

# European Union Transport Policy under the Crisis' Impact

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## Abstract

The paper is focused on the global crisis' impact on the European transports. The analysis is based on the latest official documents and books and it is supported by statistical tables and pertinent diagrams. The transports' situation is followed by an analysis of the policies able to support the development of the European transports.

A distinct part of the paper analyses the transport trends in Romania, the latest member of the European Union, in order to observe if the adhering to the European Union was/or was not positive for the Romanian transport.

The main conclusion of the analysis is not a positive one, because the EU27 is not able to implement policies to support the transports' development and to face the crisis' challenges.

**Keywords:** transport trend; transport network; competitive freight; transport policy; single European transport area.

## 1. Introduction

A common transport policy is able to contribute to the EU Member States' economic integration and development. The transport activity is a vital sector for the economy and its organization has a significant effect on other activities location (Diaconescu M., 2004). According to the Rome Treaty (Article no. 84), the common transport policy was focused only on the roadways, railways and waterways. The common transport policy requires regulations to facilitate the transit through the national boundaries, the discrimination eliminating and the cost of crossing borders reducing. The same Rome Treaty allowed the granting of transport subsidies or supporting them in the context of the regional aid. The general principles governing the transport policy were defined in the Schaus memorandum (1961) and were reiterated in the action programme, which was implemented in 1970.

The Community transport policy revival began in 1985, when the European Commission published its White Paper on the single market creation. In that document, the transport policy was regarded as an important part of the Community strategy. In December 1992, the European Commission published its Communication on the Future Development of the

Common Transport Policy, which made the transition from the transport policy sectoral approach to an integrated policy based on sustainable mobility. Until 1<sup>st</sup> of January 1993, the European transport policy was based on two principles: the users' free choice of the transport modes and the principle of subsidiary. In 1992, PACT (Pilot Actions Combined Transport) was implemented, in order to concentrate all concerned operators on an international combined transport axis. The Maastricht Treaty stipulated as main objectives: socio-economic cohesion through the Trans-European Networks and other transport infrastructures development; traffic safety improvement; and creating conditions to ensure the enterprises' competitiveness, including those of transport.

The Communication COM 95/0302, published in July 1995, had as object the improvement of the transport activities quality, through the introduction of the technical progress, in order to optimize the transport market functioning and to develop the transport policy external dimension.

In December 1995, the Communication COM 95/691 approached, for the first time, the tax issues related to transport activities. Moreover, the Communication COM 98/466 raised the question of setting up a harmonized system of the transport taxation.

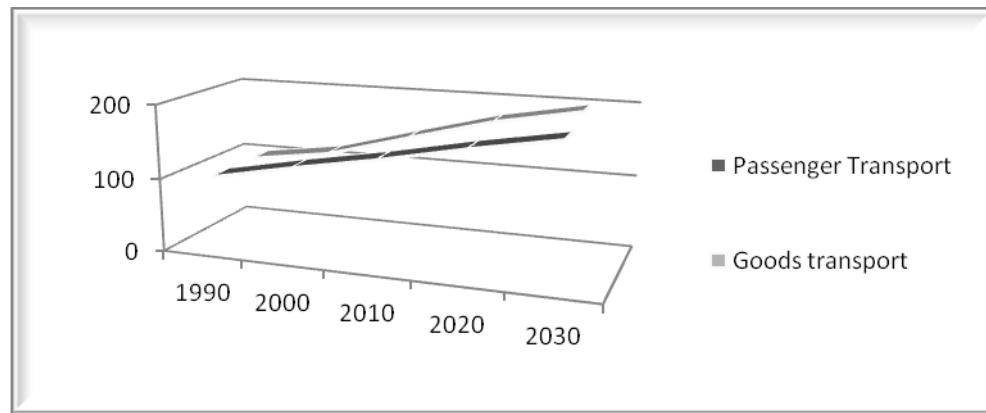
In 1996, the European Commission adopted the Eurovignette Directive to regulate the non-discriminatory access to the transport infrastructure of heavy transport vehicles on the average infrastructure costs basis.

In ports and airports, the access to the transport infrastructure is made on the costs basis related to the fair competition conditions provision, in accordance with the guidelines established by the European Commission in 1997. The rail transports are governed on the costs basis, according to the scarcity of the building capacity and the environmental protection (European Commission, 2001).

The income surplus resulting from new transport taxes imposition across the EU will be targeted to improve the transport infrastructure, reducing negative environmental impacts and improving the European rail transport (Nash C., Sansom T., 2001). In 2001, was published a Transport White Paper, which provided the main action objectives and directions still by 2010.

Nowadays, the EU faces to a growing imbalance between the modes of transport. This is why the European Commission tried to achieve two important objectives still 2010: regulation of the competition between the transport modes and building a better connection between the transport modes through cooperation between them (DG TREN, 2007).

**Figure1: Transport activity trend (1990=100%)**



Source: personal contribution using Eurostat database

The latest official document was The White Paper on Transport realized by the European Commission in 2011. According to this document, the new transport patterns must emerge, according to which larger volumes of freight and greater numbers of travelers are carried jointly to their destination by the most efficient (combination of) modes. Individual transport is preferably used for the final miles of the journey and performed with clean vehicles. Information technology provides for simpler and more reliable transfers. Transport users pay for the full costs of transport in exchange for less congestion, more information, better service and more safety (European Commission, 2011).

