

THE STRENGTHENING ROLE OF ROMANIAN PORTS IN THE EASTERN EUROPEAN REGION, WITH SPECIAL REGARD TO EUROPEAN SHORT SEA SHIPPING

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Abstract: The short sea shipping of goods parallel with Constanta's competitiveness can be an option of road and rail transport if supposing that the European Union's transport policy (e.g. Marco Polo program) is able to coordinate especially the short sea shipping with the inland waterway and overland transport. It is necessary that the short sea shipping of goods should be integrated into the TEN-network more effectively, or the „hub” role of major ports should become more powerful. The development of the following decades in relation to Constanta should focus on this purpose so that the port can be an optional target for the Western European and Mediterranean ports.

Key words: European Union, Black Sea, Romania, port, short sea shipping, marine areas

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INTRODUCTION

Sea shipping has become especially important in world trade in the years of the recent global economic crisis. Its importance, taking the period of crisis into consideration as well, is also growing within the economic area of the European Union. One of the reasons for this is that Europe has an indented seacoast of about 3,500 kms, which makes it possible for coastal countries (especially on the Atlantic Coast) to establish ports with high-level traffic and run them economically. The second, more important, reason is that, due to more than 1,200 sea ports and several hundreds of river ports, this method of transportation means a competitive alternative for the overburdened public highways and for the lack of railroad networks. Besides all these, the cost reductions forced out by the crisis also drove EU freight transportation into the direction of sea shipping. The present paper seeks to answer the question as to how the ports of Romania, in the area of the Black Sea and the Eastern Mediterranean, with special attention to the port with the highest level of traffic, Constanta, could accommodate themselves to these EU challenges. It also attempts to look into the role of Romanian ports in the Union's short sea shipping.

METHODOLOGY

To be able to support the assumptions laid out in the introduction, it was necessary to analyse the trade of the European Union and the particulars of its traffic and trade policy

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concerning sea shipping. The evaluation of statistical data was carried out with regard to the years of the economic crisis and its aftermath. The composition of the trade of individual coastal regions and Romanian ports and that of the goods transported was also taken into consideration as an important aspect of the analysis. The growth rate of EU economy, and, in relation to this, inland freight carriage were seen as the most important points of departure. The resulting growth of container traffic is what first and foremost concerns the growth in the traffic of European ports. The growing traffic of the ports in the period after the millennium raises the question as to what extent short sea shipping may be an alternative of inland and inland water traffic, and to what degree Romanian ports may be parts of this traffic. From the aspect of short sea shipping, several factors had to be compared. First of all, the determining factor is the ratio of transport time and distance, thus the traffic between the marine regions of the EU, comparing the ports with the highest level of traffic, had to be analysed. In the present paper, ports with the highest level of traffic were compared. Those factors of transport geography and transport policy were also taken into consideration that may affect the operation of a transport system. The comparison of the ports' logistic background (which greatly determines the choice of ports) may also decide the selection of an ideal port. This is an important aspect especially for those Eastern European countries (such as Hungary) that do not have sea coasts and thus their reliance on ports and sea trade is a crucial factor.

THE GROWTH OF EU ECONOMY AND ITS EFFECT ON FREIGHT TRANSPORT

In the analysis of short sea shipping it is vital to consider the effects that the transformation of the economy of the European Union exercised on freight transport during the economic crisis and after that as well. In the period between 2006 and 2011 (not taking the drastic setback of 2009 into account), the Union produced the largest percentage of world GDP. The growth of this GDP, though it showed an average of 3.6% growth in the period in question, could be attributed to the output of the outstanding powers among the developing countries, such as China and India. As opposed to this, the developed countries, the members of the euro area and the USA produced a growth of around only 1%. The first signs of recuperation after the crisis were seen in 2010, but in the case of the euro area, the lowest ranked of the group, this only meant a 1.9% gain. Besides all these, this economic growth failed to prove to be stable, for in 2011, along with the 1% drop of the euro area and the developing countries, in other parts of the world, growth dropped to half of the preceding periods (see table 1).

Table 1. The expansion of world economy between 2006 and 2011 (in %) (Data source: the author's compilation of relevant IMF figures)

Year	2006	2007	2008	2009	2010	2011
World	5,1	5,2	3,0	-0,5	5,3	3,9
Developed countries	3,0	2,7	0,6	-3,4	3,2	1,6
Euro area	2,9	2,7	0,7	-4,1	1,9	1,5
USA	2,7	2,1	0,4	-2,6	3,0	1,7
Developing countries	7,9	8,3	6,0	2,8	7,5	6,2

In spite of the crisis, the full output of EU trade between 2005 and 2010 grew by 19.1%. While the export of the EU rose by 18.9% and its import by 19.3%, the negative elements of the trade balance were constituted by imported mineral fuel oil (including petroleum). In 2010, the EU's trade of goods represented a value of €7,850 billion, which was shared between export and import with the amounts of €3,887 billion and €3,963 billion, respectively. During this, the internal goods trade of the EU dropped by 2.5% as regards export, while imports decreased by 2.4% (Amerini, 2009).

