
Challenges of Maritime Ferry Tourism in the Baltic Sea in the Post-pandemic Era

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Ilona Urbanyi-Popiołek¹, Magdalena Klopott²

Abstract:

Purpose: The aim of the article is to analyse the new challenges faced by operators and the operational solutions they have implemented to minimise the negative effects of the drop in volumes.

Design/Methodology/Approach: Literature analysis concerning ferry shipping, desk research and data analysis, as well as in-depth interviews were used as research methods.

Findings: The article presents the current situation of ferry tourism in the Baltic Sea. It analyses the factors influencing the volume of passenger ferry traffic and the activities undertaken by carriers to increase revenues from the passenger sector.

Practical Implications: The article emphasizes that the activities undertaken by the cruise ferry carriers allow to operate despite the negative factors and what should be undertaken to minimize the adverse effects.

Originality/Value: Research on ferry tourism in the Baltic Sea Region is modest. Most publications refer to the freight sector of ferry shipping. However, there is a lack of research on the passenger sector in the post-COVID-19 pandemic period. The article fills the research gap in the ferry tourism studies.

Keywords: Baltic Sea Region, ferry shipping, drivers influencing the ferry operation.

JEL classification: M21, L99, L83, C38.

Paper Type: Research article.

¹Ph.D., Assistant Professor, Gdynia Maritime University, Faculty of Management & Quality Science, Gdynia, Poland, ORCID: 0000-0002-1042-8559, i.urbanyi@wznj.umg.edu.pl

²Ph.D., Assistant Professor, Gdynia Maritime University, Faculty of Management & Quality Science, Gdynia, Poland, ORCID: 0000-0001-5850-9094, m.klopott@wznj.umg.edu.pl

1. Introduction

Maritime tourism in the Baltic Sea comprises two main forms, ferry and cruise shipping. The latter in the Baltic Sea Region is seasonal, with cruise ships operating from spring to autumn, while ferry shipping is year-round. In addition, cruise passengers include tourists from European countries, primarily Germany, France, the UK, as well as those from other continents. Above all, they are Americans, Canadians, Australians, as well as Asian residents from China, Japan and South Korea. In turn, ferry passengers are residents chiefly from the Baltic Sea Region countries.

Ferry shipping is a specific type of maritime carriage where passengers and cargo form one market. Transport of two different segments creating demand for services constitutes the prime characteristic of ferry business. Both segments are carried by one ship and ferries operate the regular routes according to schedule (Urbanyi - Popiolek, 2021).

Baltic Sea represents attractive region for maritime tourism. Passenger ferry traffic is highly developed and people undertake sea voyages for various reasons, as the necessity to reach a certain place, participation in mini cruise trips and conferences at sea as well as traveling for shopping and business purposes. Mini cruises, sea conferences and shopping trips are particularly popular in Scandinavian countries, Finland and Estonia as well as Germany.

Ferry business is sensitive to changes in the market environment. However passenger and cargo segments react differently to economic shocks. Cargo traffic is strictly dependent on the economic activity and level of international commerce. In example, during 2009 crisis, due to slow down in industries and decrease in trade the majority of ferry links recorded decline of 25% in number of transported units. Particularly services between Germany and Sweden were affected by a 30% drop in cargo traffic (Shippax Market, 2012). It took 8 years to achieve the level of transported cargo unites before the crisis.

The passenger segment reacts differently during recession. The latter usually is not deeply affected. Many Baltic Sea Region residents renounce longer holiday voyages to Mediterranean states or beyond Europe due to costs of stay and air transport fares.

They choose as destinations Aland Islands, Bornholm and Gotland, as well as ferry cruises in the region with stay in interesting places like Stockholm, Helsinki, Tallinn, Riga, Oslo or Gdansk, for example. We did not observe drop in passenger traffic in the whole region during slow down in economy and some destinations show growth in turnover like services to the mentions islands. The fuel crises of 1974 and 1981 as well as past recession are the examples.

