

THE PORTS OF NORTH GREECE AND THEIR IMPORTANCE FOR THE ECONOMIC DEVELOPMENT OF SOUTH-EASTERN EUROPE

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Powerful processes of change and transition in the global environment have affected Greek regional economies significantly during the last 15 years. A major aspect that has undergone profound change is interregional trade. The key characteristics of trading in the new economic environment are very different from what they used to be in the past. They are complex and dynamic and are also characterized by a very complicated arrangement of actors, relationships and infrastructures. Some of the fundamental elements that characterize world trade flows are the widespread use of containers, transportation improvements and advancements in technology, the growth of combined transportation systems and logistics. All these have brought forward the issue of time, which tends to become a major aspect of success and a competitive advantage. In this article we analyze the role that Greek seaports play in the commercial trade system of the Balkans, seeking, at the same time, the conditioning factors for improving the overall performance of Greek commercial ports in the wider geographical area.

Key words: Ports, regional development, South-Eastern Europe, transportation

1 Introduction

During the last few decades, developments in the world economic environment are indubitably judged as rapid and extremely interesting. Sovereign characteristics of world economy constitute the globalisation of markets, the relaxation of border restrictions, the predominance of multinational companies and the internationalisation of production. This new reality in the world economy, had and it continues having, serious qualitative and quantitative effects in the sector of international transports. More concretely, and in regard to the quantitative change to the height of international transports, the general conclusion is that the volume of transported products globally has been increased considerably and will continue increasing for the next years, as more national economies are expected to enter in the globalized market. Beyond quantitative, important are also the structural changes that have been observed in the way of conduct of trade.

Nowadays, the wide spread of the use of containers, the growth of combined transports and logistics, the incorporation of advanced technology, the fact that 'saving time' have become main competitive advantages and the parallel predominance of world tendency of large enterprises for adoption of the method "No stock- just in time", constitute the sovereign characteristics of world trade.

New developments have especially resulted in the rapid growth of marine transportation facilities and related businesses, as these systems seem to attract much of the interest of world commercial "players" for reducing transportation costs as well as meeting fast delivery needs (Pardali, 2001). Therefore, seaports are now key infrastructures in the world trade system. Seaport industry is attracting significant investments and the major commercial ports, which are crowded with numerous activities, have become shipping centres of interregional or international importance.

As it was expected, the competition of transportation means has affected, to a large extent, the global port industry. Henceforth, new elements constitute the competitive advantages of each port with the peak of spear remaining the increase in quality of provided services. Ports have acquired the characterization of dynamic nodes where the combining presence of infrastructures and services lends in them exceptional importance not only for national but also for international transportation procedures (Hlomodis, 2001). On the other

hand, ports via the continuous breadth of operations and activities that they develop, have a significant influence on regional growth, in countries where the marine transportations dominate, they constitute a determining factor of economic performance.

Requirements to improve the ability of seaports to sustain high quality commercial shipping call for considering their macroeconomic role and importance both in the chain of international trade as well as in the functioning of the national and regional economy within which they are located. The Greek seaport industry has not remained uninfluenced by these new international developments. Although ports have always played an important role in the economic life of the country, currently, are called to have an upgraded duty, particularly in the international commercial transactions of the country. The geographical location of the country close to the Black sea as well as its nodal place in the Mediterranean Sea, is a competitive advantage in terms of marine transportation routes. Considering the recent levels of extroversion demonstrated by a number of Greek enterprises, the country has the potential of becoming a commercial leader in the Balkans.

The aim of this article is to point out the importance of seaports of N. Greece with regards to the commercial activity of Balkans and imprint the prospects for further growth of their commercial activity in the wider region of SE Europe. In the next section, we conduct an analysis concerning the contribution of ports as economic organisms in the economic growth of the regions where they are located. Section 3 provides information on the main characteristics of ports of N. Greece as well as their figurative activity. In the fourth section, we record the tendencies in Balkan market while analysing the competitive framework of Greek ports. Particular attention is given in the market of FYROM which constitutes the largest market of transit flows for the Greek ports. Finally, we propose three scenarios regarding the growth of transit movements of ports to the Balkans. The article concludes by commenting on the wider implications of the analysis for the Greek ports.

2. Ports and Regional Economic Development

The seaports are intermediate locations in the global flow of passengers and freight, vital nodes in global supply chains and international and regional trade. They serve the shipments by sea, which account for about 80% of international trade in terms of volume. It is, therefore, obvious that the economic importance of ports is two-fold. On the one hand, it is necessary consider the micro-economic role that ports play in the chain of transports and on the other hand, it is vital to take into account the macroeconomic services that ports to their hinterland as well as to the national economy.

A first view of the contribution of ports in the transportation chain can be acquired by just studying the relative data given by EU. According to EU, 90% of non-community trade, as well as 40% of intra-EU trade are carried out via European ports, while at global level via ports are trafficked more than 3,5 billions tones of charges per year (Psaraftis 2005, EUROSTAT 2007). Finally, at the global scale, it should be marked that, in 2003, the cargo transported by sea reached as much as 6,48 billions tones, while, in 2004, this number increased even more reaching some 6,74 billions tones (ESPO, 2007).

The importance and the role of ports for the regional and national growth constitute a complex issue which depends on a pleiad of heterogeneous and frequently not accountable factors. It is a fact, that the contribution of ports in the growth of their direct hinterland was more obvious until the 50's, where industry constituted the main regulator of economic growth. Therefore, that period a lot of port-cities such as Liverpool, Hamburg and Los Angeles were developed very fast taking advantage of their direct access to the sea. The fact that the tertiary sector has become the major driver of world economic growth as well as the parallel reformation the of transportation sector and in particular maritime transportation, rendered the measurement of contribution of ports in the growth of their hinterland, a more complex process (Haynes et. al1997).

