## THE IMPACT OF THE ECONOMIC CRISIS ON PORT DEVELOPMENT

## NECHITA DANIELA

"Dunarea de Jos" University of Galati, Romania

### ABSTRACT

In order to meet the European and global standards in the maritime industry, extensive efforts are required that aim at re-arranging all system components in a logic vision, upgrading the existing infrastructure to an efficient level, protecting the environment, providing security to passengers, stimulating the private initiative, restructuring transport capacities, reshaping cultural awareness of institutions that operate in this sector. Moreover, European transport integration is an issue related to the integration of large dynamic systems that rely on changing the national systems in order to meet the requirements of the European ones, and based on harmonizing the existing infrastructure networks, standards, rules and regulations. At the same time, the strategies that should be adopted require the avoidance of the risk related to the less developed transport systems that may orbit around the developed ones, providing solutions to the issues regarding authority and power in integrate power in integrated logistics systems.

**Keywords:** *globalization; integration; port industry; port activities; economic development; maritime industry.* 

### 1. INTRODUCTION

Numerous companies are stagnating not due to the lack of energy or personal ambition but to the lack of realism and also to the failure to define goals and failure to acknowledge the fact that the organisation cannot be oriented to solve short-term problems. In this respect, strategic management can offer a thorough analysis of the competitive behaviour of the market, estimation of opportunities and substantiating decision-making on the available resources.

The transition from the traditional to modern guidelines involves significant changes in the structure of the mechanisms generating the market's current and future dimensions, which in turn impose the reshaping of the management systems and rethinking strategic activities in order to show dynamism, creativity, flexibility and functionality inherent in the market economy system.

The increasingly expanding globalization has exacerbated inequality in several countries, providing insufficient development opportunities for certain fields of activity, which might have become powerful engines for change and economic growth. Thus, within the context of market globalization, port activities may be regarded as an important factor in maintaining and increasing European competitiveness, which relies not only on the technical quality or productivity but also on all types of transport, on the possibility of improving the infrastructure, with the purpose of increasing accessibility of other sectors of the new market economy, of integrating technical breakthroughs and benefiting from these innovations.

Moreover the essential changes that have occurred in the port industry over time, have also had a continuous and significant impact not only upon some other important sectors of the economy but also upon the port activity and management. It should be emphasized that all these changes require a more active and competent involvement of the government particularly regarding the applied strategies that deal with the existing regional discrepancies in providing infrastructure, in training staff and managing the economic and financial levers to determine an accurate and fair pricing mechanism for port services.

Under these circumstances, the port industry which is in fact a global industry is aware of the urgent need for some effective measures that should be taken in order to achieve sustainable development of all port activities. Moreover the current financial crisis provides opportunities to governments for shaping and completion of investments in the port area and for adopting strategies to support this long-term development and to enable all countries to collaborate and cooperate in a global economic system.

# 2. CURRENT GLOBAL ISSUES IN PORT DEVELOPMENT

Due to decentralization and increasing degree of financial autonomy, funding the port sector witnesses various levels of financial autonomy and non-repayable public funding in the EU member countries, facing at the same time the lack of transparency in port pricing. In this respect, the European Commission has allocated € 32 billion for major transport projects. Thus out of 150 projects financed from EU structural funds, carried out by Romanian managing authority, only 83 have been labelled as relevant according to the criteria of EU Strategy for the Danube and the Black Sea Region. Among the most relevant such projects financed by SOP-T (Standard Operation Procedure for Transportation - 2007-2013) are those projects that are still being carried out in the ports of Constanța, Galați and Oltenița.

Moreover, numerous ports are facing blockages and obstacles generated by capacity, connections or management. In this respect, the review and improvement regulations is highly recommended on land use, upgrading IT systems and creating databases on ports, waterways and preliminary data traffic, creating new security and telecommunications systems, acquiring new automated port equipment and interoperability of European surveillance system, that have a major role in simplifying the transport procedures and supporting the development of maritime transport market within the internal market.

