secondary cities lost their independence as information centres for trade and

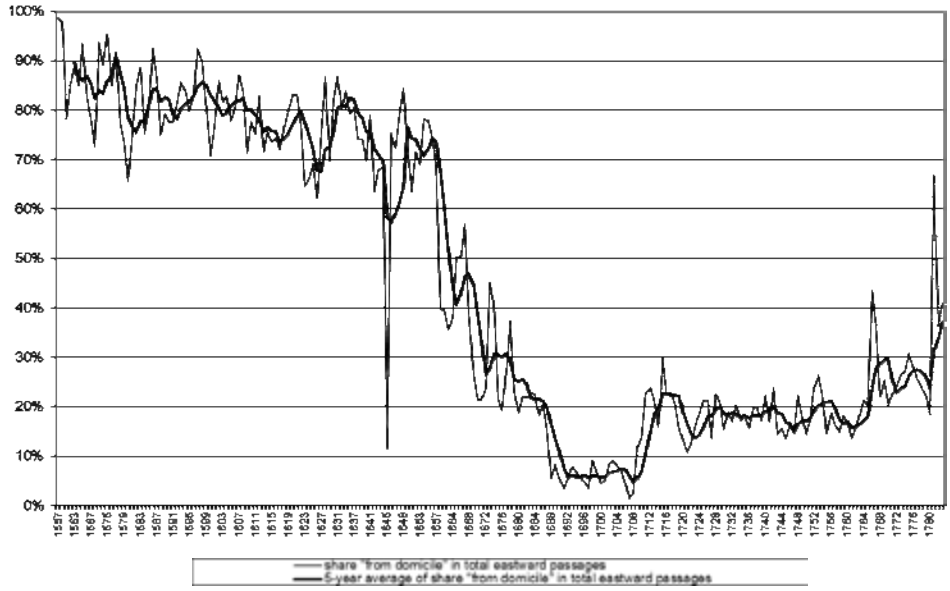
[16] M. 'T HART, *De Nederlandse Republiek en de betekenis van steden*, in *Een wonder weerspiegeld: de Nederlandse Republiek in Europees perspectief*, K. DAVIDS, J. LUCASSEN eds, Amsterdam 2005, pp. 53-89 there 71.

[17] *Ibid.*, p. 57.

[18] This shift is part of a broader process situated in the first half of the eighteenth century, of which the contours already became visible in the second half of the seventeenth century. See: *Ibid.*, p. 71.

transport. Their place was taken by one central *gateway*. Whereas at the beginning of the seventeenth century, the developing *gateway* system still had the form of a limited number of regional 'meeting points' of trade networks and transport systems, around 1700, the role of the remaining *gateway* had evolved to that of a single 'meeting point' of trade networks and transport systems for large coastal regions. This is clearly visible in the evolution of the share of shipmasters passing the Sound from their domicile in eastern direction between 1557 and 1800[19].

Graph 1. **Sound passages in eastward direction by Dutch shipmasters. Share of departures from their own domicile vs. total number of eastward passages**




Source: *Tabeller over Skibsfart og varetransport gennem Oresund 1497-1660, I: Tabeller over Skibsfarten*, cit.; *Tabeller over Skibsfart og varetransport gennem Oresund 1661-1783 og gennem Storebaelt 1701-1748, I: Tabeller over Skibsfarten*, cit.; STRO. Graph published in W. SCHELTJENS, *Dutch Deltas*, cit., p. 49.

Until 1660, circa 80% of all Dutch shipmasters left for the Baltic from their own domicile. Between 1660 and 1700 a complete turnaround occurred. Around 1700, only 5% of all Dutch shipmasters departed from their own domicile (see graph 1). The larger part of the shipmasters departed from Amsterdam, the only remaining *gateway* in the Zuiderzee. In the first half of the eighteenth century, the

[19] *Tabeller over Skibsfart og varetransport gennem Oresund 1497-1660, I: Tabeller over Skibsfarten*, N. ELLINGER BANG, K. KORST eds., Copenhagen-Leipzig 1922; *Tabeller over Skibsfart og varetransport gennem Oresund 1661-1783 og gennem Storebaelt 1701-1748, I: Tabeller over Skibsfarten*, N. ELLINGER BANG, K. KORST eds., Copenhagen-Leipzig 1930.