The predominance of combined transports and the reduction of time-distances as a result of major improvements in the road and railway axes, altered radically the beam of influence of each port, leaving enormous margins of growth or shrinkage of port hinterland

(real and potential). However, despite these changes, ports continue to play an important role for the local economy.

Ports continue constituting a marine commercial gate for the distribution of products of local enterprises. They also constitute important infrastructures for the growth of tourism, while, last but not least, is a fact that around, each port a considerable number of various shipping services has been developed. This system of services and activities can be characterized as an economic microcosm. Within ports areas, economies of scale contribute in the settlement of enterprises which can offer services, to individuals (ship-owners, seamen, passengers, carriers), to the ships (pilotage towage etc), or finally they can provide services of organisation of figurative process (Logistics). On the other hand, it is apparent that the operation of port, also increases the economic activity of the existing services of the cities in which the ports are located (banks, centres of exchange, actuarial organisms, tourist agencies etc) (Mylonopoulos, 2004 and Pardali, 1997 and Haynes et. al, 1997). Finally, it is important to point out the contribution of ports in the increase of employment of its wider region. According to the relevant data of EU, port industry in 2005 occupied more than 350.000 workers (Psarafis, 2005 and Copens et. al 2007 and Gripaos and Gripaos, 1995).

3. The Ports of North Greece

Greece has the longest coastline in the whole EU, while possessing some 1250 sea ports (Karachalis and Kyriazopoulos, 2006) Seaports operations constitute essential conditions for the maintenance of territorial unit and cohesion, ensuring access to all inhabited islands of the country. Beyond their importance in guaranteeing of territorial cohesion, Greek ports also play an important role in the conduct of trade and more generally in the economic growth of the country. Apprising the increased importance of marine transports in the world transportation chain, the role of Greek port industry has become exceptionally significant, particularly in a country where the shipping sector constitutes one of the 'heavy arms' of its economy. Besides, the possibilities for further growth of Greek ports are also extended by the strategic location of the country being in the crossroad of East and West. Under these circumstances the Greek ports and particularly the ports of Northern Greece have a strategic character for the conduct of trade in the wider region of S.E Europe. They occupy nodal places in the international marine roads that penetrate the Mediterranean and the Black Sea.

The main ports of N. Greece are the port of Thessaloniki which constitutes the central port of N. Greece, the port of Igoumenitsa which constitutes the western gate of N. Greece, as well as the ports of Kavala and Alexandroupoli, which constitute the Eastern marine nodes of N. Greece. The location of the above ports is presented on Map 1.



Map 1: The main ports of N. Greece
Source: MMM (2006)

In recent years, central role in the conduct of commercial activities plays the port of Thessalonica, because of its size, its infrastructures and its nodal place concerning the Balkan peninsula. The growth of this particular port constitutes a main priority of MMM. For this reason the port together with the port of Piraeus constitutes the two strategic ports for which it has been announced open competitions, for the concession of container terminals in private individuals. This competition constitutes the first step for the implementation of the Landlord Port system in Greek ports.

Generally speaking, the port demonstrates a high level of activity, while its excellent connection with the railway and road networks classify it, in the bigger marine gate of Balkans to the Mediterranean. The port services includes the distribution of charges of direct approach (direct call), meaning that land transport of goods take place in small distance, and is directed or emanated mainly from regions of N. Greece but also and charges that require transports of larger distances. In addition the port demonstrates an important activity in regard to the merchandising distribution with the Balkans. The location of port as a centre of transit in the Balkans is strengthened by the completion of railway and road network Sofia – Thessalonica.(TPA, 2008 and MMM, 2008)

The port of Igoumenitsa constitutes another important gate of Greece to Western Europe. In the last years the installations of port have been upgraded considerably, while in the plans of IPA have been included new interventions that are expected to further improve the operational ability of the port. The port serves mainly the merchandising transports of N. Greece and Balkan countries, while it demonstrates also a respectable activity concerning the distribution of merchandises to the M. East. The distribution of merchandises, up to now is limited in the movement of lorries and trucks (Ro-Ro), because of the lack of specialised infrastructures.(IPA 2008, VPA 2005).

The port of Kavala serves mainly the needs of local economy, of the regions Kavala - Drama and periodically it also serves lines of distribution as a supportive port to that of Thessalonica. After the relocation of commercial port in Nea Karvali which is an area located out of the urban concentration of Kavala, there is a very important chance of improvement. The existing infrastructure of the new port “Philippos II” suffices for the current movement of port, but there are still some problems existing in the operation and the organisation of the port. These problems are expected to be eliminated as soon as the port authorities complete the works which are included in the Master Plan of the port. The mainly competitive advantages of port constitute, it's easy approach (access is not impeded by the urban web), the adjacency with the Egnatia Road, as well as it's connection with the railway network which is expected to be completed in small time interval (KPA 2008, VPA 2005).

The port of Alexandroupoli has been recently. The largest part of infrastructure has been completed (container management station) or it is about to finish. Its proximity to the international commercial networks attributes to the port great significance. The adjacency of port with the Egnatia Road and the fact that one of the bigger European road axes, the Axis Helsinki-Alexandroupoli will lead there, constitute important competitive advantages for the port. The complete exploitation of these connections will emanate with the completion of scheduled works that concern the improvement of the railway and road connections of port with the axes above. (MMM 2008, APA 2008).

The total transportation throughout of the ports is presented in the table 1. The distribution of merchandises from the port of Thessalonica indicates continuous augmentative tendencies, that is also continued at years 2006 and 2007, while the level of figurative work of other ports is characterized by important fluctuations. Finally, the distribution of lorries in the port of Igoumenitsa shows an upward tendency.