For example, in the port Galați, the project - *Rehabilitation and modernization of vertical quay Dana* 31- has been encountering difficulties in its implementation, in achieving its modernization objectives due to numerous disputes over land.

From the economic globalization perspective, modern ports play the role of commercial services centres that must provide an efficient transport, adequate technical facilities and communication that comply with the international standards in order to ensure customer access to local and global markets.

Furthermore, they must ensure a wide range of value-added services, ports becoming service platforms, designed to ensure customer satisfaction to the highest degree. The use of IT in port administration, extended to the entire port, leads to the streamlining interdepartmental communication between different departments of the port administration and their partners as well as rapid access to information.

For instance, Bull-Siveco Romania consortium inaugurated in 2011 the integrated IT system of Constanța Port Administration - Neptun, which covers a wide range of business, defined by 850 processes, contributing both to performance increase of the entire port system and to a better organization of specific activities APM Constanta. In 2012 was created the portal of this organization, which is an essential source of information for both community members of Constanța port due to the available information related to specific port activity as well as other for other visitors due to the marketing information, general information and statistical studies provided. This portal is mainly one of the main tools for promoting the port of Constanța, Romanian companies or those from abroad interested in carrying out activities in the port of Constanța.

Moreover, the infrastructure requires standards, procedures and equipment for the proper conduct of all port activities, using various institutional and legal systems as management tools on infrastructure.

The sustainable development of the Danube region will continue to emphasize the geostrategic importance of the Black Sea; the two strategies should be complementary and mutually reinforcing. For the implementation of these strategies and for their success implicitly, all public and private actors must apply the management of the 4C - connectivity, cooperation, coordination and competitiveness in the post-crisis global competitive environment.

Among the most relevant such projects financed by SOP-T(Standard Operation Procedure for Transportation 2007-2013) are those projects that are still being carried out in the ports of Constanța, Galați and Oltenița that amount to 206.3 million euros, we mention the following:

• building of a road bridge at km 0+540 of the Danube – Black Sea Canal and afferent infrastructure works of road building and access to Constanța port, totalling € 36.8 million;

- extension of offshore breakwater (from 1.050 meters to 5.900 meters) in the port of Constanța, amounting to € 148 million;
- development of railway capacity in the rivermaritime area of Constanța port, amounting to € 21.5 million.
- out of the eligible projects for funding, totalling €96.1 million, we mention the following:
- modernizing port infrastructure by ensuring the increase of channels and basins depth and safety of navigation in the port of Constanța, taking into account the global shipping industry trends in recent years and orienting towards ships with increased cargo carrying capacity the estimated value of works is € 49.5 million;
- building a connecting steel bridge road and a passage over the existing railways, which will ensure the connection between the river and sea region and the artificial island of the port of Constanța, as well as achieving its connection to the internal and external of the port totalling € 40 million;
- extending southwards the port of Constanța's overall berth totalling €4.6 million.

The start up of the project - *Rehabilitation and development of port infrastructure in the port of Oltenița* was in April 2012 by the Managing Authority for Sectorial Transport Programme and National Company Maritime Danube Ports Administration Giurgiu plc. The main objective of this project was to achieve the technical project as well as the execution of infrastructure works in the port of Oltenița, in order to increase port traffic and reduce operating costs. The project's estimated value is 24.603.881 lei, of which 12.096.760 is non-refundable grant allocated by the European Commission through the European Regional Development Fund.

In Galați, the DaHar project (Danube Inland Harbour Development) has as main objective the achievement of a better integration of inland navigation within transport logistic chains by investigating and using the multimodality potential of ports and port areas in middle-sized port cities of Southeast Europe, along the Danube. The project runs from April 2011 to March 2014 and has a total budget of  $\leq 1.966.100$ .

On the other hand, the project - *Rehabilitation and Modernization of the Vertical Quay - Berth 31 -* aims at inaugurating its first container terminal, located on the maritime Danube in Galați port docks. Achieving this objective will lead to higher growth of containerized cargo and generate the emergence of new services and opportunities to provide to the local and regional economic environment.