share of shipmasters leaving from their own domicile to the Sound would stabilize at 15% to 20%. These developments obviously had consequences for the scale of the maritime transport sector in secondary cities and rural areas. Shipmasters of secondary cities, who originally served the carrying trade of their own city, lost their own, locally organised transport market due to the structural changes after 1660. Operational specialisation – or specialisation in the trade on certain routes and the transportation of certain goods – caused an absolute decline in this case. Possibly, the decline was strengthened by *business life cycle*-patterns, where the maritime transport sector was replaced by another business activity in bad times and thus could disappear within one generation. This, however, was less of a problem for the central *gateways*, as they had a much more diversified services supply. Similarly, for rural shipmasters, the change was not necessarily dramatic. The transport market moved, but their activities stayed the same, namely: supplying services to 'third parties', who (mostly) did not come from their own domicile. In this case, operational specialisation could have a positive effect. Indeed, several rural maritime transport communities were able to build a strong position in the international cargo trade on certain routes. However, as was the case with secondary cities, operational specialisation could also have a negative effect. The needs of the *gateway*, and the fulfilment of these needs, which was bounded by economic-political and physical-geographical circumstances, determined the routes and goods of the maritime transport communities serving this *gateway*. When changes occurred in the market, either due to long-term changes or because of external *shocks*, rural maritime transport communities quickly lost their market position.[20] When the spatial structure of an international trade network, in which a maritime transport community had taken up its place as services provider, changed under the influence of economic-political or physical-geographical factors, that maritime transport community was the first to suffer the consequences. When a domestic trade network, out of which a maritime transport community had developed, declined, the maritime transport community would also start to decline.

Based, among other sources, on the relatively dense information provided by the Sound Toll Registers Online (further: STRO),[21] the 'Dutch case' has shown that shipmasters organized and executed their business in a particular spatial and temporal context, often recurring to collective strategies. Shipmasters' movement trajectories were never truly unique nor isolated: exogenous as well as endogenous factors influence their occurrence and allow these trajectories to change over time. The exogenous factors comprise the political, economic and environmental framework in which the movement takes place. Disturbances such as bad harvests, warfare or blockade provoked temporary adaptations in the routes of shipmasters, but could also lead to permanent changes in the shipmasters' operational strategies. The endogenous factors comprise the direct societal surroundings of the shipmaster, i.e. his environment of fellow masters from the same cluster, which exerted a signifi-

[20] For a case study on the Dutch grain trade in the eighteenth century, see: W. SCHELTJENS, *The Changing geography of demand for Dutch maritime transport in the eighteenth century*, in "Histoire & Mesure", XXVII, 2012, pp. 3-47.

[21] www.soundtoll.nl

cant influence on the choice of routes and cargo specialization of the individual shipmaster. Informal 'rules of the game' played a decisive role in the emergence, growth and decline of specialized maritime transport communities in the Low Countries. In the end, communities of maritime transporters could turn out to be more or less efficient, when dealing with external shocks and disturbances.

Tab. 1. **Key data about the maritime transport communities of Groningen and Pekela**

| | Groningen | | | | | Pekela | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Period | TOT | 3rd A | HR | HP | A'dam | TOT | 3rd A | HR | HP | A'dam |
| 1670-79 | 1 | 100% | 0% | | | | | | | |
| 1680-89 | 4 | 81% | 19% | 100% | 68% | | | | | |
| 1690-99 | 4 | 96% | 4% | 100% | 94% | | | | | |
| 1700-09 | 4 | 86% | 14% | 100% | 86% | | | | | |
| 1710-19 | | | | | | | | | | |
| 1720-29 | 15 | 65% | 35% | 96% | 52% | | | | | |
| 1730-39 | 15 | 41% | 59% | 97% | 28% | | | | | |
| 1740-49 | 23 | 71% | 29% | 97% | 52% | 1 | 100% | 0% | | |
| 1750-59 | 41 | 76% | 24% | 82% | 51% | | | | | |
| 1760-69 | 116 | 71% | 29% | 87% | 36% | 8 | 83% | 17% | 35% | 51% |
| 1770-79 | 132 | 67% | 33% | 78% | 45% | 62 | 68% | 32% | 56% | 49% |
| 1780-89 | 124 | 70% | 30% | 37% | 42% | 140 | 83% | 17% | 14% | 57% |
| 1790-99 | 119 | 78% | 22% | 44% | 34% | 161 | 89% | 11% | 16% | 63% |
| 1800-09 | 43 | 79% | 21% | 16% | 46% | 41 | 75% | 25% | 17% | 67% |
| 1810-19 | 95 | 90% | 10% | 71% | 44% | 121 | 89% | 11% | 7% | 52% |
| 1820-29 | 91 | 95% | 5% | 73% | 38% | 162 | 95% | 5% | 5% | 37% |
| 1830-39 | 89 | 9% | 11% | 69% | 38% | 225 | 97% | 3% | 7% | 38% |
| 1840-49 | 116 | 84% | 16% | 92% | 35% | 276 | 96% | 4% | 2% | 35% |
| 1850-56 | 138 | 92% | 8% | 90% | 18% | 387 | 97% | 2% | 4% | 21% |

Based on STRO. Legenda: TOTAL = 10-year average of the total number of passages through the Danish Sound by shipmasters domiciled in Groningen or Pekela; 3rd A = share of passages to or from other areas than the homeregion (HR) of the shipmaster (here: Province of Groningen); HP = share of passages to the homeport of the shipmaster (as share of HR); A'dam = share of passages to or from the selected maritime transport communities' gateway (here: Amsterdam).