However, changes in the environment over the past four years have significantly affected both segments. The COVID-19 pandemic, the war in Ukraine, inflation, high fuel prices and the slowdown of the BSR economies have resulted in a slower recovery of the passenger market after the pandemic and stagnation in cargo volumes.

In the literature and in practice, there is no uniform definition of ferry shipping and ferry vessel which results from permanent changes of this type of vessel as well as approach of the researchers and practitioners to the fleet operation.

The ferry market is competitive in terms of price and quality of service. The scope and standard of services offered by a ferry operator is one of the core requirements determining its position in the market. These services can be divided into sea and land segments. The former includes activities carried out directly on the ferry and the latter includes those performed or organised by the ferry operator on shore. In practice, activities provided to tourists are performed comprehensively and cover both spheres of activity.

2. Research Methodology

The research concerns the impact of the COVID-19 pandemic and other negative factors on ferry tourism in the Baltic Sea and focuses on the efforts of ferry operators to have a positive impact on passenger volumes. The primary aim of the article is to analyse the new challenges faced by operators and the operational solutions they have implemented to minimise the negative effects of the drop in volumes.

The research questions are formulated as follows:

- *RQ1: How negative factors have affected ferry tourism in the Baltic Sea Region?*
- *RQ2: How the measures taken by shipowners have affected passenger traffic and shipowners' performance?*

Literature analysis concerning ferry shipping, desk research and data analysis, as well as in-depth interviews were used as research methods. The data were collected from the ShipPax Information, a publisher and provider of consulting services for ferry shipping industry, as well as from year reports of selected ferry operators. In-depth interviews were conducted with chosen operators' representatives on - line.

3. Theoretical and Practical Foundations of Ferry Tourism

There is no uniform definition of ferry shipping and ferries in theory and practice. The reasons for this are changes in this type of vessel, changes in supply and demand in the ferry market, and the authors' approach to the issues presented. However, the carriage of passengers and cargo by one vessel, the use of ro-ro

technology for loading and unloading wheeled units and private cars is the chief feature of this maritime transport. Ferry operations are therefore defined as a type of liner shipping in which passengers and cargo form a single market.

Ferries operate on regular routes, usually between two or three ports according to timetables (Urbanyi - Popiolek, 2009). Other authors also highlight the fact that ferry shipping carries passengers and cargo (Kotowska, 2014; Kotowska, 2015; Stapford, 2009). Cargo transports, however, are not the scope of the research in this article.

Passenger traffic as a segment of ferry industry is usually analysed in terms of tourism functions of ferry shipping (Wild and Dearing, 2000; Kizielewicz and Urbanyi-Popiolek, 2015). Research on market segmentation has been carried out by Kizielewicz and Urbanyi-Popiolek (2015). The authors analysed the generic structure of the tourist demand for ferry travel in terms of demographic variables and purchasing behaviour of passengers on-board ferries.

The motives for ferry travel were defined generally as tourists, visiting relatives, business-/work-related and combinations of specified needs (Kizielewicz *et al.*, 2017). Pantouvakis examines the factors and the ways that influence the passenger to select a ferry operator and states that ferry passengers form satisfaction perceptions on the basis of their evaluation of four primary dimensions, service quality, price, convenience and availability (Pantouvakis, 2007). Other authors focus on the competitiveness of ferry shipping and passenger air transport (Mańkowska, 2015; Mańkowska and Tłoczyński, 2018).

Ferry operations in the context of passenger transport comprise two sectors:

- transport functions involving the carriage of passengers on liner service, where the ferry trip is a part of the overall journey,
- the tourism function of leisure and entertainment on the ferry, with sea travel being undertaken to spend time on board as part of organised cruises and holiday packages.

Among the services provided to passengers on the ferry, the following can be distinguished:

- transport services,
- culinary and entertainment services,
- shopping services,
- conference services,
- tourism services.

Transport services include the carriage of passengers and passenger vehicles as well as coaches. The passenger segment includes individual or group passengers. The

former group includes motorised passengers and foot passengers. The latter covers groups travelling as part of packages organised by ferry operators and trips organised by tour-operators.