In the future, port may develop as intermodal hubs where goods are taken over and handled, especially those goods that are suitable for container traffic. This development is advantageous because it would reduce the negative effects of pollution as well as transport costs. However, the economic crisis impairs the implementation of development strategies for intermodal ports as well as small businesses that have been started in ports so far. Thus, the container terminal in the port of Galați was inaugurated in 2008. For about 3 years no container passed through it and the investments made for this purpose were significant, approximately  $\leq 10$  million in the development of port infrastructure for the 16.000 sq meters, and works of quay modernization, over a length of 136 meters, amounting to 34 million lei.

Due to the reviving transport flows, the port of Galați will face fierce competition, generated by the building of a container terminal in the port of Giurgiulești that is interconnected to the railway that was built in the past two years on the Moldovan banks of the Danube river. This competition also involves another competitor of the port of Galați, namely the port of Reni, Ukraine, towards which are heading all ships that cross the Bastroe channel, so we can conclude that the benefits of infrastructure were wasted.

The impact upon the environment is a key element in port development and the environmental law ensures the proper functioning of ports. In this respect, progress in environmental management was achieved, while the constraints of environmental protection contained in the port sector projects resulted in complex procedures. In Galați there are two major ongoing projects, namely the WANDA project - WAste management for inland Navigation on the DAnube and the CONEDAV project.

The WANDA project has as main objective the creation of a concept of ship-waste management system along the Danube which adopts a coordinated transnational approach, which is sustainable in terms of environment, including the development and implementation of appropriate measures to protect this source of water as well as its complex ecosystems. The project was conducted between April 2009 and March 2012 and the total budget amounted to  $\leq 1.667.240$ .

The CONEDAV project is co-financed by the European Regional Development Fund through the Sectoral Operational Programme-Transport (SOP-T) and has as main objective the creation of a ship-waste management system. The waste is collected from ships in maritime Danube ports in order to minimize the negative environmental impact and create proper conditions for improving the quality of water and current environmental factors of the Danube. The total budget of CONEDAV project is 48.669.426 lei and it is conducted between December 2010 and December 2014. At the same time, at the level of South-Eastern Europe, Hungary and Romania are responsible for the sustainable development of the Danube and must strive for better coordination and collaboration for its promotion. In this respect, the two countries are subject to generate a set of rules that are to be implemented in each bordering country for the sustainable development of the river.

On the other hand, professional training is of utmost importance for a safe and efficient operation of ports, and currently, there are no specific community rules on professional training of port workers. European ports are vital elements in the system of European cohesion by providing freight and passenger transport intra and extra community, representing the source of over half a million jobs in the EU and generating investment for entire regions, being recognized in the Treaty of Lisbon strategy as key priorities in sustainable social and economic development of the EU

Two aspects that are essential and complementary at the same time in ensuring the continuity of the European port system are the free access to port facilities and infrastructure security in ports, as the basic structure of the entire European legislation. This legislation is designed to harmonize national legislations in order to develop a unified network of ports at EU level. Despite this, EU failed to adopt a directive on free access to European ports. Implementing a single policy on the level of European authorities on free access to ports has experienced difficulties whore repercussions are felt even nowadays as EU failed to adopt a directive, there is only a proposal and not all Member States have agreed with it. Thus, countries like Greece and the Netherlands, which have the most important ports in the EU, drew up their own proposals for the directive, designed in order to satisfy all stakeholders. However, it is important that such countries do not entirely agree with the EU policy of unifying the legal framework, which is generically called "one size fits all ports", as their positions promote a policy that was characterized as protecting the monopolist interests of a giant operator or manager of several ports.

Moreover, the process of opening the transport markets involves the achievement of fair conditions for competition both at the individual level for each type of transport and between them. For this reason, the harmonization of laws, regulations and administrative provisions, including the prevailing technological, social and tax conditions, has gradually become increasingly important.