The 'Dutch case' contains different scenarios describing the rise and decline of maritime transport services clusters in the wake of changes in the structure of international trade networks or the regional economy. Some key data about two communities of the maritime transport services cluster in the north-eastern part of

the Netherlands, the city of Groningen and the peat-digging settlement of Pekela, show how structural changes in the regional economy could have a positive or a negative effect, provoking the rise of maritime transport services clusters in some areas and their decline in other. Additionally, a survey of long-term changes in the composition of the maritime transport community of the Frisian town of Hindeloopen between 1670 and 1790, based on information gathered from STRO, allows describing the impact of exogenous and endogenous factors on the rise and decline of one single maritime transport community.

The key data for the maritime transport community of the city of Groningen show (see Table 1):

- The transport community's rise from 1740 onwards, a period of decline during the first decades of the nineteenth century and then recovery from 1840 onwards. The 10-year averages of the number of passages through the Danish Sound by masters domiciled in the city of Groningen are indicative of the community's long-term development.
- The increasing share of transportation on routes that do not depart from or are destined to the home region of the masters, i.e. the Province of Groningen. This increase is shown as the 10-year average share of passages through the Danish Sound by shipmasters domiciled in Groningen, which depart from or are destined to 'third areas'.
- The long-term decline in the share of the *gateway* Amsterdam as one of the Groningen masters main destinations. The decline is visible in the 10-year average share of passages through the Danish Sound by shipmasters domiciled in Groningen, which depart from or were destined to Amsterdam.
- The decline of the home region (i.e. the Province of Groningen) as region of departure or destination in the shipping patterns of masters domiciled in the city of Groningen. The decline is apparent in the 10-year average share of passages through the Danish Sound by shipmasters domiciled in Groningen, which depart from or were destined to their own home region. The share of the homeport signifies the part of the transport services departing from or destined to the home region, which went to the shipmaster's domicile.

Similarly, the key data for the maritime transport community of the peat-digging settlement of Pekela show (see table 1):

- The transport community's rise from 1740 onwards, a short period of decline during the first decade of the nineteenth century, and sustained growth from 1810 onwards. The 10-year averages of the number of passages through the Danish Sound by masters domiciled in Pekela are indicative of the community's long-term development.
- The predominant share of transportation on routes that do not depart from or are destined to the home region of the masters, i.e. the Province of Groningen. The 10-year average share of passages through the Danish Sound by shipmasters domiciled in Pekela, which depart from or are destined to 'third areas' and do not call at ports in the home region, was high from the start and continued to increase well into the nineteenth century.

- The long-term decline in the share of the *gateway* Amsterdam as one of the Pekela masters main destinations. The 10-year average share of passages through the Danish Sound by shipmasters domiciled in Pekela, which depart from or were destined to Amsterdam shows this decline. As with Groningen, the decline starts in the second decade of the nineteenth century, when Amsterdam had definitively lost its previous position to competitors in the North Sea area, such as Rotterdam and Antwerp.
- The decline of the home region (i.e. the Province of Groningen) as region of departure or destination in the shipping patterns of shipmasters domiciled in Pekela. The decline is apparent in the 10-year average share of passages through the Danish Sound by shipmasters domiciled in Pekela, which depart from or were destined to their own home region. The share of the homeport signifies the part of the transport services departing from or destined to the home region, which went to the shipmaster's domicile.

Groningen and Pekela provide fine examples of the emergence of maritime transport services locations in rural coastal areas with a close connection to a major gateway for international trade (i.e. Amsterdam). In the case of Pekela, the settlement developed from scratch; in the case of Groningen, the small degree of autonomy of secondary cities can be readily observed. In both Pekela and Groningen, the intimate relation between regional economic structure and the supply of maritime transport services is clear. In Pekela, the emergence of the maritime transport sector coincided with rapid peat production increases, the development of a canal infrastructure for its distribution and the rapid growth of the demand for peat in Amsterdam and other major commercial centres in the Dutch Republic (see graph 2)[22]. The sustained growth of maritime transport services in Pekela, however, went hand in hand with the decline of peat production in the first half of the nineteenth century. During this phase, transportation services seem to have obtained greater value as a means to survive. Quite literally, the transport sector became detached from its origins.

