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THE DEVELOPMENT AND THE MODERNISATION OF THE
TRANSPORT INFRASTRUCTURE IN ROMANIA ACCORDING
TO THE E.U.'S DIRECTIVES

Abstract

The paper deals with the transports' evolution under the sustainable development. For the beginning, we analyse the impact of the transports on the European and the Romanian economies. The analysis covers all types of transports and is focused on the Romania's situation.

A distinct part of the paper talks about the future of the transports' development during 2007-2013.

The final part of the paper analyses the impact of the transports on the environment and connects it to the next evolution. The forecasts talk about a growth of the road traffic about 30% in 2010, comparing to 1995. On the other hand, in the same year, the external costs of the air and road traffic will grow to 42%.

1. General framework

An efficient transport infrastructure which is connected to the European transport network supports the economic competitiveness growth, facilitates the integration into the European economy and allows the development of the new activities on the single market.

Nowadays, the situation of the Romanian transports is characterised by a little number of speedways and speedways connections with the neighbour countries and other Member States, by low speed railways, a high degradation of the naval infrastructure and of the rolling stock.

As a result, there are necessary the modernisation and the development of the national transport network in order to obtain a sustainable development of the transports in Romania.

Under the Development and the Modernization of the Transport Infrastructure Strategy, the objective is to generate an equilibrated development of every transport modes by ensuring the modern and sustainable transport infrastructures together with better services and a unity into diversity system, as well.

The development of the transport infrastructure represents a condition for the implementation of the other Romania's development

priorities during 2007-2013. It supports the growth of the persons and goods' mobility, the integration of the regional growth poles to the trans-European transport network, the elimination of the undeveloped areas' isolation and the development of the regional and local transport infrastructure.

Romania establishes the guidelines for its important communications ways into the Plan of the National Teritorial Development, 1st Section - Communication ways -as a support of the long term complex and sustainable development, including the regional development. This plan defines the national communication ways network, identifies the priority projects and the harmonisation measures for its development and proposes solutions in order to establish territorial equilibrated economic reports and to connect the major transport national network to the 3 pan-European and priority corridors (IV, VII and IX) wich pass over the Romania's territory.

The Law no. 203/2003 republished establishes the development priorities of the transport infrastructure modernisation till 2015.

The future economic growth, the evolution of the society and the territorial development will influent the transports and this will ask for a constant improvement of the infrastructure and the quality of the transport services.

The growth of the transports demand is supported by the demographic evolution, the tourism development, the evolution of the industry and the agriculture and the occupation dispersion of the urban peripheries.

This growth is accompanied by a demand for services' quality which has to be satisfied under the Romania's access to the post-adhering European funds, which are able to support the investments for the transport infrastructure.

The demand for goods transport is connected to the economic evolution. The growth of the goods transport demand is greater than the growth of the GDP in the developed countries. In Romania, the forecasts determined a rate of the goods transport demand 2% greater than the GDP rate of growth.

This trend is the same with those from other new Member States, like Hungary, Poland, Slovenia and Czech Republic.

The different trends in the goods transport and in GDP rates are caused by the low valoric density of the goods, which means big weight

and low monetary value. In the Western Member States the valoric density of the goods is higher. As a result, every supplementary GDP unit will generate a lower volum of the goods transport.

The development of the transport infrastructure in Romania will support the integration into the single market and the valorisation of its geographic position as transit zone between the pan-European transport corridors IV and IX. This geographic position represents an important element for the strategically options about the development and the modernisation of the transport infrastructure in Romania.

The opportunity created by the Danube-Black Sea Chanel and by the Danube can realise a key position in order to attract the international goods fluxes in the relations between Europe and other continents.

A viable transport alternative for Romania is the transit on the internal navigable ways using the Danube. The Romanian Danube sector (1075 km) and the Danube-Black Sea Chanel ensure the conection between the Danube and Constanta harbour, because the Danube-Black Sea Chanel cuts back the distance between the Black Sea and the Danube harbours from the Central Europe with 400 km. Moreover, this Chanel ensures the direct conection between Constanta and Rotterdam.

The Danube will support the conection and the integration of Romania into the E.U. It will ensure a sustainable development and will improve the Romania's position in order to attract greater goods fluxes connected to the relationships between Europe and other continents.