### 3. CHANGES AND CHALLENGES OF PORT INDUSTRY IN GLOBAL ECONOMY

In the context of expanding globalization, port industry places a great emphasis on the correlation between the economic growth and the increase of passenger and freight transport. The successful completion of the internal European market, the removal of internal borders, reduced transport prices due to the opening and liberalization of transport markets as well as changes occurred in production systems and in storage conditions have led to a steady increase in transport volume. In this respect, the statistical studies provided by Eurostat on the volume of goods handled in the main ports, shows a significant increase which is revealed for the ports in Europe (Table no. 1.) ranging between 107.93% for Germany to 225.3% for Greece. For the other ports, the changes displayed, be it about decreases or increases, are within normal limits imposed by the post-crisis conditions.

|                        | 2011<br>Trim I | 2011<br>trim II | 2011<br>trim III | 2011<br>trim IV | 2012<br>trim I | 2012<br>Trim II | 2012<br>Trim III |
|------------------------|----------------|-----------------|------------------|-----------------|----------------|-----------------|------------------|
| Germany                | 3.595.823      | 3.887.817       | 3.939.116        | 3.770.567       | 3.874.902      | 3.881.239       |                  |
| Greece                 | 372.779        | 455.983         | 515.680          | 589.910         | 750.961        | 829.444         |                  |
| Holland                | 3.633.206      | 3.827.730       | 3.917.145        | 3.511.314       | 2.794.817      | 2.931.451       |                  |
| Rotterdam              | 3.582.349      | 3.789.704       | 3.881.042        | 3.476.859       | 2.755.700      | 2.896.388       |                  |
| Croatia                | 36.372         | 41.694          | 41.188           | 35.199          | 35.394         | 40.034          | 36.660           |
| Slovakia               | 149.022        | 150.881         | 141.602          | 145.408         | 244.158        | 140.533         |                  |
| Bulgaria               | 33.326         | 37.560          | 40.007           |                 | 40.923         | 44.822          |                  |
| Romania<br>(Constanța) | 143.673        | 171.586         | 179.124          | 158.923         | 141.149        | 196.689         | 177.833          |

| Table 1. – Transport of containerised mercl | nandise (TEU) |
|---|---------------|
|---|---------------|

Source: www.Eurostat.com

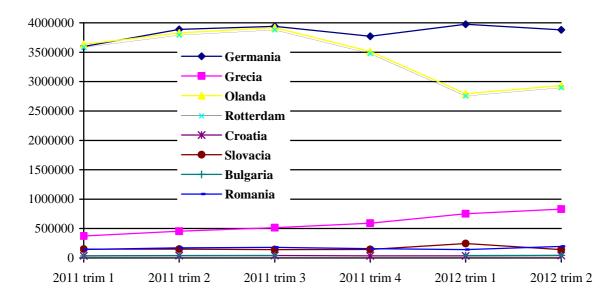


Figure 1.Transport of containerised merchandise(2011-2012)

In the ranking carried out by Eurostat, based on traffic data recorded between 2009 and 2012, the port of Constanța occupies the 19<sup>th</sup> position, climbing from the 20<sup>th</sup> position in the latest top achieved. In terms of containerized freight traffic, the port of Constanța occupies the 18<sup>th</sup> position. Table no. 2. shows according to the primary information provided by Eurostat, a

perspective upon the share freight transport in GDP. Thus significant increase from this point of view during the period analyzed are recorded in Germany, Hungary and Bulgaria. The rest of the countries analyzed by Eurostat, display variations that hold steady within the normal limits of the economic environment generated by the international trade evolution.

|          | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  |
|----------|-------|-------|-------|-------|-------|-------|
| Germany  | 106,0 | 117,0 | 115.1 | 118,9 | 144,6 | 156,2 |
| Austria  | 98,1  | 101,6 | 97    | 91,3  | 79,1  | 80,5  |
| Hungary  | 105,5 | 118,9 | 134,1 | 132,4 | 133,1 | 131,6 |
| Slovakia | 93,7  | 87    | 92,2  | 91,5  | 86,2  | 85,8  |
| Bulgaria | 126,8 | 117   | 115,1 | 118,9 | 144,6 | 156,2 |
| Romania  | 174,2 | 171,4 | 165,6 | 148,5 | 113   | 105,8 |

 Table 2. – Volume of merchandise transport in GDP (%)

Source: www.Eurostat.com

This analytical presentation is also emphasized by the graphical representation of the share of goods

volume in GDP, which reveals the relative changes that are somehow insignificant for the period analysed.