These economic flows affected the freight traffic of the EU to a great extent. The ratio of transport volumes to GDP also show that as opposed to the increase prior to the economic crisis, a

setback began from the year 2007. The rates and changes, however, are different in the eastern and western parts of Europe. According to relevant figures, it was chiefly the countries that accessed to the EU during the eastern enlargement that could pull up the EU average (table 2). It is also to be noticed that the depression affected the Eastern European region later, thus the ratio of freight transport to GDP began to drop as late as 2008.

Table 1. The ratio of freight transport volumes to GDP (in %) (Data source: The author's compilation based on relevant Eurostat figures)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
European Union (EU-27)	100	98,9	97,7	98,8	104,7	104,8	105,1	105,6	103,5	95,8	98,6
European Union (EU-15)	100	98,9	96,6	97,1	102,3	101	100,2	99,4	96,4	88,1	89,5

Table 3. The ratio of freight transport volume in the EU and certain member states to GDP (in %) (Data source: the author's compilation of relevant Eurostat figures)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
European Union (EU-27)	100	98,9	97,7	98,8	104,7	104,8	105,1	105,6	103,5	95,8	98,6
Germany	100	99,6	98,6	98,3	103,2	106	109,1	110,2	108,7	100,9	102,4
Italy	100	98,7	100,4	91,6	101,5	107,6	94,8	90,4	91,3	87,6	90,3
Romania	100	106,3	119,6	127,1	145,1	174,2	171,4	165,6	148,5	113	105,8
Slovenia	100	101,2	95,5	98,8	114,4	129,2	132,3	138,6	152,7	147,5	160,2

Comparing the figures of certain Western and Eastern European countries, one may see a sort of duality: while in the case of some Western European countries, the volume of freight transport roughly equals a certain country's GDP (or even shows a 10% fall), in the case of the new EU members such as Romania or Slovenia, it is well over the GDP. Regarding Romania, the setback is substantial only from 2009, while Slovenian expansion could not be halted even by the economic crisis (table 3).

Analysing freight transport further, one can notice, on the one hand, that expansion up to 2007 was checked by a setback the following year, due to the effects of the economic crisis. On the other hand, it is clearly seen that public highway transport and sea shipping were the dominant transport methods in the past decade as well (figure 1). The output of the other four types of transport had not changed significantly (excepting railroad transport).

The total traffic of the two ways of transportation mentioned above exceeded the joint sum of all the other means of transport. These figures are even more relevant in the case of sea shipping, for the majority of the Union's freight transport passes through various ports. In concrete terms, this means that about 3,500 million tons of goods are exported and imported through more than 1,200 sea ports of the EU every year. Sea shipping alone witnessed an average yearly rise of 1.6% (in tonne-kilometres) between 2000 and 2008.

Romanian ports are more and more involved in this improvement. It is especially true of Constanta, which, just like Western European ports, strives to become a logistic service centre where there is an opportunity to treat and process the incoming materials and goods and provide different services pertaining to them (UNCTAD, 2010).

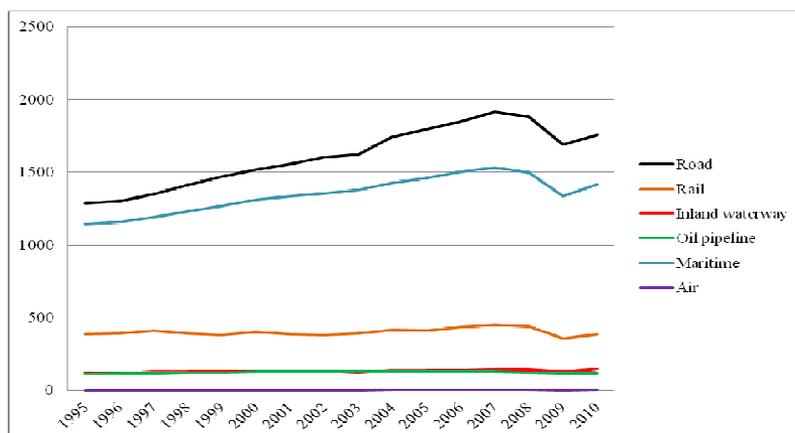


Figure 1. Freight carriage in the EU according to means of transportation between 1995 and 2010 (in tonne-kilometres)

