



## **Passenger shipping in Greece in 2016-2020: Performance, economic contribution and prospects**

### **Summary**

#### **Introduction**

The passenger shipping sector links the approximately 115 inhabited islands of Greece with the mainland. Although the sector operates mainly on Greek territory, it is part of the ecosystem of activities that support tourism, thus it contributes significantly to the openness of the Greek economy. Transporting freight by sea from and to the mainland, it facilitates agriculture, manufacturing, trade and the development of the island economies, considering that most goods are transported to and from the islands by trucks that travel on board of passenger vessels. In this way, the coastal maritime sector is tightly connected with Greece's economic development.

The scope of the study is to present the latest developments in passenger shipping in Greece<sup>1</sup> and the challenges that it faces and to highlight its contribution to the Greek economy at national and local level. The contribution of passenger shipping to the economy includes the direct, indirect and induced effects of the transportation services by sea (domestic and Adriatic passenger routes), together with the wider effects associated with the development of other sectors (such as tourism, agriculture, manufacturing, and exports) through freight and passenger transportation over regular shipping routes.

#### **Total contribution of passenger shipping to the economy**

The total contribution<sup>2</sup> of the coastal maritime sector, in terms of GDP, is estimated at €13.6 billion or 7.4% of the GDP of Greece in 2019. In terms of employment, its contribution is estimated at about 332,000 jobs (8.5% of total employment). In addition, its contribution to public revenues is estimated at approximately €3 billion (Table 1), whereas the employee salaries supported by the development of passenger shipping in the country are estimated at almost €1.8 billion.

<sup>1</sup> The study examines the domestic coastal shipping routes, the routes Kyllini-Zakynthos and Kyllini-Poros Kefallinias and the Adriatic sea routes. The study does not examine cruises and ferry lines that make short-distance calls.

<sup>2</sup> It includes: i) the direct effect from the operation of the sector ii) the indirect effect from the production interconnections with other economic sectors along the supply chain of the coastal maritime sector and iii) the induced effects from the consumption expenditure of the employees directly or indirectly involved in the production process of the sector.

**Table 1: Economic impact of passenger shipping on the Greek economy**

	Transportation services	Wider effects from tourism and production in the island regions	Wider effects from exports	Total
GDP (billion €)	2.0	10.1	1.5	<b>13.6</b>
Employment (thousand)	33.5	256.8	41.3	<b>331.6</b>
Tax revenues (million €)	728	1,887	343	<b>2,957</b>

Source: IOBE

The total contribution in terms of GDP from the demand for coastal shipping along the domestic routes (without the wider effects associated with tourism, the economic activity of the island regions and exports) is estimated at approximately €2 billion. In terms of employment, it accounts for about 33,500 jobs.

### **Wider impact on the economy of the island regions**

The development of coastal shipping has significant social and economic benefits for the islands. The contribution of the sector due to the wider effects associated with production and tourism in the Greek islands is estimated at €10.1 billion<sup>3</sup> (5.5 % of GDP in 2019). In terms of employment, it accounts for about 257,000 jobs, supporting almost half of the total employment in the Greek island regions. The largest contribution to GDP is observed in the regions of Crete and the South Aegean, covering more than 4/5 of the overall impact on the economy of the island regions.

In greater detail, in Crete, the contribution of coastal shipping is estimated at €3.5 billion in 2019, which corresponds to 37% of the GDP of the island's 4 prefectures. Alongside the transportation of passengers, the route Piraeus-Crete contributes to the transportation of freight to the mainland and then to foreign markets. Also noteworthy is the contribution of passenger shipping to employment, as the sector supports 103,000 jobs, which accounts for 41% of the island's employment.

In the South Aegean region, the economic impact of coastal passenger shipping is estimated at €3.1 billion in 2019, whereas the contribution to employment exceeds 63,000 jobs. The effect is strong in the Cyclades, estimated at approximately €2.2 billion, representing more than 70% of the region's GDP. The majority of the inhabited islands of the Cyclades (18 out of 24) depend on coastal shipping for their interconnection and their link with the mainland, while in the islands with airport connectivity, coastal passenger traffic is substantially higher than domestic air arrivals. Correspondingly, in the Dodecanese, the overall impact is estimated at approximately €866 million, representing 24% of the region's GDP.