Throughout the early modern period, shipmasters from Hindeloopen were the Dutch Republic's most famous timber transporters.[23] Operating mostly on behalf of merchants and entrepreneurs in North Holland, shipmasters from Hindeloopen transported large quantities of timber from Norway to Amsterdam since the sixteenth century.[24] The reputation built up by the local community of shipmasters triggered further specialisation in ship type, route and cargo.[25] For a significant period, shipmasters from Hindeloopen were considered 'the best in the business'; their knowledge and skill was recognised far beyond community borders. As a rule, the reputation of a local population of shipmasters was based on a small set of very

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[22] M.A.W. GERDING, *Vier eeuwen turfwinning: De verveningen in Groningen, Friesland, Drenthe en Overijssel tussen 1550 en 1950*, Utrecht 1995, pp. 69-71.

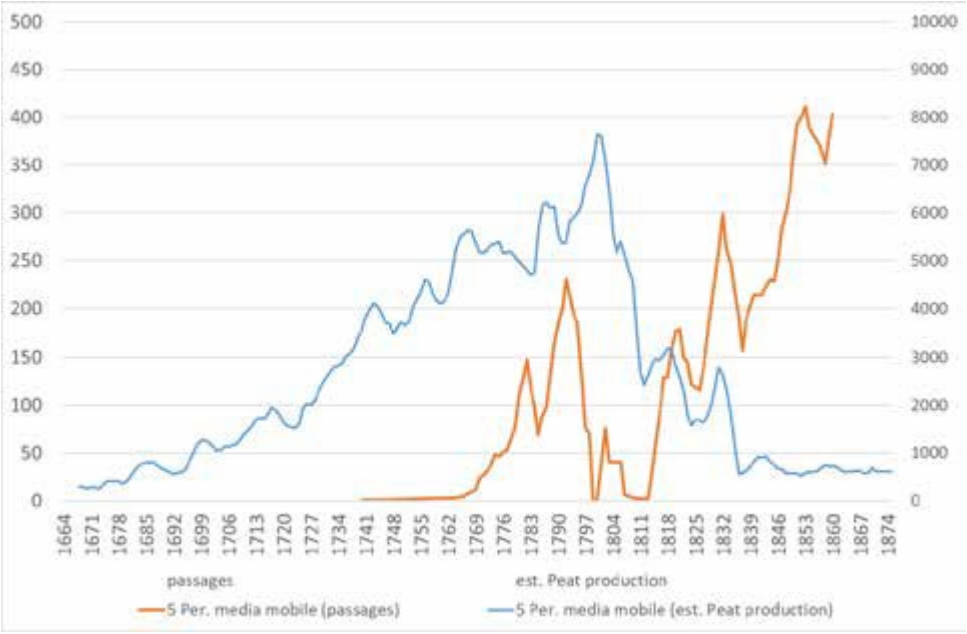
[23] S. LOOTSMA, *De Zeevaart van Hindeloopen in de zeventiende en achttiende eeuw*, in "Economisch-Historisch Jaarboek", 21, 1940, pp. 218-296.

[24] E. BOSSE, *Norwegens Volkswirtschaft vom Ausgang der Hansaperiode bis zur Gegenwart mit besonderer Berücksichtigung der internationalen Handelsbeziehungen. Erster Teil*, Jena 1916, pp. 87-94.

[25] For details, see W. SCHELTJENS, *Dutch Deltas*, cit., pp. 146-154.

specific (repeated) actions. The primary effect of their successful implementation in daily operational practice was one of expansion: newcomers ('new' in graph 3), adhering to local institutions, made the existing population of shipmasters ('known' in graph 3) grow.

Graph 2. **Peat production (right axis, in morgen) and maritime transport services (left-axis, in number of passages through the Danish Sound) in Pekela, 1664-1871**




Based on STRO and M.A.W. GERDING, *Vier eeuwen turfwinning: De verveningen in Groningen, Friesland, Drenthe en Overijssel tussen 1550 en 1950*, cit.

Graph 3. **Long-term development of the population of shipmasters of Hindeloopen, 1670-1790**


Based on STRO. Published in W. SCHELTJENS, *Dutch Deltas*, cit., p. 152.

This growth was accomplished within a locally endorsed framework of action. Within such local population of shipmasters, the chances to develop an alternative range of maritime transport activities successfully, parallel to the one in which the community had obtained its reputation were small. Indeed, both the process of emergence of a local community and that of its further development were highly path dependent. This, in turn, made local communities vulnerable to changing circumstances in commodity streams or in the community of shipmasters itself. When dramatic changes occurred in the supply of timber from Norway and new timber outlets were sought in the Baltic in the last decades of the seventeenth century, shipmasters from Hindeloopen were able to respond to this geographic supply shift and became the dominant transporters on the routes between the eastern Baltic (Narva, Vyborg, Riga, etc.) and the Dutch Republic in the first half of the eighteenth century.[26] Apparently, at that time, their reputation and skill was strong enough to deal with such significant changes.