Source: the author's compilation of relevant Eurostat figures

MARCO POLO PROGRAMME I-II, DETERMINING SEA SHIPPING IN THE EUROPEAN UNION

As it turns out from the data mentioned above, shipping – including short sea shipping – has expanded to the same degree in the recent years as public highway transport. One of the instigators of this is the Marco Polo Programme initiated by the EU. The programme's goal is to transfer traffic from overburdened inland traffic routes (especially from public highways) to „*sea highways*.” Its further aims include the reduction of traffic congestion, the improvement of the environmental output of the intermodal transportation system and thus creating an efficient and sustainable transport system that produces an added value for the EU without exercising negative effects on economic, social or geographical cohesion. The intermodality of traffic and transport of such a degree makes the integration of the traffic networks of individual countries possible, and the creation of an integrated traffic network that covers the whole area of the Union and all different transport modes.

In this scheme, ports gain a very important role as connection points between ports and the „*hinterland*”, since goods arriving in ports from outside Europe have to be transported further. The majority of them get to the European hinterland on public highways, inland shipways or on railroads. The remainder of them, however, are transported in smaller vessels to other ports to reach their final destination. Together with this, those advantages are relied upon that serve cost efficiency, eschewing traffic congestion and polluting the environment on a considerably lower scale. Due to the goals set up by the programme, a large-scale restructuring may be witnessed in the area of different transport methods, in which one of the winners is short sea shipping.

SEA SHIPPING IN THE EUROPEAN UNION

The importance of sea shipping in the European Union is well shown by the fact that more than 90% of the trade with the rest of the world is transacted through EU ports, and 40% of the trade within the economic community is also done on seas and through ports. Twenty-five percent of the world's sea trade and 50% of the global short sea shipping are also conducted through these ports. The European port system, however, cannot be regarded as a homogeneous one, for the treatment and distribution of goods in these ports show great variety. This can largely be explained with the economic diversity and the different market demands of hinterland countries, due to which several middle-sized and smaller, special ports evolved, besides the great Western European „*mega*” ports (Justen, 2012).

In the years of the global crisis, in 2007 and 2008, the EU ports treated nearly 4,000 million tons of goods. This figure shows a 18% growth compared to 2002. This means that following the millennium, the sector expanded by 2.7% on a yearly basis.

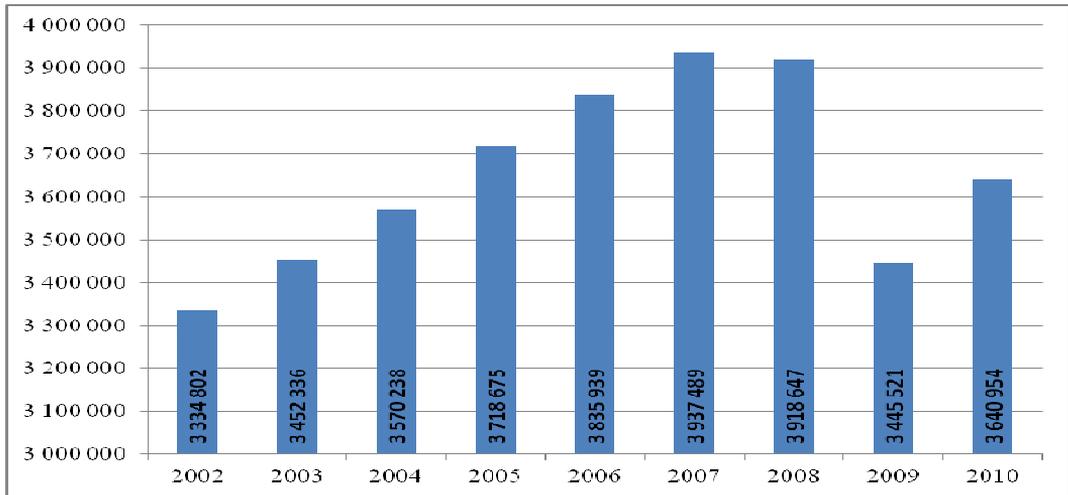


Figure 2. The quantity of goods treated in the ports of the EU-27 between 2002 and 2010 (in million tons)
Source: the author's compilation of relevant Eurostat figures

After about half a decade's unbroken expansion, however, the quantity of goods transferred in EU ports dropped by 12% in 2009, due to the global financial crisis. According to estimates, the total quantity of treated goods in the year in question was 3.4 billion tons, which corresponds to the traffic data of the year 2003 (figure 2). The greatest setback was registered in Romania (-28.5%), Slovenia and Finland, which could be explained by the negative economic tendencies of the hinterland countries (Amerini, 2010).