The air transports have a significant potential to improve its position into the medium and long distance traffic. Romania has to benefit by its geographic location in order to attract investments for the infrastructure and air services. The development of the air transports infrastructure will grow the accessibility of the less developed regions to other internal and external regions, will improve the labour flexibility on the labour markets and the competitiveness of those regions which benefit by the development projects.

An advantage can be the relative harmonious distribution of the air transports' infrastructure on the national territory. The problem is that connected to the inter-modal transport development. This inter-modal transport allows the rare materials and goods' transport with low costs and supports the sustainable development, as well.

As a result, it is necessary to establish equilibrium between the rail and the road transports and to grow the role of the air and the maritime transports.

The development of the road transport and its alignment to the European standards is asked by the necessity to connect the national network to the European one and to correlate the Romanian development projects to those from the neighbour countries.

The Romanian development policy has to integrate the national rail infrastructure to the European technical and operational parameters in order to become a compatible and an inter-operable component of trans-European rail network.

During 2007-2013, the main objective of the European rail transport is the growth of its percentage from 6% to 10% for the passengers and from 8% to 15% for the goods, in order to ensure a more equilibrated distribution of the transports and to protect the environment.

During the same period, the major objective of the Romanian rail transports is to maintain an equilibrated percentage from the transport market: 25% for the goods and 35% from the passengers.

The air transports are focused on the implementation of a secure, efficient and functional transport industry, which has to be compatible and adaptable to the European policies, principles and institutions. All civil aeronautic activities respect the greatest part of the specific European standards, regulations and directives.

A special attention will be given to the market demand. The forecasts talk about a growth of 200% of the number of passengers which will be transported from and in Romania till 2013. Moreover, the goods volume which will be transported will grow as a result of the Romania's adhering to the E.U. and N.A.T.O.

On the other hand, there are necessary to ensure services according to the European standards, to modernise and to enlarge the aeroportuar infrastructure connected to the TEN-T. As a result, will be supported the four national interest airports which are coordinated by the Ministry of the Transports.

The naval transport is focused on the modernisation and the sustainable development of the maritime and fluvial transports, in order to grow the market share of this transport mode, the volume of the transited goods by the Romanian harbours and the efficient use of the existing harbour infrastructure.

Moreover, there are necessary to refresh the trade potential of the Romanian maritime and fluvial harbours, to redefine and to consolidate the geo-strategic position in the Danube and the Black Sea's areas by building a sure, solid and integrated naval infrastructure which will be able to connect to the TEN-T, to promote a coherent basis in order to promote the free access, the secure and efficient movement of the persons, goods and services, as well.

In order to realise a sustainable development, Romania created a dedicated strategy for the transports. This strategy is based on a SWOT analysis which marked out that the Romanian transport system is less developed comparative to other Member States.

As a result, the general objective is the ensurance of an extended, modern and sustainable transport infrastructure, in order to grow the Romanian economy and to improve the life standard. The contribution of the transport activities in GDP will grow to from 3.6 billion Euros nowadays to 7.0 billion Euros till 2015.

The achievement of this objective will support the growth of the accessibility for Romania, the inter-modality of the transport system, the equilibrated development of all transports modes and the quality and the efficiency of the services. Moreover, this objective will support the decrease of transport impact on environment, the ensurance of the sustainable development of the transports and the integration of the Romanian economy to the European one.

The specific objectives of the Romanian transport strategy are the following:

- ✓ the modernisation of 5701 km from the national road network. 1347 km from the TEN-T network will be reabilited, the road structure will be dimensioned in order to take over a duty on axle of 11.5 t and 1933 E class bridges will be redimensioned, during 2007-2015. Moreover, there will be built 1052 km of highways and 301 km will be modernised;

- ✓ the ensurance of the rail inter-operativity for 1100 km from TEN-T rail lines and to 100 km from all modernised inter-operativity rail lines other than the TEN-T network. Till 2013, at least 25% from the goods transport and 35% from the public passengers transport will be made on the railway;

- ✓ the growth of the goods traffic through national and maritime harbours and the two naval canals, in order to improve the naval infrastructure. As a result, the goods traffic will grow with 3.79 million

tones by the naval ways and canals and with 39.47 million tones by the maritime harbours in 2015 comparing to 2004;

✓ the modernisation of the air equipments and facilities in the four national airports, in order to achieve a yearly passengers traffic of 11.3 million passengers till 2015.