Inevitably, at some point, saturation was reached. For the shipmasters of Hindeloopen this happened in the late 1730s. There was less and less room for new-

[26] T. LINDBLAD, *Dutch Trade in Narva in the Eighteenth Century*, in *Around Peter the Great: Three Centuries of Russian-Dutch Relations*, C. HORSTMEIER et al. eds, Groningen 1997, pp. 103-114.

comers (see graph 3) and specialisation became a negative factor for the maritime transport sector in the local community. In short, shipmasters' communities provided an informal framework for knowledge acquisition and exchange. Membership of the community was vital. It could have a positive effect, when community membership supported an increase in the benefits of competitive advantage, and a negative effect, when membership led to negative lock-in, leading to the fossilization of the community.

## 2. COMPARISON

Several questions arise with regard to the 'Dutch case'. Are the developments outlined above representative for other rural coastal areas as well? After all, the Dutch Republic was a 'modern' economy,[27] which may have preconditioned the birth of a maritime transport sector along its shores. Can the empirical findings about the 'Dutch case' be generalized to serve as theoretical framework for the emergence of maritime transport services clusters in preindustrial Europe? At first sight, the 'Dutch case' seems to comply rather well with the research results of a number of maritime historians, who have addressed the emergence of maritime transport services clusters in specific areas and locations across Europe in preindustrial times. However, the historiography of maritime transport services clusters in preindustrial Europe is unevenly divided. The 'Dutch case' has benefited from a relative abundance of previous research and quantitative data, especially with regard to Dutch transport and trade with the Baltic. Contrastingly, many rural coastal areas seem to have been largely neglected so far, whereas others have been the subject of different kinds of historical research, in which the areas' economic geography plays a secondary role. Moreover, historiographical interest in different aspects of the maritime transport business (seamen, *cabotage*, etc.) and rural coastal areas in preindustrial times takes many different forms, depending on its scientific context. In France, for example, where research on rural coastal areas (*les littorales*) and the societies making a living there is perhaps embedded more strongly in academia than anywhere else in Europe, the socio-cultural approach prevails. In many cases, one small area, one region, or even one place stands in focus, of which all different aspects of social and cultural life related to the sea are described. Often, much attention is paid to the lives and life cycles of 'maritime people' inhabiting rural areas across the French coastline and specialist terminology has been proposed to describe these people as members of a 'special class' of 'gens de mer', 'entrepreneurs de mer' or just 'marins'.[28] In short, French historiography of the littoral societies has produced an impressive body of micro-historical 'histoires totales' of small coastal areas and places and their inhabitants, but it has not been concerned with

[27] Cf. J. DE VRIES, A. VAN DER WOUDE, *Nederland 1500-1815. De eerste ronde van moderne economische groei,* Amsterdam 1995 [English version: *The First Modern Economy: Success, Failure and Perseverance of the Dutch Economy, 1500-1815*, Cambridge 1997].

[28] E.g. *Entrepreneurs des mers. Capitaines et mariniers du XVIe au XIXe siècle*, G. BUTI, L. LO BASSO, O. RAVEUX eds, Paris 2017; G. LE BOUËDEC, *Les Bretons sur les mers*, Rennes 1999; T. SAUZEAU, *Les marins de la Seudre, entre sel charentais et sucre antillais, XVIIIe-XIXe siècle*, La Crèche 2005.

the economic geography of the French (Atlantic and Mediterranean) coastline in the larger context of the European (maritime) economy.

Based on a comparison of the 'Dutch case' with descriptive accounts of the maritime transport sector in South-West France and South-West Sweden, this paper hopes to obtain a more diverse insight into the contribution and role of rural coastal areas and their urban *gateways* as catalysts for the rise and decline of regional maritime transport services clusters in the preindustrial European economy.

## 3. South-West France

A recent analysis of the role of Brittany (Fr. Bretagne) in the Bordeaux wine trade in the eighteenth century[29] has highlighted the characteristic features of the maritime transport services sector in a large coastal region stretching from the westernmost point of Brittany to the mouth of the Gironde. The regional economy was dominated by the wine trade from the Bordeaux area, on one hand, and the supply of sardines, oysters and Breton textiles as return cargoes, on the other. The main port in the commercial system of South-West France was Bordeaux; secondary centres of supra-regional commercial activity were Nantes, Lorient and, to some extent, Redon and Brest. Moreover, two ports further north, Morlaix and Saint-Malo, had strong connections with the wine trade in South-West France. These ports were described by Kimizuka as 'ports de commandement' and 'ports-donneurs d'ordre', which indicates that information about trade and transport accumulated in these ports; they served as regional markets for the supply of transport services. In Kimizuka's analysis, the focus lies on regional coastal traffic in South-West France, or *cabotage*, which was practiced by a large number of rural coastal communities depicted as "ports de service".