Moreover, the European Commission established ten goals for a competitive and resource-efficient transport system:

Halve the use of 'conventionally fuelled' cars in urban transport by 2030; phase them out in cities by 2050; achieve essentially CO<sub>2</sub>-free city logistics in major urban centers by 2030;

Low-carbon sustainable fuels in aviation to reach 40 % by 2050; also by 2050 reduce EU CO<sub>2</sub> emissions from maritime bunker fuels by 40 % (if feasible 50 %);

30% of road freight over 300 km should shift to other modes such as rail or waterborne transport by 2030, and more than 50 % by 2050, facilitated by efficient and green freight corridors. To meet this goal will also require appropriate infrastructure to be developed;

By 2050, complete a European high-speed rail network. Triple the length of the existing high-speed rail network by 2030 and maintain a dense railway network in all Member States. By 2050 the majority of medium-distance passenger transport should go by rail;

A fully functional and EU-wide multimodal TEN-T ‘core network’ by 2030, with a high-quality and capacity network by 2050 and a corresponding set of information services;

By 2050, connect all core network airports to the rail network, preferably high-speed; ensure that all core seaports are sufficiently connected to the rail freight and, where possible, inland waterway system;

Deployment of the modernized air traffic management infrastructure (SESAR) in Europe by 2020 and completion of the European common aviation area. Deployment of equivalent land and waterborne transport management systems (ERTMS) (13), (ITS) (14), (SSN and LRIT) (15), (RIS) (16). Deployment of the European global navigation satellite system (Galileo);

By 2020, establish the framework for a European multimodal transport information, management and payment system;

By 2050, move close to zero fatalities in road transport. In line with this goal, the EU aims at halving road casualties by 2020. Make sure that the EU is a world leader in safety and security of transport in all modes of transport;

Move towards full application of ‘user pays’ and ‘polluter pays’ principles and private sector engagement to eliminate distortions, including harmful subsidies, generate revenues and ensure financing for future transport investments (European Commission, 2011).

## **2. Methods and Materials**

The analysis in the paper is based on the latest trends in the EU transport policy. It started from the research of the official dedicated documents, in order to understand the main directions of this policy.

The next step consists in studying the literature focused on this problem. As a result, we used especially representative documents and books from the crisis’ period. Practically, the analysis consists in a comparative approach in order to find common elements and disparities between the European documents, the dedicated scientific works and the real economic environment.

### *2.1 The Rail Transport*

The rail sector is the only one which registered a decrease during 1970-2011. This evolution is the result of the rail sector lower competitiveness related to the road transport. The growing demand for transport, resulting from the internal market creation, led to the Member States rail system integration into a European rail system. EU tries to create the conditions for the railway sector efficiency improving and adapting it to the single market the requirements. But the rail transport is less reliable than the road transport in respect of delivery times, which are less predictable for the railways. Across the Member States, the rail transport development and

importance are very different. These significant variations are determined by geographical peculiarities of each Member State, as well as of the national level of the transport policies.

The common transport policy characteristic is to cover the trade deficit using the subsidies. The regularization of the subsidies granted to the rail transport was initiated in 1965, when it was agreed to harmonize the rules governing financial relations between the national governments and of their railway companies.

Two other Regulations (1191/69 and 1192/69) introduced common standards for the rail transport across the Member States. In its White Paper (July 1996), the European Commission proposed a financial recovery plan for the rail companies in order to ensure the free access to all public services and traffic and to promote the integration of the national systems and the social aspects. The harmonization of the national railway transport policies continued with other three Directives: 2001/12, 2001/13 and 2001/14. The European Commission had an important contribution to the European rail network implementation. This system uses the same rail gauge (except UK), but with slight differences in its peripheral areas (Spain, Portugal, Finland and Ireland). The system was supported by the railway equipment manufacturing industry rationalization. As a result, the rolling stock production is currently dominated by three companies: Bombardier (Canada), Siemens (Germany) and Alsthom (France).

The European rail network implementation was based on the rail connection Paris-Brussels-Cologne-Amsterdam. Moreover, the Trans-European Networks (TEN) were always in the Centre of the European Union's efforts to create jobs and to provide efficient links between the various parts of the Union's single market (Delors J., 1993). During 1993-1994, the EU identified 14 priority projects for the granting of preferential EU funding, and a pan-European Conference on transport, held in 1994 in Crete, identified nine priority corridors. A very important corridor was the tunnel under the Channel. This tunnel, opened in 1994, cost 12.5 billion ECU and was financed by 210 commercial banks, and the European Investment Bank. Since 1997, this tunnel covered 60% of the market in the passengers' carriage on London-Paris route. The corridors identified in Crete included road and rail links between Helsinki and Warsaw, Berlin and Moscow, a bordering relationship on the Danube River, passing through seven separate states, and a link between Germany and Turkey, by five countries (see Figure 2).

In 2002, The European Commission presented a second package of measures for the reform of the rail transport policy in order to accelerate the creation of a competitive and open trans-European high-speed rail system. As a result, the European Railway Agency was created in order to provide technical assistance, security and interoperability with the railway authorities of the Member States.

**Figure 2: The rail TENs**



Source: Eurostat

In 2004, the European Commission adopted a third package of measures designed to the railway sector further reform. These measures opened the competition connected to the international passengers transport in the EU, strengthened the passengers rights, implemented a certification system for locomotive drivers and took measures to improve the quality of the railway services.

Nowadays, was introduced the European Rail Traffic Management System (ERTMS) in order to replace the existing railway signaling systems in over 20 countries with a single system. ERTMS has two main components: a radio system used for the exchange of information between the traffic management centers and the on board crews (GSM-R) and a computer system for controlling the train speed. ERTMS covers six important international rail connections: Rotterdam-Genoa, Napoli-Berlin-Stockholm, Anvers-Basel-Lyon, Seville-Lyon-Torino-Ljubljana, Dresden -Vienna-Budapest and Duisburg- Warsaw.