If one analyses the tendencies of sea shipping according to marine regions, several important differences may be spotted. The leading role of Western Europe may be seen, apart from the total of traffic, in the carriage of dry bulk products and container traffic. About one sixth of the traffic of Western European ports is conducted by Black Sea and Eastern Mediterranean ports (table 4).

Table 4. The traffic of European ports according to marine regions and types of goods in 2008
(in millions of tons)
(Data source: the author's compilation of relevant Eurostat figures)

2008	Dry bulk	Liquid bulk	Container	Other / Non-bulk	Total
Northwest Europe	336	495	328	187	1,346
Black Sea; East Mediterranean	89	91	26	41	248
West Mediterranean (incl. Italy)	240	463	222	160	1,084
East Baltic	61	79	12	27	178
Great Britain and Ireland	139	252	68	135	595
North Baltic	150	217	34	148	549
EU27 total (+ Croatia and Norway)	1,015	1,597	688	699	3,999
EU27 total	946	1,503	682	672	3,804

Similar tendencies may be registered if one analyses the short sea shipping of the EU. Up until 2008, this type of freight transport represented 60% of all sea transport of the EU-27. This rate was maintained in 2009 as well, despite the recession in traffic (figure 3). The rates, however, are diverse in different countries and regions. Similarly to 2009, short sea shipping in the EU carried 1.9 billion tons of goods in 2010, which is nearly 62% of the total sea traffic in the Union. However, each country has different shares from this amount.

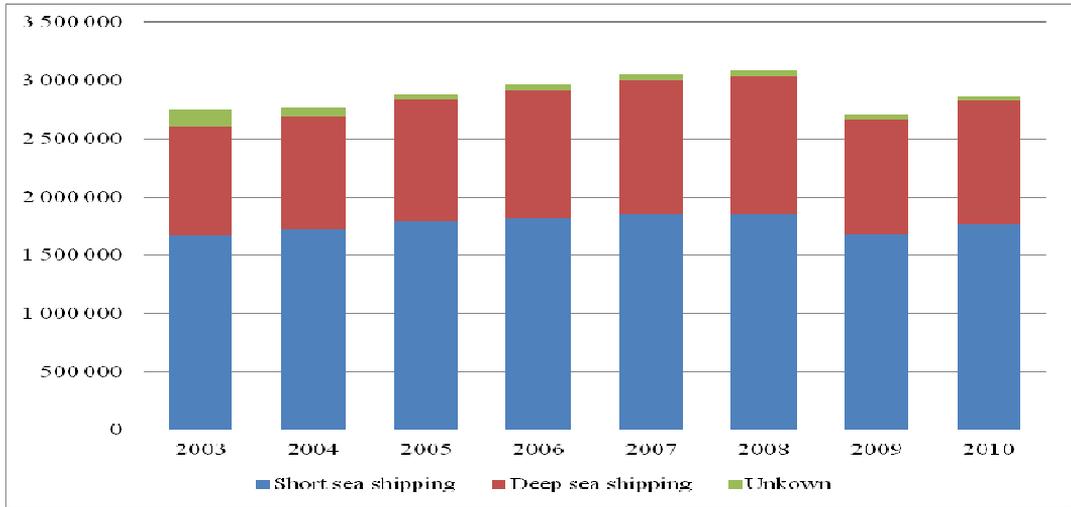


Figure 3. Share of short sea shipping (SSS) of goods in total sea transport between 2003 and 2010 (gross weight of goods in Mio tonnes)
Source: the author’s compilation of relevant Eurostat figures

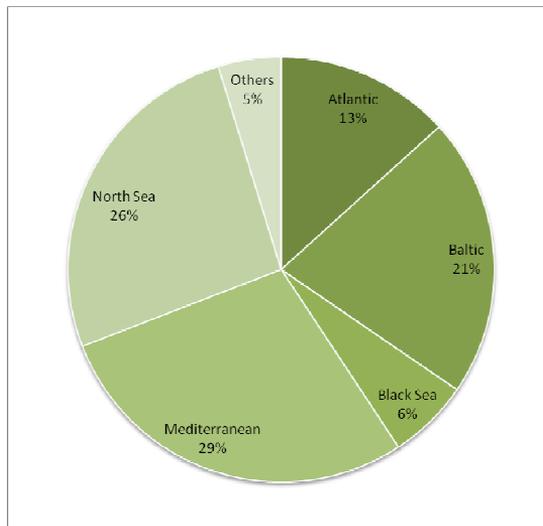


Figure 4. Short sea shipping of EU-27 between marine regions in 2010
Source: the author’s compilation of relevant Eurostat figures