Kimizuka's survey reveals the existence of three regional cabotage services clusters: Blaye, Roque-de-Thau and Plassac (Estuary of the Gironde), the Côte des Abers and the Golfe du Morbihan[30]. Moreover, the different attitudes of secondary ports and the impact of operational specialisation on these services clusters are revealed. Insofar as the attitudes of secondary ports is concerned, the predominance of Bordeaux increases in the course of the eighteenth century and provokes defensive reactions in the secondary ports. The latter, insofar as the size of their local *cabotage* fleet allowed them to do so, tried to keep the organisation of transportation services in their own hands. This was the case in Landerneau and Concarneau, who delivered local produce to Bordeaux in exchange for wine. However, the position of the secondary port of Redon was different: it did not have a large local *cabotage* fleet and, therefore, had to accept the services of surrounding small ports for its commercial activities.[31] Regarding the impact of operational specialisation on transport services locations in South-West France, Kimizuka makes an interesting distinction between straightforward sailing on regular routes (*rotations régulières*), on

[29] H. Kimizuka, *Bordeaux et la Bretagne au XVIIIe siècle. Les routes du vin*, Rennes 2015.

[30] *Ibid.*, pp. 136; 147-155.

[31] *Ibid.*, p. 134.

one hand, and *tramping*, on the other. He argues that, in practice, both types of operations were combined and that both reveal the continued dependence on the Bordeaux wine trade as the driving force of the activities of *caboteurs* in South-West France.[32]

Whereas Kimizuka's analysis identifies the different functions of ports in a regional system, but provides only scarce information about changes to it, the micro-historical research of Thierry Sauzeau has highlighted the impact of changes in regional economic structure and international trade networks on the maritime services locations in the Marennes, North of the Gironde.[33] Rather than maintaining a focus on shipmasters, like in the "Dutch case" or Kimizuka's analysis, Sauzeau deals with 'gens de mer' in general, i.e. with anyone engaged in maritime life in the rural coastal area depicted as Marennes. Significantly, Sauzeau shows the impact of exogenous and endogenous factors on the dynamics of maritime services in the Marennes between 1760 and 1860. In particular, he highlights the negative impact of the French revolution as external factor[34] and of *recul social* in the wake of a reorientation of Bordeaux' commerce towards the slave trade as an endogenous factor.[35] In the end, both factors provoked the reorientation of the 'gens de mer' of Marennes to novel activities such as the cultivation of oysters.

## 4. SOUTH-WEST SWEDEN

Every time, when the herring swarms 'suddenly' came to the shores of South-West Sweden, a rural coastal region with Göteborg and a number of smaller staple towns (Kungälv, Marstrand, Strömstad, Uddevalla) as its main urban centres, the entire region seems to have turned into a 'place-to-be' for fortune seekers. For as long as the herring was abundant in its coastal waters, South-West Sweden turned into a vital and attractive centre of economic activity. However, when the herring period came to a close and fisheries became less and less rewarding, the coastal region declined rapidly and went back to its previous state, waiting for the herring to return. Nine so-called 'Bohuslän herring periods', named after a Swedish province in South-West Sweden, have been identified in the past 1000 years, each of them lasting for several decades and followed by an interval period of 50 or more years.[36]

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[32] *Ibid*., pp. 162-163.

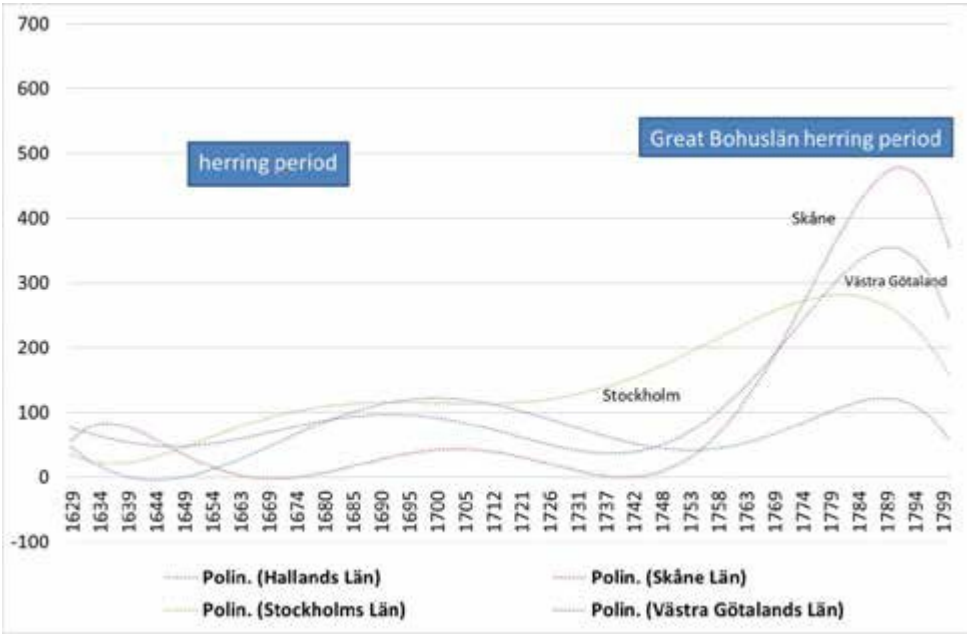
[33] T. SAUZEAU, *Les gens de mer du quartier de Marennes et l'institution des invalides de la Marine (milieu XVIIIe-milieu XIXe siècle)*, in "Annales de Bretagne et des Pays de l'Ouest", 120, 2013, pp. 179-192.