The general and specific objectives of the national development priority- The development and the modernisation of the transport infrastructure- are achieved by actions which are grouped into three sub-priorities:

✓ the modernisation and the development of the trans-European transport infrastructure and the connection networks: this objective will generate the territorial cohesion in Romania and in other Member States by the development and the modernisation of the road infrastructure, the decrease of the travel times to the main destinations, the growth of the rail, naval and air facilities, in order to satisfy the intensive traffic of goods and passengers;

✓ the modernisation and the build of the trans-European road infrastructure: this measure is focused on the finalisation of the highways, including the variant routes for the cities located on the TEN-T and the modernisation of the roads and the bridges on the same TEN-T. The main benefit of the road transport is the growth of the speed and the capacities on the Pan-European road corridors. The implementation of the projects connected to the realisation/development/modernisation of the transport infrastructure on the 4th Pan-European transport corridor represents an absolute priority for Romania. The National Company for Highways and National Roads from Romania will be the main beneficiary of the national and European financial allocations for the road infrastructure development. The main projects will be focused on the North of the 4th Pan-European transport corridor between Nadlac-Arad-Timisoara-Lugoj-Deva-Sibiu-Pitesti-Bucuresti-Constanta;

✓ the modernisation and the build of the trans-European rail infrastructure: this objective will grow the attractiveness of the rail transport by growing the speed to 160 km/h for the passengers trains and to 120 km/h for the goods trains, as well. The rail transport will cover 30-35% from the market and it will have a high security degree, modern methods of the rail infrastructure maintenance and a better inter-operability with the European rail transport system. These mean the reliability of the rail

tronsons Curtici-Simeria, Simeria-Coslariu, Coslariu-Sighisoara, Sighisoara-Brasov, Brasov-Predeal and Craiova-Calafat;

✓ the modernisation and the extension of the trans-European naval infrastructure: is based on the maximum use of the Danube's potential. That means a lot of protection coasts works, consolidation works, topohydrographic measures and a semnalisation and watching system for the Danube's traffic. The navigation parameters will be improve between Calarasi and Braila and the building operations will continue across the Romanian-Bulgarian Danube, the Danube-Black Sea canal and Poarta Alba-Midia-Navodari canal, as wel;

✓ the modernisation and the extension of the trans-European air infrastructure: is connected to the works for the airports from Bucuresti-Otopeni, Bucuresti-Baneasa, Timisoara and Constanta, in order to eliminate the traffic congestions;

✓ the modernisation and the build of the TEN-T conection networks: the conection of the local/county/national transport networks to the trans-European transport network will support the accessibility improvement, the fast acces to the TEN-T and the growth of the goods and passengers volume. A main importance will be gave to the conections between the points of the passengers fluxes' creation, in order to ensure a fast and confortable link between those points and the accessibility growth of the adjacent areas of the TEN-T;

✓ the sustainable development of the transports: tries to integrate the principles of the sustainable development into transports sector, as a result of the documents adopted to the European Cpuncil from Cardiff (1998) and the European Strategy for Sustainable Development (Goteborg, 2001).

2. Transports and the sustainable development

The sustainable development implies the decrease of the transport-environment impact and the stabilisation at a low level of the pollution emissions and agents resulted from the transport activities.

These are the result of the adhering negotiations (Chapter 9 - Transport policy) and of the international treaties and accords which Romania and/or the E.U. adhered (UNO Framework Convention- 1992, Kyoto Protocol- 1997, and Geneva Convention about trans-border air pollution).

During 2008-2012, Romania has to decrease its greenhouse effect emissions with 8% comparing to 1989. Moreover, the global greenhouse effect emissions have to decrease at least 5% comparing to 1990 till 2012.

The achievement of this objective will be supported by the extension of the combined and inter-modal transports together with their endowments and the use of a specialized rolling material with high performances connected to the energy consumption and the environment protection.