On 9<sup>th</sup> of November 2010, the Regulation EC 913/2010 concerning a European rail network for competitive freight entered into force. Moreover, the EU representatives want rail transport to dominate Europe by 2050 and to create an extended European railway market, able to cover more than 50% of all freight moving. There are great plans to invest in infrastructure and traffic control systems (Kallas Siim, 2010).

In December 2010, Spain became the European leader in high speed rail transport, with a network of over 2000 kilometers. The high speed railway network of France has 1900 kilometers, while the German has a length of 1300 kilometers. Spain was surpassed only by China (over 3500 kilometers) and Japan (2500 km).

In June 2011, was published a DG MOVE staff working document concerning a European rail network for competitive freight (DG MOVE, 2011). There are nine Rail Freight Corridors which have 10.11.2013 or 10.11.2015 as the latest dates of implementation.

## *2.2 The Combined Transport*

The combined transport is the transport of goods by way of involving more than one type of transport. It includes containers and other special transport modalities (RO-RO) which use the road/rail systems. The railway transport of the containers is coordinated by Inter-container, a consortium of 23 rail companies, which is able to carry over one million containers annually. This type of transport is focused on Marseilles-Fos-Rotterdam route and has a great importance for the railways in France and in Germany. The carriage of containers is less developed. Germany has supremacy in this area for internal traffic, and Italy for the international traffic.

The combined transport presents cost advantages for distances greater than 500 kilometers and protects better the environment. More, this transport is able to improve the financial situation of the railway companies. Since 2005, the volume of combined transport increased by 200%.

During 2003-2007, the Marco Polo programme was implemented. This programme has a financial support of 115 million Euros and encouraged effective measures for the combined transport development. In June 2004, the European Commission proposed to continue this project with Marco Polo II. This new programme was connected to the "sea highways" development. There were established four sea highways which had as final date of implementation 2010:

Baltic Sea highway: links the Baltic Sea States with the Member States in Central and Western Europe;

Western Europe maritime highway: connects Spain and Portugal to the North Sea and the Irish Sea;

South-East Europe maritime highway: connects the Adriatic Sea to the Ionian Sea and Eastern Mediterranean, including Cyprus;

South-West Europe maritime highway: connects Spain, France, Italy and Malta.

The financial support for Marco Polo II programme was regulated by a special Regulation in 2006 (European Council, 2006).

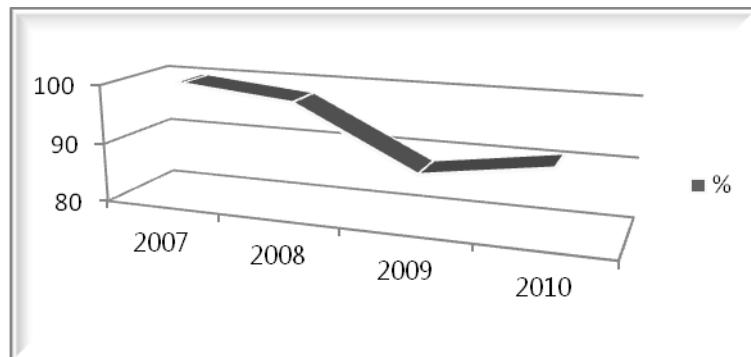
In 2009, the effects of the Marco Polo II programme implementation were object of an external evaluation. The result of this evaluation covers proposals to amend that Programme (European Council, 2009).

### *2.3 The Road Transport*

The road transport represents a transport operation made by road vehicles for the goods or persons movement, even if the vehicle is, on a certain portion of the road, transported to turn on/from another mode of transport (railway wagon, ferryboat). The road transport is the main transport mode for freight and passengers across the EU.

The total tonnage of the transported goods within the EU increased by 2.5 times during 1970-2011, and the share of road transport increased from 48% to 74%. The road transport goods were the object of licenses for all EU Member States. These licenses led to restrictions imposition related to the entry in this activity, which were able to compete successfully the rail transport. Under the impact of the crisis, the road freight transport activity in the EU had fluctuant evolution (see Figure 3).

**Figure 3: Road freight transport activity**



Source: personal contribution using the European Commission DG for Mobility and Transport Unit D.3 databasis

From 1<sup>st</sup> of January 1993, any carrier of a Member State may carry goods, without any kind of restrictions, to another EU Member State. A similar liberalization was desirable to obtain in the case of road passengers transport. But the European legislation was more oriented towards the international passengers' carriage and the bus carriage, leaving to the Member States the national regulation of motor transport passengers' services. The most developed road transport networks are those in the UK and the Netherlands (see Figure 4).

Since 1992, the Member States returned to the application of restrictions on transit through national borders by trucks and in tonnage. The bilateral agreements related to the transport licensing led to this transport inefficiencies increasing.