Table 1: Fluctuation of movement of merchandises in the main ports of N. Greece (2001-2005)

Movement of merchandises in the main ports of V. Greece (2001-2005)						
<i>Year</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>Total</i>
Thessalonica	5.497.793	5.349.416	5.480.272	6.354.788	6.892.413	29574682
Kavala	1.175.245	1.115.240	1.081.675	1.721.496	1.054.195	6147851
Alexandroupoli	281.329	289.327	500.281	652.331	346.870	2070138
Total:	6.954.367	6.753.983	7.062.228	8.728.615	8.293.478	37.792.671
Igoumenitsa *	112954	120858	124419	127855	130138	616224

* The total distribution of port Igoumenitsa refer to the total passage of lorries.

Source: Egnatia Odos (2008)

The largest international throughout is marked in the port of Thessalonica. The greatest advantage of the port, in relation to the other ports of N. Greece, beyond it's supremacy in infrastructures and connections with transportation networks, originates from the existence of "Free Zone", that increases the distributions of transit charges. Important international movement is remarked also for the port of Igoumenitsa, as a simple node passage for lorries, which are directed from the ports of Italy to Eastern countries and reversely. The other two ports present a small international throughout serving mainly their hinterland, while because of the lack of 'free zones' of transportation the transit charges is limited.

More specifically and with reference to the distribution of merchandises to the Balkans, Greece have developed constant and important commercial flows with FYROM and Bulgaria. Greece has also developed traffic flows with other countries such as Serbia, Albania and Romania. However these flows do not present the height and the continuity of the flows above. The main volume of merchandises is trafficked via the port of Thessalonica, while the ports of Kavala and Alexandroupoli present a small and seasonal commercial interconnection with these countries. Therefore, it is feasible to extract an indicative figure of total height of merchandises distribution, from and to the countries above, just examining the elements of port of Thessalonica. Table 2 indicates the total distribution of 'transit' charges via the port of Thessalonica, from and to countries of Bulgaria and FYROM, that constitutes the more important 'target-markets'.

Table 2: Transit movements from Port of Thessaloniki to FYROM kaj Bulgaria

	1999	2000	2001	2002	2003
Transit of merchandises Former Yougoslave Republic of Macedonia					
From	385.149	650.286	475.931	373.782	352.720
To	1.042.263	1.239.172	705.394	648.655	568.570
Total	1.427.412	1.889.458	1.181.325	1.022.437	921.290
Transit of merchandises Bulgaria					
From	73.670	62.690	39.091	39.498	39.147
To	121.042	115.945	135.674	147.325	170.283
Total	194.712	178.635	174.765	186.823	209.430
Total distribution of transit of merchandises OLC	1.880.362	2.307.928	1.530.451	1.333.192	1.311.466

Source: SVVE (2004)

The data show that, the transit of merchandises from and to the FYROM and Bulgaria exceeds 85% of the total distributions. However, the height of distribution with the two

countries presents different fluctuations. Thus, it is obvious that the distribution of merchandises with FYROM was decreased considerably at the five-year period, while on the contrary, at the same period, the distribution with the Bulgaria presented an important increase. Also, bending tendencies are shown in the total height of transported merchandises, which are characterized as reasonable, since the total level of distribution depends to a large extent, on the distribution with FYROM. The bending tendencies were inverted from 2004 and then, since the height of transit merchandises has been increasing year by year, reaching in some 2,7 million tones, in the year 2007.(TPA, 2008).

Important conclusions can be drawn from the examination of total container transit flows managed by the port of Thessalonica at the seven-year period 2001-2007.

Table 3: Container Transit flows from the Port of Thessaloniki 2001-2007 (Source: TPA 2008)

Year	2001	2002	2003	2004	2005	2006	2007
Height of Distribution	40421	40500	46623	50954	56230	57101	79933

From the data in table 3, it's easy to ascertain the augmentative tendencies of total container distribution. Another remarkable element is that though the level of trafficked containers presented a relatively soft increase from year to year, the increase concerning the year 2006 was almost vertical and reached roughly 40%. It should be also marked that the majority of the transit containers, concerns countries of South - Eastern Europe and mainly those of FYROM and Bulgaria.

The data above show that the market of South - Eastern Europe constitutes a big feeder for the port of Thessalonica, while potentially it also becomes developmental lever for the other ports of N. Greece. Even if the transit of merchandises to the Balkans for the period 2001-2003 was characterized by a decrease, data for the last three years show that Greece recovers the lost ground. However, the main objective of Greece, as it is stressed continuously by various dignitaries of MMM, is not to simply reach again the levels of 2003. On the contrary, central governmental aiming continues to constitute, the constant enlargement of the spatial influence of Greek ports, which will by far increase the transit of charges to and from the South - Eastern Europe, rendering the particular ports and the region that their direct hinterland fixes, in a Balkan transit centre.

The achievement of this objective seems feasible. However, on the one hand, it is influenced from a lot of factors, while on the other it requires long-term and constant policies from the Greek state. It could be mentioned that Greece was late in conceiving the advantages offered by integral commercial spreading in the wider region of Balkans. Therefore, serious planning for the growth of its commercial flows to the North are absent.

4. The Ports of South-Eastern Europe

(a) The competition

The past ten years have been a period of great and rapid changes in the political regime and consequently in economy of the countries of South - Eastern Europe. These changes have brought significant transformations in the structure and operation of ports and shipping industries. Ports contribute vitally to the countries rapid development via the growing international trade and economic co-operation.