Tourist traffic is seasonal. Most people take their holidays in the summer months and also partly in the winter. This is reflected in the occurrence of seasonality in passenger demand for ferry services. Ferry ship capacity should be adapted to summer demand. Offering the possibility for passengers to take their own vehicle is another determinant of the level of service.

Accommodation is another important service. Ferries are equipped with 2, 3 and 4-beds outside (with window) and inside (without window) cabins. Cabins are divided into classes according to their location and equipment. In addition to the typical tourist class, Lux class cabins and the most luxurious suites are available.

Gastronomy services consist of offering meals to passengers taking a ferry journey. In this sphere, activities such as offering a wide and varied choice of food and beverages, adapting the main menu to specific consumer tastes (e.g. on Scandinavian lines traditional Scandinavian cuisine predominates), as well as a preference for national dishes and regional cuisine, which is an attraction for foreign passengers, should be distinguished. A variety of ways of serving the meal (e.g. buffet, à la carte, self-service) are used in the catering areas. The catering outlets include facilities such as restaurants, cafeterias, bars, cafés.

An important group of activities offered by ferry operators relates to entertainment and recreation which the passenger may enjoy during the sea voyage. As far as leisure and entertainment services are concerned, their standard will be set, apart from the obvious technical possibilities, by the activities of shipowners to make the time spent on a sea voyage more attractive: above all by offering artistic programmes (e.g. cabarets, music recitals, performances by orchestras, illusionists, etc.) theatre performances and interesting movies.

Another group of activities is shopping. Shopping area cover duty and tax free markets and shops as well as boutiques. Alcohol, cigarettes, cosmetics, clothing, toys and electronics are the main items sold in ferry shops. Their prices are competitive with those ashore, despite the abolition of duty-free sales on intra-EU routes. The latter is retained on services connecting Norway with EU countries and on ferries calling at Aland ports.

Conference services include the organisation of conferences and symposia during a ferry trip. These services are particularly popular in the Nordic countries. The attractiveness of this activity is due to the prices and attractions that the conference participant can enjoy during the voyage. The quality of conference services is determined not only by the provision of the conference space itself, but also by the level of professional service provided to participants.

Another segment is tourist services. A mini-cruise trip includes a round trip by ferry with attractions during the journey. Ferry operators also organise package trips and package holidays, where the passenger buys an all-inclusive service.

A package tour is an extension of the mini-cruise and include a land stay, usually with hotel accommodation. A package holiday, on the other hand, includes a holiday in attractive destinations, where the ferry trip is only part of the package. The level of this type of service is not determined by the tour itself, but above all by the standard of the offers, which consists of a set of elements such as the choice of tour programmes and their differentiation depending on the market segment, the level of land accommodation and the professional service of the organised packages.

The passenger demand is created by people travelling in different purposes, e.g. visit a selected destination, holidays trips where the ferry is part of the journey, participation in package trips, shopping or business voyages. The passengers can be segmented as follows (Kizielewicz and Urbanyi-Popiołek, 2015; Urbanyi - Popiołek 2020):

- Liner passengers – travellers taking a trip in various reasons (visit an interesting destination, participation in culture or sport event, visit relatives etc.), ferry crossing is only a part of whole trip,
- Cruise passengers – travellers participating in package trips of diverse nature, e.g. round trips for pleasure, trips with short stay in port of destination etc.,
- Conference passengers – participants in conferences and seminars organized on-board within liner trips,
- Shopping passengers – people who travel to purchase commodities on-board or in port of destination,
- Business passengers – passengers travelling in connection with their professional activities, in this category lorry drivers are included.

Liner passengers are those who travel individually, with or without their own vehicle. The main motive for the journey is the need to arrive at a particular destination and the ferry trip is only a part in the overall journey. These passengers travel, for example, as tourists, to spend a holiday, to visit friends, to attend a cultural or sports event, etc.