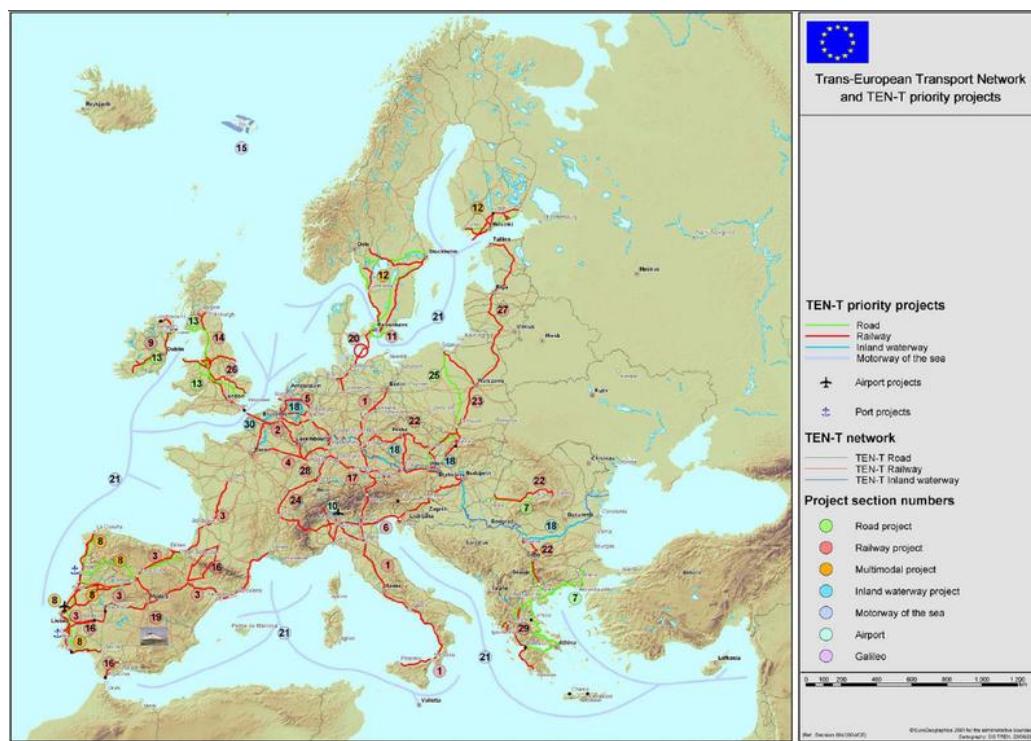
As regards the passengers' carriage, the most effective measure was that connected to the catalytic converters' implementation, which contributed to the pollution reduction across the community.

In order to improve the road safety, the European Commission adopted an Action Plan during 2003-2010. This Plan was connected to the European Charter on Road Safety, which promoted effective measures to decrease of the number of accidents and their victims

Since 1<sup>st</sup> of January 1993, any operator who wishes to carry goods or passengers across at least two Member States must hold a driving license recognized by the Community. This permit is issued by the Member State in which the operator is resident and allows the operator an unlimited access to the single market.

In September 2011, the European Commission presented a report related to the road freight transport. According to this document, the road transport covered 73% of the inland freight transport in the EU, related to the tonne-km (see Figure 5).

**Figure 4: Trans-European Transport Network and TEN-T priority projects**

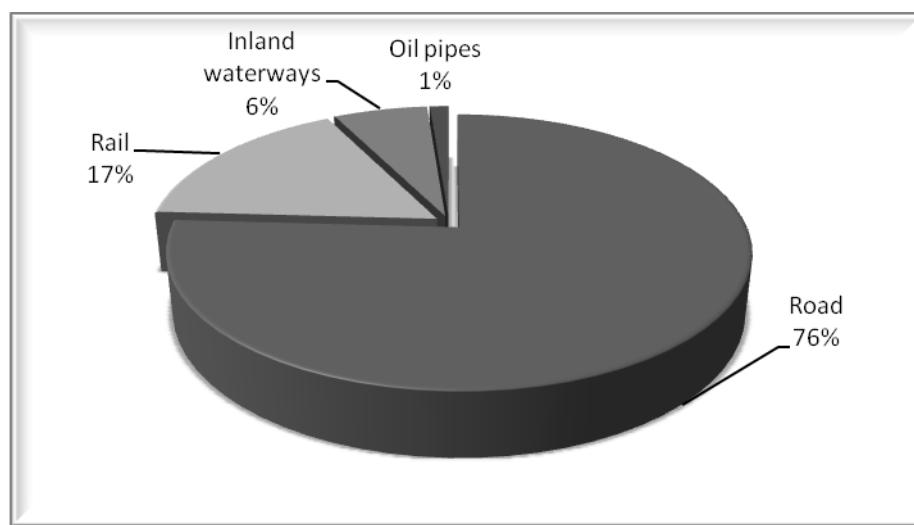


Source:

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php?title=File:Priority\\_axes\\_and\\_projects\\_of\\_TEN-T.PNG&filetimestamp=20090430095935](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:Priority_axes_and_projects_of_TEN-T.PNG&filetimestamp=20090430095935)

The distribution of road freight transport activity by distance class reveals that more than half (55%) of all goods in terms of their weight are not transported more than 50 km. Three quarter of all goods are not transported more than 150 km. It is in these distance brackets where road transport has no economically viable competing mode of transport. Only around a quarter of all goods are transported over distances greater than 150 km.

**Figure 5: Modal split in inland freight transport (%)**



Source: European Commission, 2011.

#### *2.4 Inland Waterways Transport*

These transport operations are extremely important for the continental Europe. They allow the connection between the Mediterranean and the North Sea, and towards the East, to the Central and Eastern Europe. EU has 29,500 km inland waterways, which are concentrated in two main systems: Meuse-Scheldt, which connects Belgium, France and Netherland; and Rhine-Main-Danube, which stretches over practically the whole continental Europe.

Between these two systems, the Rhine is the most important, because through it is transported 57% of the total volume of goods which are subject to shipping in the EU inland waters (121 billion tonnes-km). This is, in fact 1/3 from the entire traffic of goods inside the EU. This type of transport is more developed in Germany and the Netherlands, which cover 73.1% of the EU's inland waterway traffic. France and Belgium have also important inland transport networks.

Since 1990, the European Commission approved a system of subsidies that are granted to stimulate the construction of inland waterway vessels. From 1<sup>st</sup> of January 1993, the inland waterway transport benefited from the cabotage liberalization. Since 2000, Netherland, Belgium and France granted subsidies for the employees in this economic sector. These measures led to the inland waterway transport investment policy coordination. Moreover,

since 1995, the European Commission supported the idea of building a trans-European Fluvial Transport Network.