Nowadays the countries of South - Eastern Europe have a completely different structure from the one that used to have at the decade the 90's. The uncertainty for the future that

constituted a natural consequence of permanent agitations tends to disappear and SE Europe in our days shows that progressively acquires a stability which springs firstly from the consolidation of borders. Countries like Bulgaria and Romania constitute henceforth members of European Union and via this enlargement Greece finally acquired common land borders with the EU. From the other, the European orientation of many states of SE Europe, such as Serbia, Albania, FYROM and Turkey, is rendered explicit. From an economic point of view, the critical indicators in the countries of Balkans show the size of growth that is observed in the region. The rhythms of growth in Bulgaria and Romania for 2006 oscillated roughly 6,0% and 7,5% respectively, while until 2007 they continued remaining high. The rhythms of growth for Serbia and Albania exceeded 5% for the year of 2006 while the corresponding rhythms for FYROM reached 4%. In demographic grounds, it should be reported that Romania constitutes the second bigger country in Central and Eastern Europe with 22 million residents while Bulgaria's population reaches 7 million residents

It is therefore obvious that the northern hinterland of ports of N. Greece encloses a region whose inhabitants reaches the 30 million, creating enormous prospects, in the matter of increasing of consumption transportation. Considering the possibilities of trade growth with other countries of Black Sea market that can be served by the Greek ports approaches, the potential target population 300 million residents (EUROSTAT, 2008 and NBF, 2008 and AIOS, 2007 and SORS,2007).

Exceptional interest for the examination of the possibility of promoting commercial flows of transit for the Greek ports presents the examination of competitive environment in which Greece is called to act. SE Europe has a group of important ports which participate dynamically in merchandising distribution that is observed in the wider space. Considering their geographic location, the ports can be distinguished in Eastern (Black Sea) and in Westerners ports (Adriatic sea). The ports of Eastern side are those of Varna, Burgas (Bulgaria) and Kostantza (Romania), while in the ports of Adriatic Sea are included the ports of Trieste (Italy), the ports of Rijeka and Spljt (Croatia), the port of Koper (Slovenia), the port of Barr (Montenegro) and the port of Durres (Albania). The ports in the near past have upgraded considerably their advantage position while it constitutes a fact that from year to year they receive continuously larger numbers of charges. The data in table 4 show the container distribution of largest ports of SE Europe for a five-year period 2003-2007.

Table 4: Container traffic in the main ports of SE Europe(Source: Ports Authorities)

Port	Year				
	2003	2004	2005	2006	2007
Varna	65.063	78.599	84.000	94.046	99.713
Kwsta'ntza	206.449	386.282	768.099	1.037.077	1.411.414
Ko'per	126.237	153.347	179.745	218.970	306.548
Rijeka *	26.000	54.000	72.000	94.400	145.000
Trieste		174.729	198.319	220.310	265.863
Dyrra'hjo	3803	8292	15.286		
Thessalonica	269.552	336.096	365.925	343.727	447.211

The areas of influence of each port are altered diachronically while in many regions are observed phenomena of overlapping. However, the examination of data for the last decade shows certain constant dependences between regions of the Balkans from concrete ports.

More specifically, it is obvious that the largest part of Bulgaria is served by the two main ports of the country. Northern Bulgaria is served by the port of Varna while the regions southern and Eastern Bulgaria are covered by the port of Burgas. This dependence is expected to be strengthened because the two ports are expected to be upgraded considerably

improving their infrastructures and extending the possibility of distribution of charges. It should be said that the heist throughout in bulk and particularly liquid bulk cargoes is presented by the port of Burgas, while Varna bears the palm in container distribution, which for 2007 reached some 100.000 TEU. Also important nodes of transit for the regions of Bulgaria are the Dunabian ports of Lom and Rousse. The port of Lom is one from the largest Dunabian ports while the port of Rousse is located in the section of European Axes X and IV and ensures the commercial interconnection with central and northern Europe via the inland waterways. Commercial flows with regions of Bulgaria are also maintained by the Greek ports while a big share of the market in the North of the country could be covered by the port of Kostantza. (port-Varna, 2008 and port-burgas, 2008 and Ruse-bg, 2008 and port. bg, 2008).

The market of Romania is served mainly via the port of Kostantza as via the particular port is trafficked the main part of trade. The port allocate the advantage of connection with Danube ensuring on the one hand its connection with Central and Northern Europe and on the other strengthening its place as transit centre for Europe and Eastern countries. Its records in the distribution of charges are really remarkable, particularly its records in container distribution. For the period 2002-2006 container distribution was increased from 136.272 to 1.037.068 TEUs. It should be marked that the port functions in the models of Landlord Ports after, the grant of part of the Container station management in private individuals. Part of market of Romania and specifically the southern regions of the country is asserted by the ports of Bulgaria (Portofconstantza, 2008, ESPO 2007).

The market of Serbia is a more complex issue, because the central place of the country makes possible for Serbia to be serviced both by the ports of Adriatic sea and the Aegean and by those of Black Sea.. Up to now its disturbed relations with countries like Slovenia and Croatia had excluded its exit in Adriatic sea and thus, the largest throughput was channelled and it continues to be channelled via Danube, with direction to N. Europe or to the ports of Bulgaria and Romania. The ports of Bulgaria are expected to strengthen their place in the particular region after the completion of Pan-European Axis VIII which connects the Adriatic Sea with the Black Sea, penetrating Serbia. Commercial flows with Serbia have been developed by the port of Barr which is placed in Montenegro and which allocates the privilege of "Free Zone", however, it remains low in terms of infrastructures. It should be stressed that Serbia presents exceptionally low commercial flows with the regions of Asia, America and Africa and thus the bigger part of its trade emanates and is directed to European countries. This renders currently the movement of transit from the south, limited (S tatserb, 2008 and VPA, 1997 and port-Varna, 2008, port of bar, 2008).