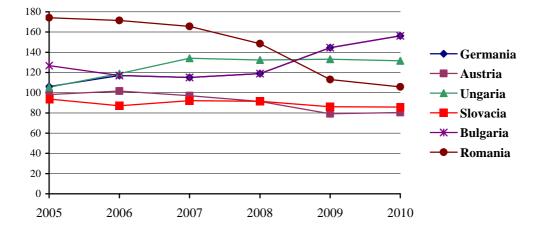


Figure 2. Share of goods volume in GDP

For our country, the table no. 3 shows the traffic of goods handled on the maritime Danube between 2010 and 2012, which reveals a slight, almost insignificant increase of the goods in transit though the ports of Galați, Midia and Constanța, respectively of 11.42%, of

which 14.71% increase for the port of Constanța, 4.16% for the port of Midia and a decrease of 24% for the port of Galați, which means that the above-mentioned ports are operating below their potential.

| Table 3. – Maritime trans | port of goods | (thousand tons) |
|---------------------------|---------------|-----------------|
|---------------------------|---------------|-----------------|

|                    | Romania | Constanța | Galați | Midia |
|--------------------|---------|-----------|--------|-------|
| 2010 trimester     | 9.121   | 7.380     | 421    | 1.320 |
| 2010 trimester III | 9.685   | 8.242     | 451    | 992   |
| 2010 trimester IV  | 9.896   | 8.562     | 384    | 950   |
| 2011 trimester I   | 8.125   | 6.436     | 413    | 1.276 |
| 2011 trimester II  | 9.163   | 7.456     | 284    | 1.423 |
| 2011 trim III      | 10.131  | 8.447     | 468    | 1.216 |
| 2011 trim IV       | 10.069  | 8.639     | 425    | 1.006 |
| 2012 trim I        | 8.006   | 6.394     | 289    | 1.323 |
| 2012 trim II       | 10.755  | 8.945     | 458    | 1.352 |
| 2012 trim III      | 10.161  | 8.466     | 320    | 1.375 |

Source: <u>www.Eurostat.com</u>

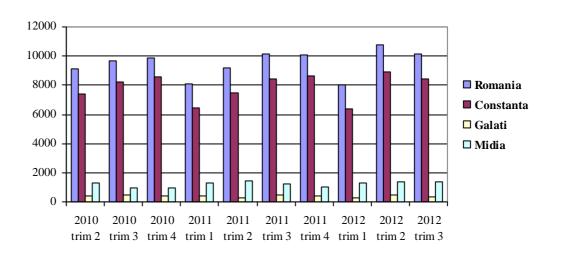


Figure 3. Maritime transport of goods (2010-2012)

One of the major strategic challenges in the development of port industry is the development and promotion of the national system of intermodal freight transport in order to develop freight and improve the environmental impact of transport as well as traffic safety. And if we have to talk about the hindrances of this major change in the port industry, we can mention the following:

- organizational barriers which are due to bureaucratic aspects of the transport sector, lack of cooperation between stakeholders and lack of clearly-defined responsibilities;
- infrastructure-related obstacles lack of interoperability, inadequate capacities, necessity for different types of cargo-handling equipment;
- operational obstacles lack of information transparency in the transport chain, lack of operative measures flexibility, lack of information on the services available in ports, problems related to the integration in the chain of logistical activities;
- legislative related obstacles lack of a harmonized framework of financial, technical and organizational provisions in the transport and freight logistics;
- economic and financial obstacles high investment costs, high operating costs, especially the transfer and storage ones, unclear costs structure, lack of subsidies granted to transport operators.