However, the European inland waterway transport operations suffered of a surplus transport capacity due to the large investment needed to modernize the fleet and the competition from the Eastern European states.

The navigation of the Rhine is governed by the Mannheim Convention provisions (1848). In addition, the European Commission issued several rules, such as: 82/714/EEC, which harmonizes the specific technical parameters relating to the transport ships, or 76/135/EEC, which establishes mutual recognition of the navigability licenses.

In 1983, the European Commission implemented five proposals made by the European Parliament, relating to: entry on the market, working conditions, the introduction of tariffs, cabotage and access to the Rhine navigable. In addition, was adopted an action programme relating to the fleet restructuring, the state aid granting for new vessels construction and for this type of transport infrastructure modernization.

Since 1993, any vessel belonging to a Member State may carry goods and passengers inside the EU (according to Regulation 91/3921/EEC). In January 2000, this type of transport has been completely liberalized at the Community level.

The fluvial transport is efficient, produces low pollution, and consumes less energy per tonne-kilometers related to the road and rail transports. In addition, the number of accidents, traffic jams, and noise and air pollution are 7 times lower than for the road transport. The White Paper from 2001 proposed the promoting of this type of sustainable transport.

## **2.5 The Air Transport**

The air transport was subjected to a lot of rules at the Community level. Moreover, the EU had to take into account, in this policy developing, all bilateral and international agreements signed by that time. The international air transport regulation was based on the Chicago Convention (1944).

At the beginning, the European civil aviation industry was characterized by relatively small airplanes with common technical parameters. Almost 50% of the air traffic was among the EU Member States (Pryke R., 1991).

In 1979, the EU adopted the 1<sup>st</sup> Civil Aviation Memorandum (COM 79/311), which defined a competitive and effective market in the area. In 1984, was signed the 2<sup>nd</sup> Civil Aviation Memorandum (COM 84/72 final), which introduced the concept of "flexibility zones". The further regulations of the European Commission connected to the air transport were classified by specialists in three packages. The first package of directives and regulations was approved in 1987. It stipulated: the European Commission authority to apply the European air transport

legislation (Regulation 3975/87), the agreement types (Regulation 3976/87) and the decrease of the Member States' individual control on the air transport (Directive 601/87).

The second package of directives and regulations was adopted in 1991 and facilitated the signing of new bilateral agreements and emphasized the process of air transport market liberalization. The third package of measures was implemented in 1993 and was focused on the adoption of the licensing rules, based on common criteria, recognized by all Member States. The cumulative impact of the three packages of measures consisted of full liberalization of the air transport market. The largest expansion of the air transport was achieved by France, Spain and Germany. The charters developed rapidly, reaching out to hold up to 80% of the total air traffic in some Member States.

After the terrorist attacks in New York (2001), the European airlines incurred losses of 15% and their financial situation worsened. In order to resist on the market, the European airlines adopted low tariffs, appealed to the special services and packages, developed charters and tried to operate on new routes and other periods of the year. Through a press release, issued on 15<sup>th</sup> of June 2006, the European Parliament showed that, in order to improve the flight safety measures after the terrorist attacks of 11<sup>th</sup> of September 2001, it was necessary to apply strict rules concerning the security agents' presence on the aircrafts board.

The decrease of the economic activity under the global crisis impact supported the decrease of the demand for transport. Within the transport sector, the air transport seems to be more sensitive than other modes (Blauwens G., De Baere P. and Van de Voorde E., 2008).

The possible future developments of the air transport activities were forecasted in a study based on a set of endogenous and exogenous variables. Among the exogenous variables under consideration are such factors as economic activity, fuel prices and the price of aircraft, either newly purchased, second-hand or leased. Endogenous variables are the yields, the cost structure (cf. hedging agreement or not), financial indicators, capacity utilization, mergers and acquisitions.

The future developments we wish to put forward are the following: alliances, consolidation and niche players; privatization, or the end of flag carriers; the influence of cross-border mergers and acquisitions; survival of the Southwest-model; more bankruptcies; new market entries and increasing aggressiveness; changed influence of governments; extreme volatility of the airfreight market; increasing foreign capital; and less employment (Rosário Macário, Eddy Van de Voorde, 2009).

An interesting evolution of the EU air companies was that to participate to global network carriers under so-called strategic alliances into a limited number of fiercely competing networks, both in passenger and in freight transport. As a result, there are three important strategic alliances nowadays (see Table 1).

**Table 1: Air companies' strategic alliances**

Alliance	Air companies
Star Alliance	Air Canada, Air China, Air New Zealand, ANA, Asian Airlines, Austrian, Egyptair, LOT Polish Airlines, Lufthansa, Scandinavian Airlines, Shanghai Airlines, Singapore Airlines, South-African Airways, Spanair, Swiss, TAP Portugal, Thai Airways International, United, US Airways
	Regional members: Adria Airways, Blue1, Croatia Airlines
SkyTeam	Aeroflot, Aeromexico, Air France, KLM, Alitalia, China Southern, Continental Airlines, Czech Airlines, Delta Air Lines, Korean Air
	Associates: Air Europa, Copa Airlines, Kenya Airways
Oneworld	American Airlines, British Airways, Cathay Pacific, Finnair, Iberia, Japan Airlines, LAN, Malev, Quantas, Royal Jordanian

The European Commission continued to be focused on the air safety. As a result, in October 2011, it published a paper on how to achieve a better system of aviation safety management for Europe (European Commission, 2011). The paper proposes ten actions with the aim of improving air safety. One of the major actions does involve legislation, and this is to table proposals to update the rules on occurrence reporting. A further action is the publication of a Safety Plan which contains specific safety issues and some of the actions to address them. This 'European Aviation Safety Plan' will be updated annually and will enable the European citizen to be kept informed on progress in aviation safety.