The preponderance of short sea shipping is especially significant (with more than 90%) in Finland, Malta and Sweden, which can only partly be explained by geographical factors. In these countries, short sea shipping is further reinforced by the great extent of feeder services. As

opposed to this, in relatively smaller countries, such as the Netherlands and Belgium, which concentrate significant so-called mega ports conducting intercontinental trade, the rate of short sea shipping is lower than 60%. As regards marine regions, the most active one was the Mediterranean, with nearly 570 million tons of goods, amounting to 29% of the total traffic, followed by the North Sea region with 524 million tons (figure 4).

In spite of the expansion of traffic, the Black Sea region is significantly lagging behind with a 6% share, which thus considerably affects the role of Constanta and other Romanian ports in European short sea shipping. This low share is due to the absolute isolation of the area and consequently to the relative isolation of the ports. This geographical disadvantage is sadly reinforced by geopolitical factors shaped by Turkey (see, for instance, the traversability of the Bosphorus). As regards marine regions, the different characteristics and demands observable between the economic regions of the European Union (such as the ratio of agriculture and processing industry) also heavily affect the composition of transported goods (figure 5).

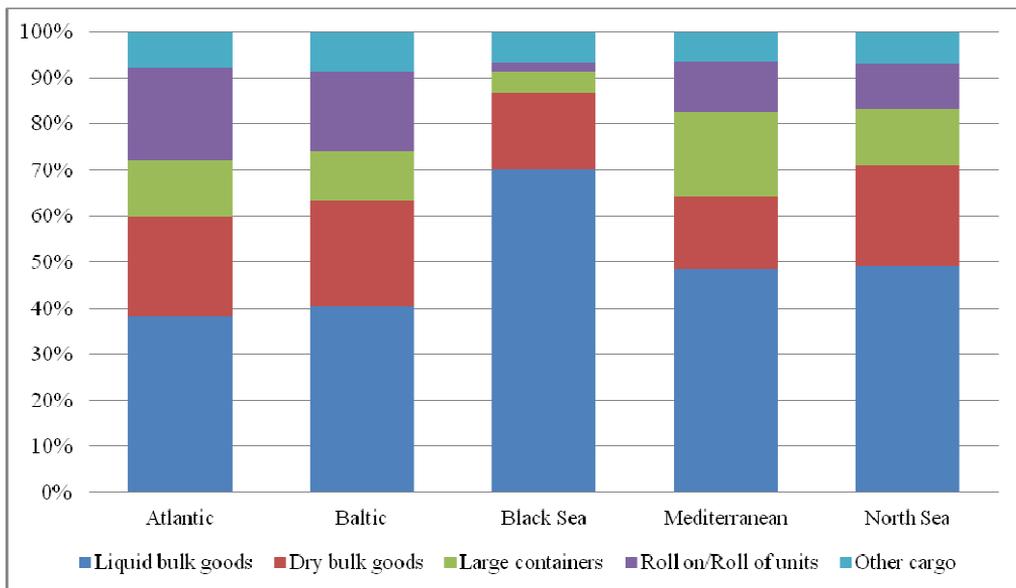


Figure 5. EU-27 SSS of goods by type of cargo for each marine region of partner ports in 2010
Source: the author's compilation of relevant Eurostat figures

As far as regions are concerned, the greatest share in the composition of goods was represented by liquid bulk goods (870 million tons) in 2010. Their share was the highest in the Black Sea area (70%). The proportion of dry bulk goods (with a total quantity of 341 million tons) shows a smaller diversity (between 16 and 23%). Container traffic represents a higher rate in the Mediterranean area (18%), while the share of Ro-Ro goods is the highest in the Atlantic region with 20%.

THE GEOGRAPHICAL DETERMINATION AND RELATIONSHIP NETWORK OF ROMANIAN PORTS

The geographical isolation of the Black Sea and the problem of the traverse through the Bosphorus continues to dominate the sea shipping of the region. Although the 1936 multilateral Montreux Convention secures, among other things, the free passage of merchant ships through the straits, Turkey tends to curb the free passage of tankers heading Black Sea ports, referring to environmental reasons (Capatu, 2010).