Over the years, the share of this group of passengers on most ferry lines has been declining. This is related to the use of alternative modes of travel (airlines, tunnel-bridges and land routes). In terms of geographical distribution, they dominate on lines in the Western Baltic and Kattegat and partly on services in the Central Baltic. Increased traffic from this group is also observed on all lines during the summer season.

The next group is composed of cruise passengers. This category includes passengers taking part in various types of packages on ferries. The cruise market is most significant on lines between Sweden, Finland and Estonia. Scandinavians are among the most mobile societies in Europe.

Mini-tours and shopping trips for them are a sociological phenomenon and are the standard for Finns or Swedes to spend their time. A high share of passengers in this category is also observed on connections between Norway and Denmark, Sweden and Germany. This is due to the fact that mini-trips are generally combined with the desire to do shopping.

Conference passengers are people attending conferences and symposia at sea - as part of liner schedule. The concept has become extremely popular since the early 80's and in many markets in the Baltic Sea it is, along with mini-cruises, the primary driver of passenger demand. The largest volumes of conference passenger traffic occur on the routes: Finland-Sweden, Sweden-Germany, Finland-Estonia, Norway-Germany, i.e. in tourist markets.

Shopping passengers are travellers whose primary purpose for trip by ferry is to make cheaper purchases of goods. The abolition of duty-free and tax-free sales on intra-EU lines has resulted in a decrease in the number of people who chose to travel by sea solely for the purpose of shopping on ferries.

Tax-free sales are instead retained, as mentioned, on routes in the eastern Baltic. The shipowners Viking Line and Tallink/Silja Line, which operate routes between Sweden, Finland and Estonia via the Åland Islands, conduct such sales. Duty-free sales are also possible on lines to countries outside the European Union, e.g. Norway.

Shopping travellers also include those going to neighbouring countries for cheaper goods. Such trips are seen, for example, on the lines connecting Finland and Sweden with Estonia, as well as from Denmark and Sweden to Germany. At German ferry ports such as Puttgarden, Travemünde, Rostock special border shops have been organised for Scandinavians who only come to Germany for shopping. This group of ferry passengers is sensitive to exchange rate fluctuations that affect the price of goods and the profitability of the trip.

The latter group is represented by business travellers. In addition to business travellers, this group includes people working far from home and travelling between work and home (shuttle trips).

The presented selection is based on the prime factor generating the demand. In practice, assigning the travellers to given category is not clear because passengers traveling e.g., as conference participants also do some shopping and enjoy

entertainment. The assignment of traveller to a given segment results from the main transport need (Urbanyi-Popiołek, 2018).

4. Ferry Shipping Operation in the Baltic Sea

Baltic Sea constitute one of the world prime ferry markets. In 2023, around 185 million passengers and 65 million private cars were transported in the region compared to 275 million passenger and 105 million cars in 2019. The numbers include the whole turnover with short routes between islands and mainland. On international and main domestic Danish and Swedish ferry lines (e.g., Bornholm and Gotland) important for tourism, around 30 million passengers, and 3 million cars were carried in 2023 (ShippaxMarket 20, 2020; ShippaxMarket 24, 2024).

Baltic ferry business is highly concentrated. According to Shippax data, in January 2024, 15 major carriers operated on the main international and domestic markets. In terms of transport capacity and market share the leaders are Finnlines, Stena Line, Tallink Group, Viking Line, TT-Line, Color Line, Unity Line.

Among others are Fjord Line, Scandlines and Polferries. The network of ferry connections included 60 services with around active ferries of different types - cruise, ro-pax, cruise-ro-ro and high-speed (Table 1).

The largest operators in the Baltic Sea ferry tourism market are Tallink Group and Viking Line. These carriers operate only cruise ferries. Stena Line and TT-Line, on the other hand, are examples of more cargo-oriented operators, but also offer mini-tours and conference packages on their ro-cruise ferries.

Table 1. Summary of basic data on selected ferry operators.