The EU most important airports are now facing a capacity crunch. On present trends, 19 of the European airports will be unable to accommodate any more flights by 2030. The resulting congestion could mean delays for half of all flights across the network. On 1<sup>st</sup> of December 2011, the European Commission adopted a comprehensive package of measures to address capacity shortage at EU's airports and improve the quality of services offered to passengers. The package contains three legislative proposals on slots, ground handling and noise as well as a communication (European Commission, 2011).

Moreover, on 22<sup>nd</sup> of December 2011, the same Commission adopted the Communication COM(2011)923 related to the deployment phase of the SESAR Programme, the technological pillar of the Single European Sky (SES) for establishing governance and incentive mechanisms to deploy SESAR technologies in a timely and synchronized manner. SESAR is a fundamental component - the technological pillar - of the Single European Sky, alongside other vital elements such as Functional Airspace Blocks, the Performance Scheme (Performance Review Body), and the Network Manager. SESAR is now in the phase of development under the leadership of the Joint Undertaking, then followed by the deployment phase implying the large scale production and implementation of the new air traffic management infrastructure.

As the SESAR Joint Undertaking's mandate expires on 31.12.2016, the Commission will carry out the necessary evaluation and consultations with a view to submitting a relevant proposal before 2013 in view of extending the SJU's mandate.

### *2.6 The Maritime Transport*

The common maritime transport policy was implemented since 1970. In 1989, the European Commission proposed the creation of the European Shipping Register (EUROS) to the EU's flag (COM 89/266).

In 1993, the introduction of cabotage and the need for the Community intervention in the maritime transport improvement resulted in the adoption of the measures relating to the competition policy, in order to prevent unfair charging practices, to define standards for vessels used for the carriage of dangerous goods and for the work conditions.

In its communication from 13<sup>th</sup> of March 1996, the European Commission reiterated three priorities in the maritime policy development: safety, open markets maintaining and competitiveness increase.

In 2009, the same European Commission presented a forecast related to the EU's maritime transport policy until 2018 (European Commission, 2009). This forecast started from the idea that Europe plays a major role in today's shipping world, with European companies owning 41% of the world's total fleet (in dwt).

The proposed options are built on an integrated approach to maritime policy and based on the core values of sustainable development, economic growth and open markets in fair competition and high environmental and social standards. The benefits set out in this vision should go beyond the frontiers of Europe and extend to the whole maritime world, including the developing countries.

### **3. Discussions and Case Study: The Transport Policy in Romania**

The main reasons of the limited financing of the transport infrastructure in Romania come from some key elements which define the most important changes from the transports sector still 1990. These key elements cover: fundamental change of transport sector structure from Romania, from a state planned economy (controlled economy) to an economy which is based on transport demand and is led by the market; decline of those industries which would use intensive the rail transport; regional instability from the neighbor Balkan states; heritage of an inadequate infrastructure and low investments on; low investments for the infrastructure maintenance; a rapid growth of the private vehicles park; decrease of the public transport use; deterioration of the road and rail infrastructure as a result of big floods.

All these elements led to: a significant decrease of the goods tone-km number on railway; a change of the international traffic dimension and the below capacity use of the water ways for

the international transport of bulk goods and containers transport; growth of the need to build new transport infrastructures; growth of the need to rebuild and improvement the transport infrastructure; rapid growth of the road traffic volume.

The effects of these above components include: growth of road congestions, operational costs for road vehicles and road transport time; low rail speeds; decrease of the passengers' number of the rail transport; growth of the environment pollution; a negative impact on the Romanian market efficiency and attractively for investments.

Moreover, it was a slow implementation of the innovative ideas and technologies. This caused the decrease of the opportunities to use alternative financing sources and new transport modes, as multimode and combined.

The specific Sector Operational Program (SOP T) is based on the quantification of the most important tendencies from transports. SOP T is different of individual projects, because it is connected to a large national strategy. The global analysis of the traffic evolution is enough for the SOP T objective.

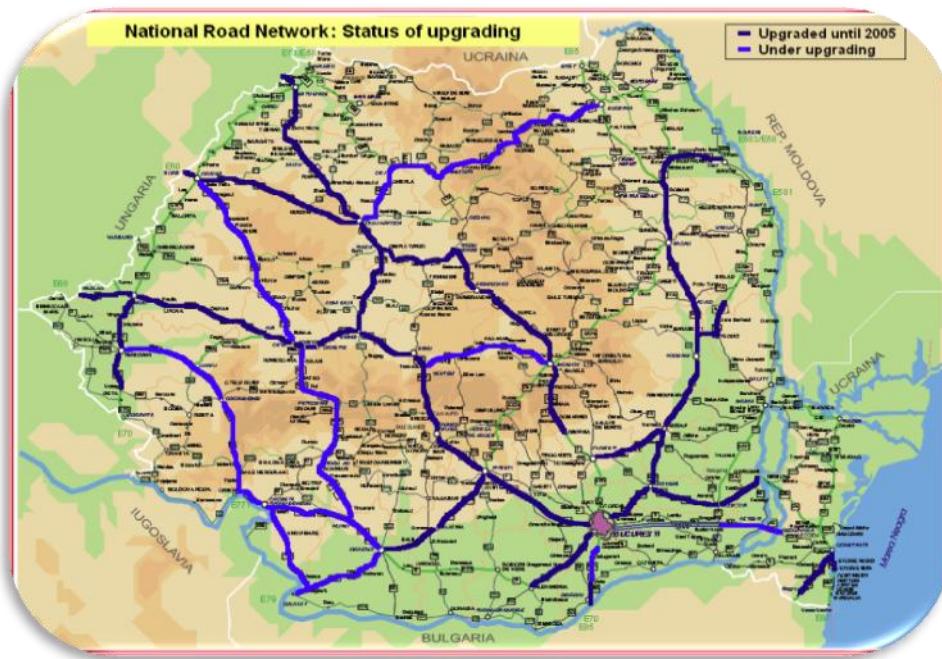
The traffic/GDP elasticity values which are taken into control are based on EU the average values from the latest period and they are named as: road good transport 1, road passengers' transport 1.1, air passenger's transport 1.3, air good transport 1.2 and rail passenger's transport 0.8. This connection between traffic and GDP trend shows the interaction between the economic development and traffic growth.