In the case of FYROM, Bulgaria can play a dominant role for the transit traffic from the Eastern Countries, but also the port of Costantza can assert a significant market share. Serbia also constitutes an exit for FYROM's commercial distribution while the port of Durres in Albania is able to serve FYROM, in the distribution of merchandises with the countries of Adriatic sea (apdurres, 2008, port - burgas, 2008 and portofcostantza, 2008 and VPA, 2005).

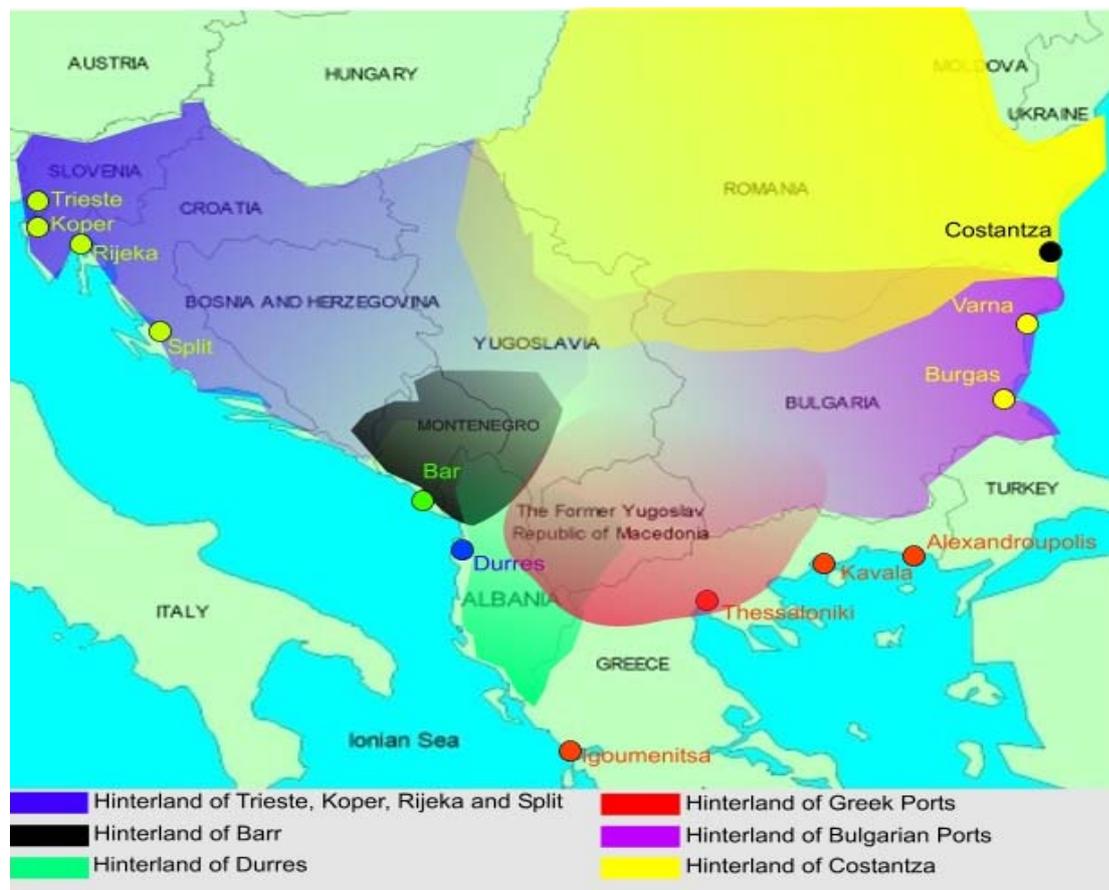
As for the NW countries of Balkan Peninsula it is obvious that Croatia Slovenia and Bosnia have a strong dependence upon the ports of Adriatic sea, as those of Rijeka, Koper and Split. The ports in the recent past had a limited role, However, in the last few years they have specifically demonstrated an important increase in the distribution of charges and containers. More specifically, the port of Rijeka in 2007 exceeded in container distribution the 140.000 TEUs when in 2000 the distribution did not exceed the 10.000 TEUs. Container traffic in the port of Koper reached in 2007 305.648 TEUs when in 2000 the corresponding distribution reached 46.279 TEUs. Finally, the port of Spljt began to recover progressively the its former transportation force as in 2007 the port distributed 3 million tones of products when the distribution in 2000 reached the 1,9 million tons. It is therefore, visible the

existence of powerful and continuously strengthening competitors. The competition becomes more powerful from the adjacency of these regions with the large Italian port of Trieste, which maintains important commercial flows particularly with Croatia. (Porto.trieste 2008, Portsplrit 2008, Port of rijeka 2008, Port of Koper 2008).

In the case of Albania the competition springs from the presence of ports of Italy and Albania. The movement of line Italy-Albania presents an important movement while recipient of this movement is mainly the port of Durres. The particular port can fall short of infrastructures, however it presents an important centre specifically in the imports as in 2005 exceeded 2,5 tons. It should be stressed that considerable infrastructure improvements are planned for the port of Durres, while the completion of AXIS VIII which will lead there, will increase the significance of Durres Port. The completion of Axis VIII will also increase the competition between the Albanian ports and the ports of Black Sea (apdurres, 2008 and VPA, 2005).

Finally, the competition is wider in the wider region of Black Sea, and it is strengthened by the conflict of large trade companies, in their effort to dominate the region. Up to now, there wasn't any port that would assemble important movement of merchandises and the various ports of the region served concrete hinterlands. However, this situation has changed as the of Istanbul and Kostantza are controlled by world transporters which are able to attract increased volume of charges to the ports that they control (Portofconstantza, 2008 and ESPO, 2007 and MMM, 2008).

Map 2 incorporate all the elements that were mentioned in the analysis above and portray the direct and indirect hinterlands of the analyzed ports.