These factors heavily affect the network of relationships of Romanian ports. At the same time, the role of the Danube in international commodity trade may balance these drawbacks in the case of Romania. The river Danube, in this way, connects Romanian river-sea ports into the international commodity flow of Europe. Among the ports, the role of Constanta, as the „hub” of the region, is obvious if one looks at statistical data. The leading role of the port can, however, only be interpreted together with the network of relationship with other, satellite and river-sea ports, for it is situated, together with the area of the Black Sea, at the crossroads of trade routes that connect landlocked Central and Eastern European countries not only with Central Asia and the Far East but with the markets of Western Europe as well. „*The Rotterdam of Eastern Europe,*” however, has to face competition with the ports of the Adriatic region that are of similar size and have similar traffic density (Erdósi, 2008).

Constanta plays a crucial role in the commercial and economic life of those landlocked Eastern and Central European countries that conduct intensive traffic with several other European countries. The transport corridors that connect directly with the port also have a central role in this. Thus, the port, through the Danube-Black Sea Canal, is connected to the VII pan-European transport corridor, which provides shorter and cheaper transport from the direction of Central European countries and Northern European ports than public highways. Through its connection with the Rhine-Main-Danube Canal, it is joined with the western pole of European trade, Rotterdam. The navigable inland waterway from the Romanian terminal to Kelheim, Germany, is nearly 2,050 kilometres long. The port, being the eastern departure and terminal of the IV/b Helsinki corridor, provides the necessary connections with the national and the European railroad system, which contributes to the significance of Constanta in a way that 80% of the goods reaching the port from the mainland get there by rail. The most pressing goal is the development of the main corridors (IV, V, VII, VIII and X) that make up the backbone of the European transport network and which pass through the country. That is why the greatest problem from the perspective of road transport is meant by the lack of expressways (public highways). The Romanian government pays special attention to the improvement of transport network.

THE TRADE FLOW OF THE PORTS AS COMPARED TO OTHER EUROPEAN MARINE REGIONS

As it has turned out from the presentation of sea shipping from the aspect of marine regions, the 6% share of the Black Sea region counts as the lowest of the rank, despite the fact that, in comparison with the busier Mediterranean and Western European ports, up until 2008 it had shown continuous expansion, and it was only in the past two or three years that the effects of the crisis could seriously be felt. As it has been pointed out, all these tendencies heavily influenced the output of Romanian ports. This duplicity affected not only Romanian sea trade but also that of other Central and Eastern European countries. Up to the years 2007/2008 which count as milestones, steady, albeit irregularly distributed, expansion characterised sea trade (figure 6).

On the list of EU-27 countries, the share of Romania from European shipping in 2010 (1.1%) is ahead of its great rivals, Slovenia (0.37%) and Bulgaria (0.65%) and its share is comparable to that of Poland (1.42%). In comparison with Western European countries, its disadvantage, however, is remarkable. In comparison with Italy (13.63%) and the Netherlands (12.97%), it is 13-14 times higher, compared to Germany (7.72%) or France (9.14%), it is still nearly tenfold (Amerini, 2010).

In short sea shipping, Romania, together with the ports of other marine regions, conducted in total 178.3 million tons of goods traffic between the years 2001 and 2010. As regards the division according to marine regions, it is to be explained with geographical proximity and the special economic relationships that it traded the greatest amount of goods (97.8 million tons) with the ports of the Mediterranean and the Black Sea region (57.8 million tons). The volume was significantly lower in the trade with the ports of the North Sea and the Atlantic region (4.4 and 7.4 million tons, respectively). Similar output may be witnessed in the constantly expanding goods

trade with the ports of other Central and Eastern European countries (figure 7). It may also be noticed, however, that it is substantially lagging behind the share of Western European countries (the differences can be 10-15 times as much).