The 2010 budget of the Ministry of Transport and Infrastructure covered the financing for the Sibiu-Orastie speedway. This budget was published on the ministry site. According to the 2010 SOP T, where the Ministry of Transport and Infrastructure is Management Authority, will be achieved the following objectives: continuation of the approved financed demands (Constanta-Cernavoda speedway, Constanta bypass road) and approval of the major projects: Sibiu-Orastie speedway, Nadlac-Arad speedway, Lugoj-Deva speedway, Timisoara-Lugoj speedway, rehabilitation of Curtici-Radna railway and Alexandria-Craiova 6<sup>th</sup> national road. The total budget of the Ministry of Transport and Infrastructure is 10.86 billion lei in 2010, by 7.39% less regard 2009.

### *3.1 Road Transport*

The national road network is under a notified modernization process (see Figure 6).

**Figure 6: National road network: modernization status**



Source: SWK Consortium, AT for MT, 2009.

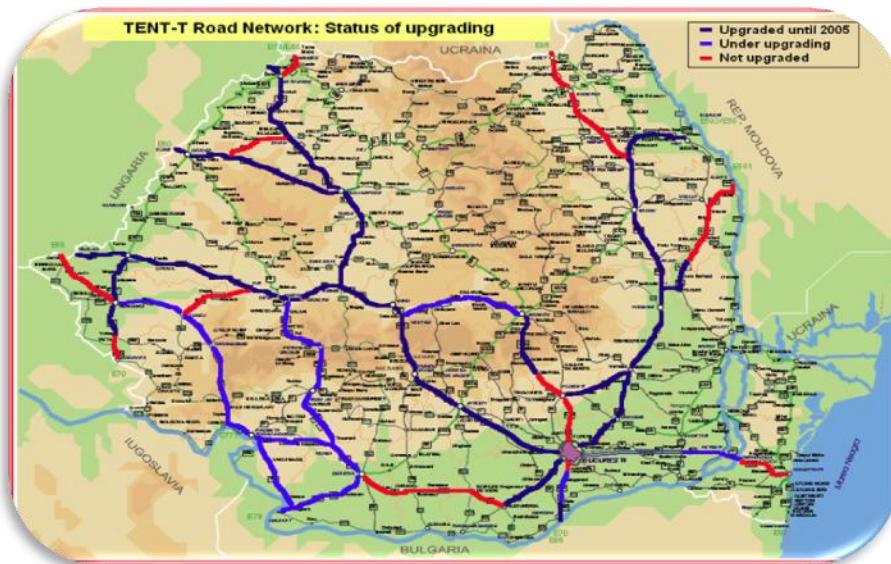
A distinct part of this modernization process is focused on the Trans-European Networks (TEN-T). The modernization status of the TEN-Ts on Romania territory is presented in Figure 7.

Over the years, the traffic grew significantly on some specific sectors and some projects were started in connection to the traffic capacity growth. These projects can be grouped in: building of bypass roads around the main cities and of speedways.

There were started the following projects connected to the speedways: rehabilitation of Bucharest – Pitesti speedway; Bucharest – Constanta speedway, which is financed by the European Investments Bank (EIB) and the Romanian government; progressive building of Pitesti – Sibiu – Nadlac speedway, along of the priority axe TEN-T no. 7; building of Brasov – Cluj - Bors speedway, which was started in 2004 and which is financed by public budget; building of Bucharest– Brasov speedway, started in 2006 and financed by public budget.

To date, the buildings are made traditionally, under the building contracts. Even that there were introduced new development methods, as designing-building-exploitation contracts (BDO) and public-private partnerships (PPP), these specific initiatives have not success till now.

**Figure 7: Road network TEN-T: modernization status**



Source: SWK Consortium, AT for MT, 2009.

The Master General Plan for Transports in Romania was started in 2008. In 2010, the Ministry of Transports and Infrastructure built 12 bypass roads (205 km). 90 km of them were finished in the same year. 1630 km of national roads are on the anvil, whereby 855 will be finish.

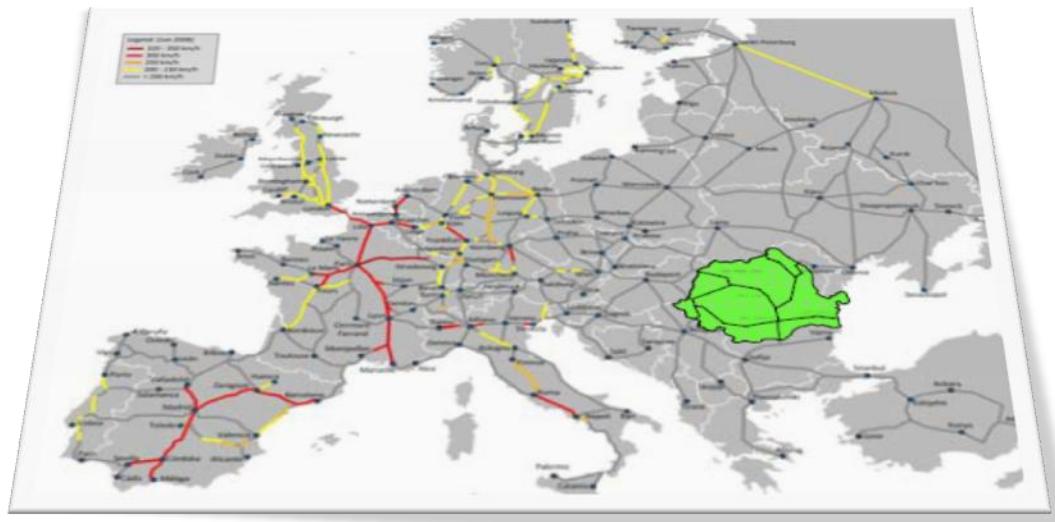
The budget allocation for capital repairs is about 800 million lei. In 2010, the need financing of the National Company of Speedways and National Roads from Romania was about 17.37 billion lei, 88% higher than in 2009.