Map 2: The hinterlands of the main ports of SE Europe

(b) Conditions of Growth of Flows

The analysis of competition, places the frames in which the Greek side is called to move itself in the effort for growth of the commercial beams with the SE Europe. More characteristic is the case of FYROM, a state with which Greece maintains powerful commercial bonds. Annual rates of growth of GNP in the last decade were increased at roughly 8% exceeding 5% for 2007 when in 1993 they were negative and reached the -7,5%. Also, the trade it swiftly increased, mainly in the last three years, both in the sector of imports and in the sector of exports. More concretely, the exports for 2007 reached roughly 3,35 billions \$, when in 1993 they just exceeded 1billions \$, while the imports touched 5 billions \$ when in 1993 oscillated in the 1 billion \$. Of particular importance are also the data concerning the composition of commercial flows as well as from their direction. More specifically, it is obvious that the largest rise is marked in the import of instruments and equipment of transport while the largest share of imports is possessed by the various final products of the industrial and manufacturing sector. From the side, of exports it should be reported that the above products dominate, possessing a percentage that reaches 50% on the total exports. On the other hand, in regard to the direction of imports and exports it is obvious that the main commercial partners of FYROM are Serbia, Germany, Greece, Italy and Russia. In the sector of exports, the first country is Serbia while in the sector of imports the main partner is Russia.

It is, therefore, obvious that the market of FYROM has become more attractive and the breadth of countries with which the country deals commercially, is developed continuously. From the Greek side, beyond the bilateral trade with FYROM, it is interesting to examine the `transit' flows to the neighbouring country. Greece traditionally served flows of transports that included products as oil, minerals, coal and other charges mainly industrial and bulky. The flows of these merchandises continue to show augmentative tendencies and Greece must keep control of their distribution. On the other hand, the main challenge for the ports of Greece is how these might ensure the transit of charges, for imported goods, like instruments, vehicles and tropical fruits, or for exported goods, like traditional products of FYROM, wines and tobacco products.

The analysis of composition of commercial partners of FYROM allows in Greece to stay optimist. Despite the fact that the main exporter in the region of FYROM is Russia, giving thus, an important advantage for `transit' movement in countries like Bulgaria and Romania, there are a lot of countries that continue to have significant commercial flows with FYROM that allow in N. Greece to be adapted in a interregional transit centre. Characteristic of these flows are the flows between FYROM, China and Italy and in a smaller extent the flows between FYROM, Spain, Indonesia and USA (NBOF, 2008 and SOOF, 2008).

The example of FYROM was analyzed as the most characteristic for the possibilities of growth of Greek transit trade to the Balkans. They are analogous the possibilities that are opened for Greece concerning the other countries of Balkans. Essential condition for the achievement of any target, is the upgrade of port infrastructure and the modernisation of the port operations. Moreover, another critical assumption is the completion of the road and railway axes that penetrate, the Greek and the neighbourhood countries and their interconnection. The first step for the improvement of transport connections of Greek ports will be achieved with the completion of Egnatia Road and the 9 globally slashes of road axes. These axes will link points of central artery with the existing frontier passages to the Balkan countries of Albania, FYROM, Bulgaria and Turkey. The finalisation of the particular works will increase the competitive position of the Greek Northern ports because it is considered that the time-distances from concrete destinations will be reduced. Beyond the completion of Egnatia Road, a very important element is the completion of the Pan European Axes which

will further reduce the time and the costs of transportations. Pan-European Axes that penetrate Greece, is the Axis IV which will lead to Thessalonica, the Axis X which will lead to Thessalonica and via the Egnatias Road to Igoymenitsa and the Axis IX which will lead to Alexandroupoli.

Beyond the completion of road connections, the completion of the railway network also plays an important role. The Greek railway system fallen short considerably of investments so that the railway transports did not contribute, as it was expected, in the total transportation activity of the country and particularly of N. Greece. As for the road transports and for the railway, an important factor is the railway interconnection of internal network with the equivalents of countries of SE. Europe, via the Pan-European Railway Axes. The axes that penetrate Greece are the same three with the road Axes.



Map 3: Pan-European Axes of Greek Interest
Source: UNECE (2008)

The completion of the road and railway axes will have a small affect to the productivity of the Greek ports until the connection of these axes with the internal networks of ports, is completed too. The problem regarding the ports of N. Greece is that these are within the boundaries of the urban areas, so that their connections are intermingled with the urban networks. The Greek State shows that has conceived the problem and has already undertaken concrete steps for the specific issue. It should be mentioned that the particular problem has been eliminated for the port of Kavala, as the commercial port have been already transported in a place out of the urban space.

Important parameter for the increase of commercial distribution with the Balkans constitutes the foundation and operation of merchandising centres in the wider region of N. Greece. Logistics services and organisation of combined transports, constitute basic conditions for the smooth distribution of merchandises. Today, as it is expected, the overwhelming majority of infrastructures of transshipment, storage and distribution are located in the wider region of Thessalonica. However, they fall short of infrastructures and quality of services. It must be said that the legal void that was preventing the undertaking of such investments, was covered with the voting of law 3333/2005. Up to now, a number of studies that has been conducted, have provided the establishment of three at least centres in the region that is examined, and concretely, in Thessalonica, in Thesprotia and in the wider region of Alexandroupoli. With the establishment of these centres, the entire region of N. Greece is covered geographically while Greece acquires a transit area which is located in