Operator	Number of ferries			Passenger capacity (No)			Market
	2020	2023	2024	2020	2023	2024	
Stena Line	17	18	15	16 484	17 816	15 144	Germany – Sweden Poland – Sweden Latvia - Sweden
DFDS Seaways	9	8	7	7 876	7 319	7 244	Germany – Lithuania Lithuania – Sweden Estonia – Sweden
Tallink Group	12	9	10	28 947	19 203	22 123	Finland – Estonia Finland – Sweden Sweden – Estonia
Viking Line	7	5	5	16 800	13 080	13 080	Finland – Sweden Finland - Estonia
TT-Line	7	9	9	3 235	4 895	4 895	Germany – Sweden Poland – Sweden Lithuania – Sweden
Finnlines	8	8	8	3 750	3 730	4 227	Finland – Sweden

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Source: Own elaboration based on ShippaxMarket 20, Shippax Market 23, Shippax Market 24.

The Eastern Baltic Sea is characterized by the highest concentration of ferry tourism. This is due to several reasons. Firstly, for many decades the Swedes and Finns have undertaken ferry trips due to the possibility of making purchases in the duty-free zone, which is still preserved in this area (lines via the Aland Islands). Moreover, the purpose of the journey undertaken by the Scandinavians on these routes is the journey itself and the attractions on the ferry as well as the shopping, not only in ferry shops, but also in Estonia.

Other lines, in Central and West Baltic Sea are more cargo oriented routes. However, these services also report relatively high passenger traffic, particularly from shopping, liner as well as mini trip segments. An exceptions are lines from Norway to Sweden, Denmark and Germany where passengers traffic dominates due to tax-free sales and mini cruise offer.

Ferry operators` revenues depend on sales of services. Theirs incomes comprise two different areas. The companies get their incomes from passenger and cargo segments. Revenues of the ferry company consist of:

- sales of tickets,
- sales on-board services,
- other passengers revenue,
- sales of cargo transport.

Sales of ticket is the first item of passengers revenue and include transport fares, sales of cabins and private vehicles transportation fares. Sales on-board services include sales in restaurant and shops as well as entertainment. This item is the prime revenue that flows to the company operating services on passenger oriented lines. It is estimated that sales on-board generates 30-55% of total revenues of cruise ferry.

In case of ro-pax, this category has minor importance in relation to cargo transportation and has a share of 20-30% of total earnings (Reinikainen, 2022). Other passengers revenues contain incomes which are not recognised as sale on-board, such as sales of packages by tour operators, transfer passengers, marketing, sales of hotel accommodation onshore etc.

The second important items are revenue from cargo segment. This incomes have a significant share on ro-paxes where cargo transportation dominates (up to 70%-80% of total incomes).

Incomes of cruise ferry operation differs in structure compared with ro-pax. On-board services generates on average as much as 40% of total revenue. Catering and entertainment generate the expenditures of passengers being the primarily source of cruise ferries income. Cargo segments amounts on average to 15-20% of this ferry type revenue.

Tallink Group is an example of carrier operated cruise ferries on passenger oriented lines. For the group passengers service is the prime source of income. Sales on-board generate more than half revenue of the group. In total, this item with ticket sales give 85% of yearly income. Freight has 11% share due to high cargo turnover on Tallinn – Helsinki route (Tallink, 2024).

Alike Viking Line is a cruise - ro-ro operator. Passenger segment generates 93% of incomes and reflects tourist feature of company's business. The carrier offers low ticket prices and concentrates on sales at shops and restaurants (Viking Line, 2024). Taking into consideration the level of costs related to purchase of goods for on-board services, one can assume that the structure of operator income from passenger segment is the same as Tallink Group.

TT-Line, Finnlines and DFDS Seaways are carriers operating more cargo oriented services among others. The incomes primarily come from freights paid by hauliers.

5. Discussion

The first negative factor that affected passenger ferry traffic was the outbreak of the pandemic COVID-19. The passenger sector was hit first and foremost. The majority of passenger – oriented ferry links were suspended and the cruise ferries were laid-up. Norway was one of the first countries in the region to close its borders.

As a result the international services operated by Color Line, Fiord Line, DFDS Seaways and Stena Line to Sweden, Denmark and Germany were temporarily discontinued, e.g. Sandefjord – Stromstad, Oslo – Kiel, Oslo – Copenhagen.