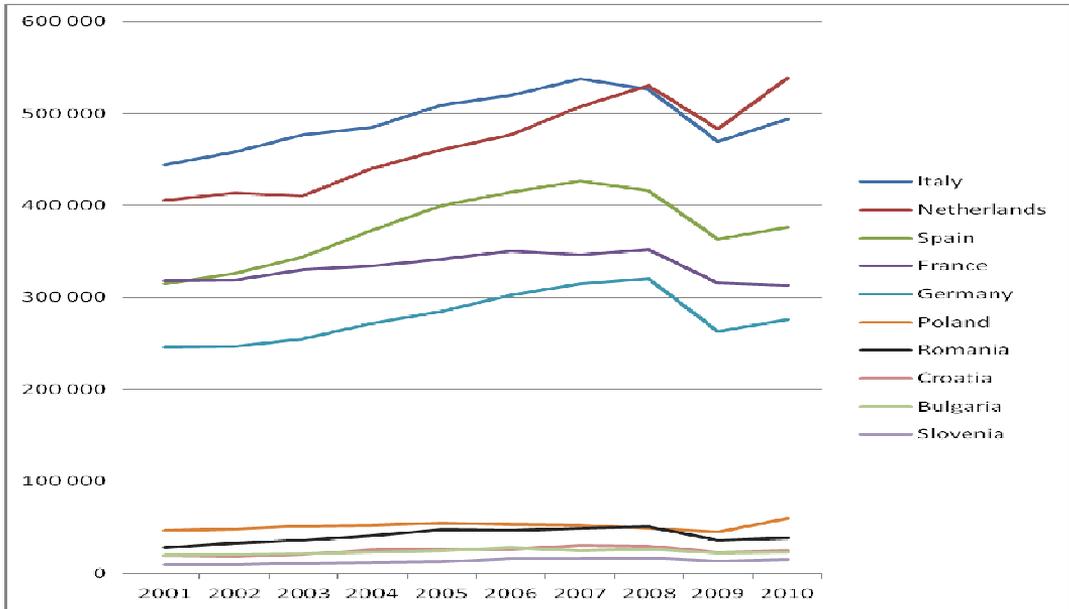


Figure 6. The share of Western, Central and Eastern European countries conducting significant sea trade from sea trade of EU-27 between 2001 and 2010 (in 1,000 tons)
 Source: the author’s compilation of relevant Eurostat figures

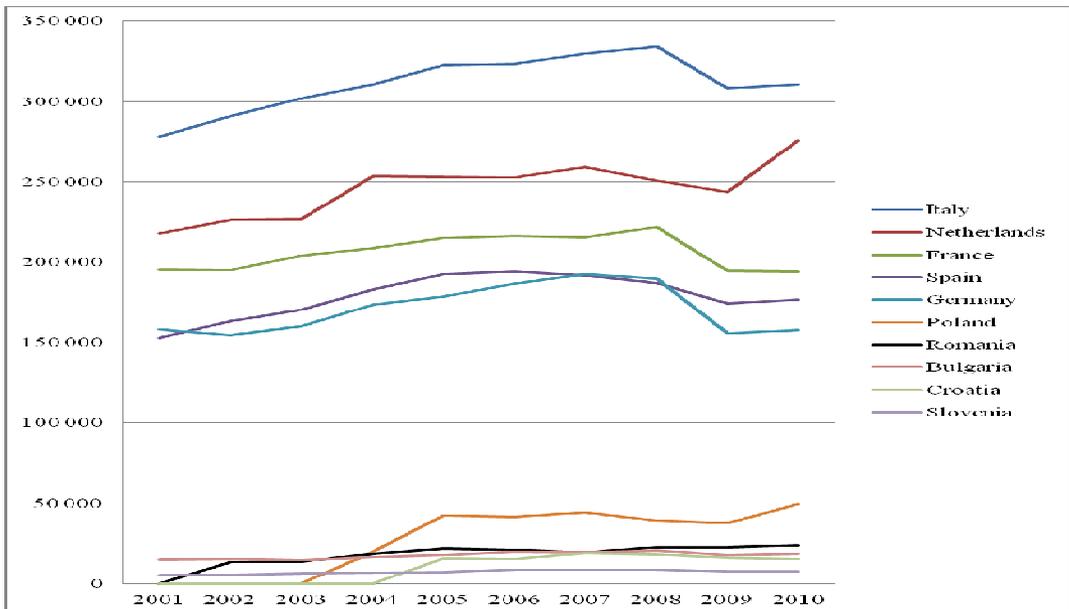


Figure 7. The share of Western, Central and Eastern European countries conducting significant sea trade from short sea shipping of EU-27 between 2001 and 2010 (in 1,000 tons)
 Source: the author’s compilation of relevant Eurostat figures

The analysis of the composition of goods carried through Romanian ports within short sea shipping clearly shows that the majority of traffic was provided by liquid and bulk goods (table 5). They mainly included agricultural products (especially wheat), basic commodities for goods with short life cycle (such as iron ore and metal waste) and fuels (such as coal, crude oil, oil products and natural gas). This idiosyncrasy is largely due to the fact that Romanian ports mainly trade with landlocked Central and Eastern European countries (for instance, Hungary, Slovakia and the Czech Republic) (Amerini, 2009).