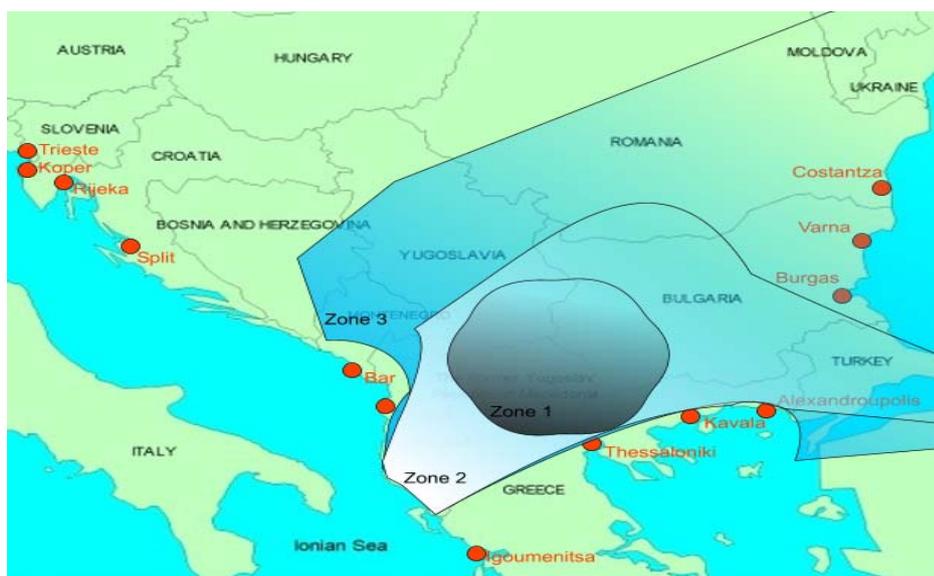
such a point so that it can serve transportation in 2-3 days time with all capitals of nearby states. The right organisation and operation of this transit area are able to attract line of enterprises, which export products in the Balkans, increasing the transit movement in the ports and further extending their hinterland.

5. The prospective of Greek Ports

Sovereign role in the effort of growth of commercial flows plays the port Thessalonika, taking mainly advantage from its connection with the European networks, its sufficiency in terms of infrastructures and the advantage of "Free Zone". A completed exploitation of the potential of ports of N. Greece is expected to strengthen considerably the competitive position of the other ports. Bulgaria and Romania constitutes the basic eastern markets-objectives. As for Bulgaria, the basic target for the Greek ports is the extension of their hinterland in regions beyond of these that are being served today. As regards Romania, the target is the development of stable traffic flows with the regions of the country which will be accessible via the Pan European axes. The competition can be powerful from the ports of the two countries. However, the Greek ports with suitable interventions are able to attract merchandise traffic from countries that could not be served by the Black Sea and the Dunabies waterway connections. On the other hand, taking advantage of the connections of Axis X, the Greek side is able to extend the commercial flows with northern regions, ensuring thus, the sovereignty in the trade of FYROM and extending the commercial connections with Serbia and in a wider scale with Montenegro and Bosnia.

Besides, the Egnatia Road and the vertical axes that connect Greece with Albania, makes Greek ports capable of extending their hinterland to northern Albanian region. Finally, the Greek ports can constitute turning-points of transshipment for merchandises that are directed to northern countries like Ukraine and the SW Russia, mainly via the marine route of Black Sea. The competition is strong and in this case however, Thessalonika like the other ports of N. Greece, is able to attract marine commercial flows that in some point of transportation have to be splitted. Therefore, the ports of N. Greece constitute ideal destinations for ships whose cargoes beared on the one hand to regions of overland Balkans and on the other hand, to countries of Black Sea region.

The achievement of the above objectives will alter radically the area of influence of Greek ports. Map 4 portrays the influence zone of the Northern Greek ports and the prospects of their future hinterland.



Map 4: Hinterland of the Northern Greek ports

The three zones that are shown in the map 4 correspond in three scenarios for the future traffic flows of the four ports. These scenarios are analyzed as follows:

Pessimistic Scenario. The Greek ports will continue exert commercial influence in the already shaped areas of commercial distribution. This scenario will be verified if Greece does not accomplish the planned steps of progress in the sector of completion of transport networks, as well as in the case where the structural changes and the programs of infrastructures upgrading in the port industry, could not be achieved. The scenario assumes, that the increase of distribution via the competitive ports for each purchase objective will 'sweep on'. It also supposes that all the competitive ports of other countries, inside and outside of EU, will upgrade their infrastructures progressively in order to correspond to the increased traffic flows. Under the above circumstances the existing area of influence probably will be shrunk and will include henceforth part of market of FYROM, the SW Bulgaria and certain small regions of Serbia and Albania.

Moderate Scenario. The reforms in the port industry will 'sweep on', while the infrastructures in transportation networks and merchandising centres will be completed. These changes however, need to be completed immediately. According to the assumptions above, the ports of N. Greece will increase considerably their direct hinterland, extending their transportation flows further and consolidating their role as important transportation nodes in the Balkans. The entry of private companies in the port industry and in the management of traffic flows will increase the volume of cargo which will penetrate the northern department of country, directed to the Balkans. Greece will utilize the increase in consumption that is observed in the SE Europe countries and will also utilize the advantage of its geographic location as the southern sea gate of SE Europe, increasing by far the area of commercial influence. Henceforth, this area will include Albania, FYROM and a large part of Bulgaria while Greece will also develop constant commercial flows that will not be characterized by the current discontinuities with regions of Romania and Serbia. Finally, also a transit activity will be undertaken which will mainly aim at the regions of European Turkey and to a lesser degree at the regions of Black Sea, via the port of Igoumenitsa. The Greek ports therefore will acquire an important share of the market which will not depend on the records of other ports.