The transport sector, although it is highly effective economically dynamic, it faces however and increasingly higher additional social and environmental costs. Therefore, the model of "sustainable mobility" has increasingly gained significance. This model is located in the confrontation area of two different categories of objectives. On the one hand, it is aimed to provide an efficient mobility and fair prices for people and freight, as a central element of the EU internal market which is competitive and which relies on the free movement of persons. On the other hand, it is outlined the need to control the increasing traffic and to minimize the costs arising form accidents, respiratory diseases, noise, harmful effects on the environment or congestion.

## 4. CONCLUSIONS

The important role of management in the current economic environment is imposed by the necessity creating a general capacity of innovation, flexibility and even if the environment is uncertain, management should be as stable as possible, thus ensuring the success of opportunities most limited situations. By pointing out the need for an operational management, certain management transition-related issues are brought forward, namely the need for a change of management concepts and practices at the micro level. These two components are converging, influencing each other at the same time.

In the current economic context, success in the real economy, transport activity performance and competitiveness of companies that conduct their business in this area depend largely on the quality of management. Under these circumstances, without a rigorous management it is difficult to grasp the current and future size and structure of market requirements. Moreover new policies and rational strategies will be difficult to develop and implement. In this respect, the reshape of management system will be difficult to achieve as well as to demonstrate the dynamism, creativity, flexibility and functionality that are inherent in the market economy system.

### 5. **REFERENCES**

[1] Caraiani, Ghe., *Marketingul şi managementul în activitatea de transporturi*, Editura Lumina Lex, București, 2002;

[2] Ion, Ghe., *Managementul transporturilor*, Editura Eficient, București, 2001;

[3] Nechita, D., *Eficientizarea activității portuare prin strategii moderne de marketing*, teza de doctorat, 2005;

[4] Trevor, H., *Maritime Logistics*, ITMMA courses, 2002;

[5] Batrinca Ghe., *Marketing şi management naval*, Editura Cartea Universitară, București, 2004;

[6] Batrinca Ghe., Caraiani, Ghe., *Marketingul şi* managementul în activitatea de transporturi, Editura Lumina Lex, Bucureşti, 2002;

[7] Batrinca Ghe., *Considerații privind fundamentarea deciziilor în transportul maritim*, Editura AIT Laboratoires, 2004;

[8] Muntean, M.C., Nechita, D., Nistor, C., Şarpe, D., *Development of Port Management in the Transport Economy*, WSEAS TRANSACTIONS on BUSINESS and ECONOMICS, Issue 4, Volume 7, October 2010, ISSN 1109-9526, Published by WSEAS Press <u>www.wseas.org</u>, pp. 414-423, ID: 88-364, Included in ISI/SCI Web of Science and Web of Knowledge;

[9] Muntean, M.C., Nechita, D., Nistor, C., Şarpe, D., *Port management importance in port activities development*, The 3rd WSEAS International Conference on URBAN PLANNING and TRANSPORTATION (UPT '10), LATEST TRENDS on URBAN PLANNING and TRANSPORTATION, Mathematics and Computers in Science and Engineering, A Series of Reference Books and Textbooks, <u>Corfu Island, Greece, July 22-24</u>, ISSN 1792-4286, ISBN 978-960-474-204-2, Published by WSEAS Press <u>www.wseas.org</u>, pp. 180-186, ID: 646-803, Included in ISI/SCI Web of Science and Web of Knowledge;

- [10] <u>www.eu.europa.eu;</u>
- [11] www.romanian-ports.ro
- [12] <u>www.portofconstantza.com</u>

[13] International Transport Forum, Leipzig, Workshop – Transport for a global economy, 2009.

[14] Vîrlănuță F., *Evaluarea economico-financiară a proiectelor de investiții din agricultură*, 2010, Publishing House Europlus, Galati, ISBN 978-973-950-73-0.

[15]Buhociu F., Vîrlănuță F., *Evaluarea și finanțarea proiectelor de investiții*, coautor, Editura Didactică și Pedagogică, Bucuresti, 2005, ISBN 973-30-1340-4.