### *3.2 Rail Transport*

The implementation of the European Council Directive no. 91/440 on the EU rail network started in 1998, with the restructuration of the Romanian Rail National Society (RRNS).

Its objective was the separation between the infrastructure management and the operative activity under the administrative and institutional levels. This is why RRNS was divided into a national company, two national societies and two trade companies which have, as main activity objects: management of the rail infrastructure and auxiliary goods; rail goods transport; passengers rail transport; financial accounting and juridical services assurance. This company (SMF) was dissolved in 2002, and its prerogatives were given to other companies; management of the supplementary actives resulted from the RRNS reorganization.

**Figure 8: Romanian railway networking in the European context**



Source: Ministry of Transports

[http://www.unife.org/uploads/2009/01\\_romanian%20seminar/presentations/Dumitrescu.pdf](http://www.unife.org/uploads/2009/01_romanian%20seminar/presentations/Dumitrescu.pdf)

The rail network in Romania is eroded, including the specific structures. As a result, the maximum speed in traffic is under rigorous restrictions on many routes.

The maximum speed is 50 km/h on 27% of the network and 80km/h on 39% of the same network. The speed restrictions number grew lately, from 386 km in 1995, to 624 km in 2008. We have to specify that the track gauge is interoperable. The communications and signaling connected to the rail transport need special attention.

### 3.3 Air Transport

Nowadays, there are 17 airports in Romania. In 2009, only five registered traffic above 100000 passengers, four between 10000 and 50000 passengers and the others less than 50000 passengers. The locating of the most important Romanian airports is presented in Figure 9.

The Romanian airports Henri Coanda, Aurel Vlaicu, Traian Vuia and Mihail Kogalniceanu belong to the public transport infrastructure and are operated by companies under the Ministry of Transports, which are lessees. Other local airports operate under the County Councils administration, as independent authorities. Arad airport operates as a company and Caransebes is a private airport.

The international airport Henri Coanda Bucharest (known previous as Bucharest Otopeni) represents the main air access way of Romania and covered above 70% from the total air transport passengers from Romania in 2009.

**Figure 9: TEN-T airports in Romania**



Source: <http://www.aircraft-charter-world.com/airports/europe/romania.htm>

The air passenger's traffic on Bucharest Otopeni grew by 10% yearly, in the latest 7 years, especially of internal traffic. The growth of the internal traffic was supported by the Tarom decision to move the base for the internal flights on Henri Coanda airport.

### 3.4 Water Transport

The water transport network from Romania covers maritime harbours, fluvial harbours and waterways. Constanta is the greatest Romanian harbour to the Black Sea. It is connected by Danube to Serbia, Hungary and Austria, and by Rhine- Main-Danube Channel to Rhine as far as Rotterdam, to the North Sea.

The Danube-Black Sea Channel connects Constanta harbour to the fluvial waterways. It belongs to state and is operated by the National Company of the Navigable Channels S.A. It is located in Constanta, and it was, some time ago, a company under the Ministry of Transports.

The waterway transport infrastructure is managed by the following companies: National Company Administration of Danube Maritime Harbours S.A. from Galatz; National Company Administration of Danube Fluvial Harbours S.A. from Giurgiu; and Autonomous Fluvial Administration of Low Danube from Galatz.

It is a powerful connection between the water transport, water quality, environment and water course preservation. It is possible to appear water pollution risks from ships, sewerage system or offals management as a result of ships filling in special locations or in marine or internal waters.

**Figure 10: Aerial photo of Constanta harbor**



Source: Constanta harbour webpage

The maritime harbours Constanta, Mangalia and Midia are placed to the Black Sea. Braila, Galatz, Tulcea and Sulina are Danube harbours, but they are operated as maritime harbours. The Danube maritime section covers 170 km, between Sulina and Braila.

The infrastructure of the Constanta harbour is weatherbeaten and more equipment are 20 years older than the recommended operating period. It is important to specify that the navigable Danube is used free of charge, because it has an international statute. As a result, there are no taxes and the maintaining funds have to be covered by the Romanian government.

According to the above presentation and the positive trend of the transport policy, we can support the idea that transports represent a key factor in modern economy. The greatest competitive advantage of the road transport is its capacity to transport goods across the Europe, with high flexibility and low prices. The economic growth of road transports will offer business opportunities for the transporters from the latest Member States, including Romania, because of their relative low costs.

Although the water transport is not an expensive transport mode and it is less pollutant than the road one, it is not use too intensively. During last 20 years, the most used transport with the greatest growth was the air transport.

Not least, the transport policy, as a component of a sustainable development strategy, has to cover elements of different policies, as: economic policy and output changes; urban planning

policy, including the land use; social and educational policy; local urban transport policy, especially of the great metropolis; competition policy; research and transport policy.

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