Optimistic Scenario. It is an alternative scenario to the moderate that, however, goes a little further in regards to the increase in area of influence of Greece. According to this scenario Greece will consolidate its place as a key commercial "player" in the space of Balkans. Furthermore, it will gain a larger market share utilizing the possibilities that are opened up by the completion of Pan-European Axes and implementing suitable marketing policies and commercial agreements. The scenario will be strengthened by any problems and delays in the growth of competitive ports. Greece will extend the area of influence including henceforth bigger departments of Bulgaria, Romania and Serbia. Moreover, flows will be developed with Bosnia and Ukraine while at the end, the Greek ports will manage to handle important

transit movement to the countries of Black Sea. The increase of traffic it is possible to give the opportunity in other ports of Greece, like that of Volos, to assert an important share of Balkan market, taking a supporting role to the examined ports or with the form of constant and autonomous commercial flows.

6. Concluding remarks

It is impossible to properly understand the changes that will be occurred in the international trade of the countries of s-e Europe ignoring the role and the importance of ports. Ports constitute an underlying factor for international trade as well as an engine of economic growth and development. The reductionism of 'saving time' is a main competitive advantage of the transports and the growth of combined transports brought the marine transports in sovereign with direct consequences to the role of ports. The ports, henceforth, constitute important nodes in transportation chain and their records have a major impact in the economies of states and regions that are located.

The Greek port industry does not remain unaffected from these new conditions and on the score of it, important structural changes and investments in infrastructures is promoted. A basic objective constitutes the exploitation of competitive advantage of geographic location of Greece and the alteration of its ports in important nodes of transports of wider region of Mediterranean. As a major challenge for the enlargement of the ports influence area is presented the market of S. E. Europe, as this area constitutes a geographic space of important economic growth and important commercial opportunities.

Sovereign factor for the trade growth to the northern areas, constitute the ports of N. Greece and specifically the ports of Thessalonica, Igoumenitsa Kavala and Alexandroupoli. As main commercial partners are FYROM and Bulgaria. However it should be marked that Greece keeps commercial flows with countries like Albania, Romania and Serbia. The further growth of commercial flows to the Balkans presupposes important improvements in the transportation infrastructures of the country. Moreover, particular attention should be given in the competition from other countries and particularly from Bulgaria and Romania because of the fact that these countries apply significant upgrading programs of infrastructures that will increase the capacity of their ports, leading these countries to extent the hinterland of their ports.

The achievement of the Greek objects depends on a pleiad of factors which can influence positively or negatively the commercial flows of the country to the northern regions, altering in this way, the influence areas of the four ports. The key for the successful achievement of growth is the time of completion of the structural changes in the port industry, taking into account that the sooner the works will be completed the stronger the competitive position of the Greek ports will become, in an environment where the investments in infrastructures constituting the more critical factor of growth.

References

1. Albanian Institute of Statistics, (2007) *Albania in Figures 2007*, Albanian Institute of Statistics
2. F. Coppens, F. Lagneaux, H. Meersman, N. Sellekaerts, E. Van de Voorde, G. van Gastel, Th. Vanelslander, A. Verhetsel, (2007) *Economic impact of port activity: a disaggregate analysis. The case of Antwerp*, National Bank of Belgium, Belgium
3. ESPO, (2007) *Annual Report 2006-2007*, Algeciras: ESPO
4. Eurostat, (2007) *Panorama of Transport*, Eurostat

5. Eurostat, (2008) *Stock Flow Adjustment(2008)*, Eurostat
6. Gripaios, Peter and Gripaios, Rose, (1995) '*The impact of a port on its local economy: the case of Plymouth*', *Maritime Policy & Management*, 22:1,13 – 23
7. Hlomoudis, Konstantinos, (2001) *Organisation and administration of ports*, Piraeus: Tzej and Tzei Greece
8. Karachalis Nicolas και Kyriazopoulos Evangelos, (2006), *Greek Port Cities in Transition: Regeneration Strategies, Waterfront Development and the Role of Cultural and Tourist Resources*, ERSA conference papers ersa06p714, European Regional Science Association
9. Kingsley E. Haynes & Yulan Magnolia Hsing & roger R. Stough & The Institute of Public Policy, George Mason University, fair, Va, U.S.A., (1997), *Regional port dynamics in the global economy - the case of Kaohsiung*, *Maritime Policy & Management* 24:1, 93-113
10. MMM, (2006) *National Port Policy*, Piraeus: MMM
11. Meggoyli Eirini (2006) *Growth of Merchandising Centres in Greece: The Creation of Merchandising Centre in the Igoumenitsa*, Piraeus.
12. Mylonopoylos Dimitris, (2004) *Shipping: Significances - Sections - Structures*, Athens: Publications Stamoyli
13. National Bank Of FYROM, (2008) *Main Economic Indicators for FYROM*, National Bank Of FYROM
14. Pardali Angeliki, (1997) *Economy and Policy of Ports*, Athens: Interbooks.
15. Pardali Angeliki J., (2001) *The port industry in the challenges of globalized economy and completed figurative systems*, Athens: Publications Stamoyli
16. Psaraftis N. Harilaos, (2005) '*EU Ports: Quo Vadis?*', *ECONOMIST Shipping and Ports Forum*
17. Statistical Office of the Republic of Serbia, (2007) *Statistical yearbook of Serbia, 2007*, Statistical Office of the Republic of Serbia
18. Statistical Office of FYROM, (2008) *External Trade of FYROM*, Statistical Office of FYROM
19. SVVE, (2004) *Conditions and Necessary Interventions for the Evolution of Central Macedonia as Node Logistics*, Thessalonica.
20. UN, (2005) *Regional Shipping and Port Development Strategies*, New York: UN
21. Volos Port Authority VPA (1997), *Investigation of Potential Market of Port Volos and Metres for the Increase of Productivity and Growth of his Commercial Relations*, Volos
22. Volos Port Authority (VPA), (2005) *Strategic and Operational Drawing VPA*. Volos