Alike ferry links from Sweden to Finland, Estonia and Latvia were suspended, as these countries sealed the borders and introduced restrictions in traveling. Helsinki – Stockholm operated both by Tallink – Silja and Viking Line, as well as Tallinn – Stockholm and Riga – Stockholm plying by Tallink are the examples. Seven of the thirteen Tallink ships were temporarily sidelined in Tallinn, Helsinki, Stockholm and Riga. Likewise four Viking Line ferries from seven were laid up the from mid-March to early June. The rest of fleet operated as cargo ships.

Passenger traffic fell by up to 70% in 2020 compared to 2019. In 2021 this segment started to recover, however the volumes still has not reach pre-pandemic levels. It is estimated that on tourist routes, a return to pre-pandemic passenger turnover levels

may not be achieved until 2026 at the earliest. Earlier industry predictions indicated 2025 as a possible year to achieve pre-pandemic traffic levels.

There are a number of reasons for this situation. One of the objective reasons is passengers' concern about the economic situation and the war in Ukraine. Some travellers continue to feel reluctant to use ferry tourism after the pandemic. Another reason is the fact, that many people have changed their working and leisure habits during pandemic.

There are less commuters onboard as many people have the option of working from home. Conversely the growing online shopping habits may drive the ferry freight volumes, which will compensate the loss of passenger-related revenues. In other words, the divergence of freight and passenger will become even more stark, with freight focused companies like DFDS, TT-Line or Finnlines, performing even better than the likes of Viking Line or Tallink in the coming years (ShippaxMarket 22, 2022).

Shipowners are taking steps to adapt to changes in the environment and travellers' expectations. The passenger oriented operators have made the reorganisation of their networks, as well as offered new summer cruise destinations to attract new customers. Some routes were permanently ceased, e.g. Stockholm – Riga, Frederikshaven – Oslo, Sassnitz – Trelleborg.

New summer destinations have been offered. Tallink have opened new destinations, such as Tallinn – Riga, Helsinki – Turku. The Stockholm – Visby route has become the other new destination. The cruises round via Marienhamn, which enables tax – free sales on board. The other ferry cruises were offered on Tallinn – Helsinki – Marienhamn route and Tallinn – Turku with short call at Langnas at Aland Island for tax – free sales. Similar network for summer season has been offered by Viking Line.

At the same time, we observe a surplus in the cruise ferry segment. Tallink Group diversified its business model by increasing the activities associated with chartering out surplus tonnage to third parties. Two sister ferries Victoria I and Romantika were chartered by the Moroccan company Tanger MED Port Authority for the summer season 2021. Sija Europa and the other Galaxy have been chartered since summer 2022 to the Netherlands to accommodate the Ukrainian refugees. At the end of 2023, Tallink was chartering out five vessels.

In 2023, charters generated 12% of Tallink revenues. Viking Line, on the other hand, sold two cruise ferries to Mediterranean buyer. Moreover, the latter operator took control of Eckero Line to increase the market share in ferry tourism (Ioannidis, 2024).

Shipowners' representatives emphasise importance of increasing revenue from the passenger sector. We observe passenger fares for travel and cabin accommodation increase by an average 15% year on year. Furthermore, operators have introduced new mini-cruise and package trips offers.

6. Conclusions

The COVID-19 crisis strongly affected the ferry industry. The passenger sector was hit deeply due to restrictions in traveling. Shipowners are taking a number of measures to increase passenger traffic. The most challenging issue for operators is the change in passenger behaviour in the post-pandemic period.

Inflation and a reduction in the income of the Baltic Sea Region population are also unfavourable factors. However, operators report an annual increase in traffic and revenue from the passenger sector. The passenger business is slowly recovering, most ferry operators reported stable or higher volumes for 2023.

It should be stressed, however, that shipowners' representatives predict that the level of ferry tourism in the region will not reach pre-pandemic levels until 2026 at the earliest.

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