[34] IDEM, *Les marins*, cit., p. 42.

[35] *Ibid*., pp. 30-32.

[36] J. ALHEIT, E. HAGEN, *Long-term climate forcing of European herring and sardine populations*, in "Fisheries Oceanography", 6, 1997, pp. 130-139.

Graph 4. **Sound passages by Swedish shipmasters, 1629-1799 (polynomial trend)**




Based on STRO.

Registrations of ships passing through the Danish Sound (in either direction) between 1629 and 1799 show clear increases in the activities of shipmasters from South-West Sweden during the herring periods of the latter part of the seventeenth century (ca. 1660-1680 according to Alheit & Hagen 1997) and in the second half of the eighteenth century (1747-1809). Different coastal regions dominated these herring periods: next to a considerable number of masters from Stockholm and its surroundings, the coastal communities of *Hallands Län* dominated the seventeenth-century herring period. Because Swedish masters benefited from tax-freedom in the Sound between 1645 and 1710, the registered number of passages by Swedish masters remains artificially low during the seventeenth-century herring period. During the herring period of the second half of the eighteenth century, which is known as the 'Great' Bohuslän herring period and is one of the best-documented herring periods of the pre-modern world,[37] coastal communities in *Västra Götalands Län* and *Skane Län* realized the largest annual number of passages through the Danish Sound.

The 'Great' Bohuslän herring period (1747-1809) differed from previous periods because of the Swedish government's conscious efforts to make the herring-

[37] A. CORTEN, *Herring and Climate: changes in the distribution of North Sea herring due to climate fluctuations*, Groningen 2001.

based economic prosperity last. The Swedes attempted to capitalize on the herring period by using it as a means for increasing commerce and navigation.[38] Several coastal communities in South-West Sweden experienced intensive migration and rapid population growth. The fortunes of the 'Great' herring period had a direct effect on the urbanization process in the region.[39] Small west-coast towns like Strömstad, Marstrand and Kungälv experienced spectacular demographic growth. In Uddevalla, the large influx of immigrants created particular health and safety issues, which urged the local authorities to elaborate extensive *Regulations for ports*, published in 1771.[40] All of these changes in the urban environment were driven by the *herring fever* that South-West Sweden experienced during the 'Great' Bohuslän herring period. The *fever* found support in novel commercial regulations, such as the *Complete Regulations for the North Sea fisheries* (1774), which stated that "the fisheries should no longer be hindered by granting royal privileges or monopolies to individuals"[41]. The incentives of the Swedish government, which tried to make the herring-related prosperity last, facilitated the emergence of a shipping services industry in South-West Sweden during the 'Great' Bohuslän herring period. Gradually, the structure of shipping services started to change from short-track transportation of local natural resources to regular long-haul traffic between the Baltic, the Southern Atlantic coast and the Mediterranean.[42]

Key data for the maritime transport community of Torekov, a coastal village in South-West Sweden (see table 2), show:

- The transport community's rise from 1750 onwards and a peak between 1770 and 1800. The 10-year averages of the number of passages through the Danish Sound by masters domiciled in Torekov are indicative of the transport community's long-term development.
- The predominant share of transportation on routes that do not depart from or are destined to the home region of the masters, i.e. South-West Sweden. The 10-year average share of passages through the Danish Sound by shipmasters domiciled in Torekov, which depart from or are destined to 'third areas' and do not call at ports in the home region, was more than 50% from 1750 onwards and continued to increase during the rest of the eighteenth century.

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[38] A.V. LJUNGMAN, *The Great Bohuslän herring-fisheries*, in "Report of the Commissioner of Fish and Fisheries", IX, 1878, pp. 220-239.

[39] S. LILJA, *Small Towns in the periphery: population and economy of small towns in Sweden and Finland during the early-modern period*, in *Small Towns in Early-Modern Europe*, ed. P. CLARK, Cambridge 1995, pp. 60-76 there 60.