<sup>3</sup> Of which €8.5 billion concern tourism, agriculture and manufacturing in the island regions and €1.6 billion correspond to the impact from the demand for goods produced in the mainland, generated by visitors of the islands.

**Table 2: Economic impact of coastal shipping on the economy of the island regions**

	Total contribution to GDP (million €)	Contribution to the GDP of the region (%)	Total contribution to employment (thousands)	Contribution to employment of the region (%)
Crete	3,516	37%	103.0	41%
North Aegean	3,099	48%	63.7	48%
South Aegean	912	35%	24.4	33%
Zakynthos	531	70%	15.5	73%
Kefalonia	176	29%	4.3	41%
Other islands	273		6.0	
<b>Total</b>	<b>8,507</b>	<b>41%</b>	<b>216.9</b>	<b>44%</b>

Source: IOBE

In the North Aegean region, the impact of passenger shipping corresponds to 35% of GDP. The economic impact is stronger in the islands of Samos and Icaria (40% of GDP), while in Chios it accounts for 30% of the island's GDP. This contribution is particularly significant considering that the region has a relatively high unemployment rate (18% in 2019 against 17% in total for the Greek economy) and the lowest GDP per capita among the 13 regions of Greece (€11,800 against a national average of €17,200).

Substantial benefits for the local economy and society arise also for Zakynthos and Kefalonia through their ferry interconnection with mainland Greece at Kyllini. In the case of Zakynthos, the total contribution accounts for 70% of the island's GDP. The contribution to employment is also significant, as together with the Cyclades Zakynthos enjoys the strongest support (in relative terms) from the domestic coastal maritime sector. Correspondingly, the contribution to the economy of Kefalonia is estimated at €176 million, representing 29% of the island's GDP.

Coastal shipping contributes significantly to the economic activity in the Sporades and the Argo-Saronic islands as well. Its impact on GDP is estimated at €198 million and €76 million respectively, representing almost the entire gross domestic product in these regions, which are essentially tourist destinations, served almost exclusively by coastal shipping routes.

### **Wider effects in the economy from exports**

The passenger shipping sector contributes substantially to the exports of Greek goods transported through the Greece – Italy routes in the Adriatic Sea. The value of goods exported from the ports of Patra and Igoumenitsa is estimated to have exceeded €1.7 billion in 2019. These two ports are ranked 2nd and 3rd respectively in Greece, after the port of Piraeus, in terms of transported international freight volumes (excluding fuels and bulk freight). The contribution to GDP from the Adriatic sea routes is estimated at €1.5 billion (0.8% of GDP in 2019). In terms of employment, the

total impact is estimated at approximately 41,000 jobs, while the total contribution to public revenues accounts for €343 million.

### **Main developments**

The demand for coastal services increased between 2016 and 2019. Passenger traffic in 2019 stood at approximately 19 million, recovering to its 2009 levels. In the Adriatic routes passenger traffic from Greek ports stood at 1.5 million in 2019. Over the period 2015-2019 the increase in passenger traffic was stronger than the growth of GDP in Greece, whereas the increase in coastal passenger traffic since 2013 mainly came from growth of inbound tourism.

In the main ports, the total passenger traffic (embarked and disembarked) in Piraeus reached 8.9 million in 2019, higher by 2.4% compared to 2018 (or 209k passengers). Against 2016, the total number of passengers increased by 15.3% or 1.2 million. Similarly, in the port of Rafina the traffic of passengers stood at 2 million in 2019 (+1.3 % compared to the previous year), posting a strong increase by 19.1% compared to 2016.

The major role of passenger shipping in the economy is also evident in the transportation of packaged products from and to the islands. Excluding fuels and other products used as inputs in the production process (liquid and dry bulk), the share of products transported by trucks in the island regions (mainly by passenger vessels) stood at 82% in 2019.

Similarly, the development of the transport activity on the Greece-Italy lines offers significant benefits by enabling the export of Greek goods to foreign markets. In the Adriatic sea routes, vehicle traffic stood in 2019 at its highest level over the period 2016-2020. The total number of vehicles (cars, trucks, motorcycles) reached 691,000, higher by 4.0 % (or 26,700) compared to the previous year and higher by 7.5% (or 48,100) in comparison to 2016.