Table 5. The share of Romania in EU-27 short sea shipping according to types of goods (in 1,000 tons)
(Data source: the author's compilation of relevant Eurostat figures)

	2003	2004	2005	2006	2007	2008	2009	2010
Liquid bulk goods	5235	8256	9497	10292	8421	7716	8019	8511
Dry bulk goods	5143	5456	6958	6640	6289	7471	10321	10479
Large containers	1074	1734	2187	1036	339	3580	1655	1495
Ro-Ro	-	45	200	145	108	94	79	156
Other	2313	2943	3239	3056	4242	3917	2514	3314
Romania total	14078	18773	22082	21170	19400	22779	22588	23954
EU-27	-	1723979	1806009	1833404	1861243	1856263	1684863	1765479

Traffic data, on the other hand, yield a much more sophisticated picture in the case of Constanta. If one looks at the twenty busiest ports in the European Union, the port occupies a much more prestigious place within Europe, as compared to the output of Romania as a whole.

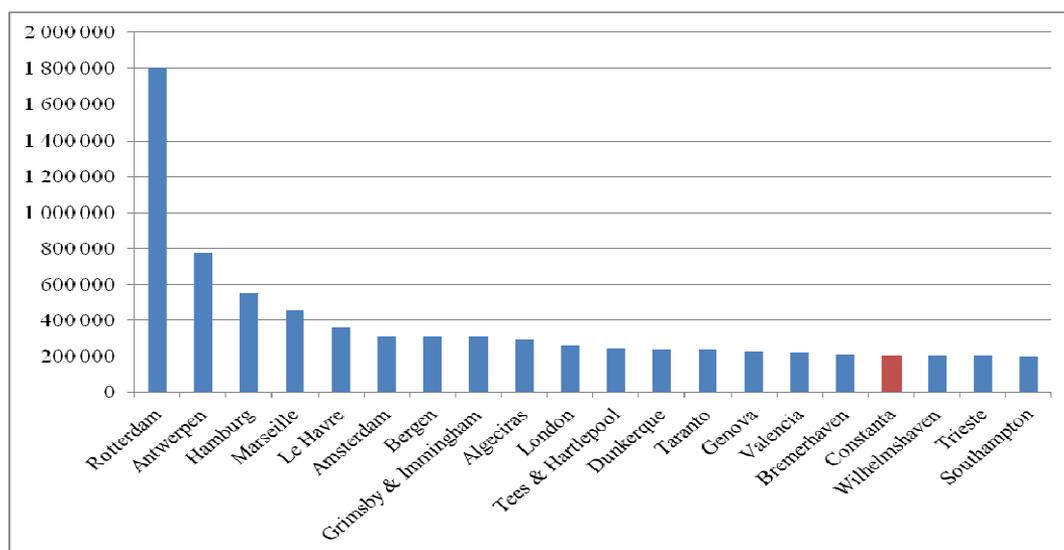


Figure 8. The busiest ports in EU-27 according to the figures of total trade between 2005 and 2009 (in 1,000 tons)

Source: the author's compilation of relevant Eurostat figures

In concrete terms this means that according to the figures of total trade between 2005 and 2009, this port was the 17th busiest one with EU-27. In the given period, nearly 210 million tons of goods passed through the port, which is approximately the scale of its Western European (second-rate) counterparts (figure 8).

Within the goods passing through the port in the period between 2004 and 2009, the share of dry and liquid bulk goods was substantial, mainly including agricultural products, crude oil and oil derivatives. Constanta, however, was not spared by economic crisis. The expansion up to 2008 was followed by drastic setback in 2009, which affected bulk products the most (table 6).

Table 6. The traffic of Constanta according to types of goods (in 1,000 tons)
(Data source: the author's compilation of relevant Eurostat figures)

	2004	2005	2006	2007	2008	2009
Liquid bulk	10,633	12,349	11,902	11,796	11,915	7,236
Dry bulk goods	16,632	17,52	16,178	15,075	18,656	13,681
Ro-Ro	26	191	139	100	99	73
Other / Not bulk	4,68	4,772	3,818	4,825	3,955	2,92
Large containers	1,857	2,439	1,083	350	4,898	2,736
Total	33,829	37,271	33,121	32,146	39,522	26,647

CONCLUSION

Short sea shipping is a determining element of the EU's transport policy. Its leading role is unquestionable both in European and world sea shipping. Due to its steady improvement, it is becoming an alternative of inland freight transport within the whole European community. As regards distinct European regions, however, its traffic shows considerable diversity. The area of the Black Sea is sadly the lowest of the rank in this respect. Due to the Union membership of Romania and its role in the Black Sea area, the port of Constanta gains a more and more important role in this mode of shipping. This role may be strengthened by landlocked Central and Eastern European countries, that, by force of their position, must heavily rely on Constanta.

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Submitted:
February 19, 2013

Revised:
April 19, 2013

Accepted and published online
May 17, 2013