[40] A.V. LJUNGMAN, *The Great*, cit., p. 234.

[41] *Ibid.*, p. 234.

[42] On the rise of Scandinavian shipping in the second half of the eighteenth century, see: H.C. JOHANSEN, *Scandinavian Shipping in the late eighteenth century in a European perspective*, in "The Economic History Review", New Series, 45, 1992, pp. 479-493.

Tab. 2. **Key data about the maritime transport communities of Torekov**

| Period | TOTAL | 3rd A | HR | HP | Gothenburg |
|---|---|---|---|---|---|
| 1700-09 | 2 | 100% | 0% | | |
| 1710-19 | | | | | |
| 1720-29 | 3 | 11% | 89% | 25% | 43% |
| 1730-39 | 24 | 62% | 38% | 8% | 23% |
| 1740-49 | 7 | 26% | 74% | 6% | 50% |
| 1750-59 | 16 | 56% | 44% | 20% | 56% |
| 1760-69 | 10 | 51% | 49% | 6% | 64% |
| 1770-79 | 61 | 67% | 33% | 7% | 66% |
| 1780-89 | 118 | 74% | 26% | 7% | 65% |
| 1790-99 | 84 | 80% | 20% | 6% | 63% |
| 1800-09 | 28 | 85% | 15% | 1% | 74% |
| 1810-19 | 7 | 61% | 39% | 7% | 72% |
| 1820-29 | 12 | 68% | 32% | 6% | 37% |
| 1830-39 | 5 | 71% | 29% | 17% | 44% |
| 1840-49 | 8 | 37% | 63% | 33% | 0% |
| 1850-56 | 10 | 8% | 92% | 62% | 15% |

Based on STRO. Legenda: TOTAL = 10-year average of the total number of passages through the Danish Sound by shipmasters domiciled in Torekov; 3rd A = share of passages to or from other areas than the homeregion (HR) of the shipmaster (here: South-West Sweden); HP = share of passages to the homeport of the shipmaster (as share of HR); Gothenburg = share of passages to or from the selected maritime transport communities' gateway (here: Gothenburg).

- The long-term increase in the share of the *gateway* Göteborg as one of Torekov masters' main destinations. The high share throughout the second half of the eighteenth century is followed by a sharp decline after 1800. The rise and decline are shown as the 10-year average share of passages through the Danish Sound by shipmasters domiciled in Torekov, which depart from or were destined to Göteborg.
- The decline of the home region (i.e. South-West Sweden) as region of departure or destination in the shipping patterns of shipmasters domiciled in Torekov during the 'Great' Bohuslän herring period and its recovery in the first half of the nineteenth century, when the community of Torekov itself had lost its significance. The decline is shown as the 10-year average share of passages through the Danish Sound by shipmasters domiciled in Torekov, which depart from or were destined to their own home region. The share of the homeport signifies the part of the transport services departing from or destined to the home region, which went to the shipmaster's domicile.

Torekov provides another fine example of impact of changes in the regional economic structure and in the structure of international trade on the emergence and functioning of maritime transport services clusters in rural coastal areas with a close connection to a major gateway for international trade.

## CONCLUSIONS

The framework for the rise and decline of maritime transport services clusters in preindustrial Europe, which has been developed based on the 'Dutch case' and tested based on a historiographical survey, is deemed relevant for two reasons. First, it was shown that, in rural coastal areas, maritime transport services emerged as a result of a preceding process of specialisation, which replaced 'subsistence' transportation of the community's own production with 'market' transportation, or the delivery of transport services to any interested 'third' party. These transport services could obtain a truly maritime character. As time went by, many maritime transport businesses tended to fossilize in their specific market strategies. They declined and, eventually, they became obsolete when the spatial structure of production, consumption and trade changed. Others managed to move into a phase of sustained spatial integration. It was shown that the recurrent development pattern in which 'subsistence' transportation is replaced with 'market' transportation, and 'market' transportation could lead to maritime transportation services and the emergence of regional maritime transport services clusters, can generate different outcomes under different conditions. As such, the theoretical framework based on the 'Dutch case' provides a promising and original starting point for the assessment of the economic resilience of rural coastal regions in preindustrial Europe. In this context, the 'acquisition of agency' seems to play a pivotal role as driving force for the local emergence of maritime transport services in rural coastal areas. Second, the framework addresses the dominant epistemology of space, which neglects the role of littoral regions in early modern globalization and assumes that these regions were home to static, closed and underdeveloped societies. As such, it tries to overcome the limitations of current research on littoral regions, which focuses on selected areas with a very clear set of characteristics, one of which is their intimate relation with the sea, but does not offer an overarching view in which the dynamics of littoral regions are put in a broader context of regional economic development and changing structures of international trade.