### **Impact of the COVID-19 pandemic**

The performance and outlook of the sector were altered by the COVID-19 pandemic. The health measures imposed in order to curb the transmission of the virus have profoundly negative effects on the economic activity in Greece. The negative impact is particularly strong in sectors serving the transportation of passengers and vehicles, such as coastal passenger shipping. Restrictions on passenger transportation in the Aegean lines from the end of March 2020 to mid-May 2020 (excluding travel of permanent residents of the islands for emergency reasons) were followed by reduced passenger protocols on ships. Accordingly, restrictions on passenger and vehicle transportation in the Adriatic sea routes were imposed between mid-March and the end of June 2020.

Considering the sharp decline in tourist arrivals during the third quarter of the year and the restrictive measures due to the outbreak of the pandemic in the last two months of 2020, passenger traffic in domestic routes is expected to drop by 55% compared to 2019, while the transportation of vehicles (cars and trucks) is expected to decline by 36%. The negative impact is stronger on passenger traffic in the Adriatic routes, as it is estimated to decrease by 69%, while

the traffic of trucks is expected to decline by 8% (Table 3). As a consequence, turnover is expected to drop by 45% in domestic routes and by 30% in the Adriatic routes, with revenue losses and negative net earnings exceeding €300 million and €120 million respectively.

**Table 3: Impact of the COVID-19 pandemic on passenger and vehicle transportation**

	2019	2020*	Annual % change
Domestic routes (million)			
Passengers	19.00	8.55	-55%
Cars	2.43	1.46	-40%
Trucks	0.54	0.43	-20%
Adriatic Sea routes (million)			
Passengers	1.50	0.47	-69%
Cars	0.32	0.13	-58%
Trucks	0.37	0.34	-8%

Source: SEEN. Note: \* Estimate

### Main challenges

The COVID-19 pandemic and the measures adopted to limit the spread of the coronavirus have strong negative effects on passenger shipping. The uncertainty about the course of the pandemic in the near future and its medium-term impact on tourism are the main uncertainties that the sector currently faces.

In the medium term, the performance of the sector is negatively affected by the poor port infrastructure as most ports have inadequate reception facilities, which causes delays in the operation of scheduled services. In addition, the transition to a low-carbon economy and the adoption of measures of the National Energy and Climate Plan for the years 2020-2030 affect the operation of the sector. The obligation, from the beginning of 2020, to comply with the new international environmental regulations for the use of low-sulphur fuels (max 0,5%) in all vessels results in higher fuel costs. Consequently, the operating costs of the coastal shipping companies and the competitiveness of the sector overall are negatively affected.

Compliance with the adopted environmental regulations indicates the need to accelerate fleet renewal. The average age of almost half of the operating fleet is between 20 and 29 years of age, while 2 out of 5 ships are more than 30 years old (Table 4). The fact that coastal shipping is the only means of transport for a large number of islands, combined with the need to maintain transportation services of the best possible quality, makes the replacement of older ships by new vessels absolutely essential.

Finally, high VAT rates applied to coastal maritime tickets have a negative impact on the transportation costs for passengers and vehicles in Greece. In the context of the measures

adopted to tackle the effects of the coronavirus pandemic, the VAT rate on passenger tickets has been reduced to 13% until the 30<sup>th</sup> of April 2021. By reapplying the standard VAT rate of 24%, Greece would have the second highest VAT rate in coastal shipping passenger transportation among the EU countries. It is indicative that Italy – with comparable to Greece volume of sea passenger traffic – imposes a VAT rate of 10%.

**Table 4: Average age of the fleet**

	2020		2030	
	Coastal shipping	Pax-RoPax vessels International routes	Coastal shipping	Pax-RoPax vessels International routes
0 to 9 years	2	-	-	-
10 to 19 years	13	4	2	-
20 to 29 years	43	3	13	4
30 to 39 years	23	1	43	3
40 to 44 years	9	1	19	1
45 to 49 years	7	-	4	-
>50 years	0	-	16	1
<i>Total</i>	<i>97</i>	<i>9</i>	<i>97</i>	<i>9</i>
<i>Average age</i>	<i>28.1</i>	<i>22.6</i>	<i>38.1</i>	<i>32.6</i>

Source: SEEN