Moreover, will be implemented the centralized gestion of the goods traffic (intermodal platforms), will be use performant means of conveyance and will be created forestry protection curtains.

Other activities will support the logistic integrated services for the road transport, the growth of the electric traction for the trains, the implementation of the modular units for the goods trains, the use extension of the electric and Diesel frames for the rail passengers transport.

During 2007-2013, the improvement of the conventional rail infrastructure and the rolling material will support the rail transport and will offer an unpolluted option, more secure, of transport.

The air transport will discourage the use of the high noises aeroplanes, but it will support the implementation of the modern monitoring systems for noise beside the airports and other systems which will be able to decrease the impact of the air transport on the environment.

A special care will be gave to the Green Paper of the action against the noise, which promotes new modern monitoring noise for road and rail transports by eliminating the noises' sources and by protecting the public health against these noises, as well.

The Marco Polo Program promoted the movement of the goods traffic from the road one to the other transport modes. Moreover, the European Commission asked for this program carrying on during 2007-2103.

As a result, Romania will use government programs in order to encourage the renovation of the road vehicles, the rail rolling material, the maritime, air and naval fleets and to support the sustainable development. This measure contains normative and financial components and it will support the decrease of the soil, air and water pollution and the growth of the transport energetic efficiency.

3. Transports vs environment

The transport policy represents one of the most affected European policies by the ecologic restrictions. The E.U. promotes a sustainable environment policy connected to the transports in order to decrease their impact on the environment, to protect the ozone and to prevent the trans-border pollution.

Moreover, the candidate countries can support this policy if they diminish the pollution, develop new rail and naval transports and extend the public ecologic transport.

The importance of the European environment policy is stipulated in the 2nd Article of the Treaty, which talks about a harmonious, equilibrated and powerful economic development across the E.U. and a high level of environment protection and improvement.

The Article no. 174 stipulates that the European environment policy is based on the precaution principles and on those principles which involve the pollution source to eliminate the pollution, as well.

The 6th Article from the Amsterdam Treaty stipulates that the environment protection has to be integrated into the definition and the implementation of the common policies.

Another challenge for the European transports is that to prepare the pan-European integration using a common transport and environment policy for the Member States and for the candidate countries, as well.

The World Bank considers that some countries from the Central and Eastern Europe have serious difficulties connected to: the high average age of the vehicles, the old models, the inadequate control of the pollution, the pollutant fuels and the inadequate service. All these elements support the environment degradation.

In order to eliminate these situations, the E.U. proposes three kinds of measures:

- ✓ the decrease of the road transports comparing to the rail ones (especially the urban transport using the tram) and the naval ones;
- ✓ the elaboration of the specific regulations in order to limit the use of the pollutant transports;
- ✓ a most flexible prices system, which can be able to stimulate the consumption of the unleaded fuel, for example.

Nowadays, Romania implements some environment programs, but their real costs are too high for the Romanian economy. There are just a few

national economies which are able to support the external environment costs.

The transports represent an industry which produces a lot of negative externalities, as: pollution, noise, accidents and the congestion of the traffic routes. The correct solution for these problems is to include the external uncalculated cost into the transport cost. These uncalculated costs are those connected to the pollution damages or to other factors which affect the environment.

As a result, the transport cost has to include the costs of the transport technology's improvement, the costs of the vehicles' replacement with other less pollutant, less clamant and more secure.

Moreover, the transports can be affected by their own activity or by other industries. The climatic changes are the effect of the energetic economic and the transport activities, which lead to the growth of the extreme meteo phenomena with supplementary effects and losses for the air and naval transports.

The internalisation of the external environment costs is made by the inclusion of the environment costs into the transport costs or by using specific taxes. But the share of the different transport modes into the negative externalities is not equal. The road transport generates 92% from the total external costs, the air transport 6%, the rail transport 1.5 % and the naval transport 0.5%.

The forecasts talk about a growth of the road traffic about 30% in 2010, comparing to 1995. On the other hand, in the same year, the external costs of the air and road traffic will grow to 42%.

The E.U. defined the 6th Framework for the Environment Protection and the White Paper for Transports which orient the European environment and transport policies till 2010. The basic idea is to replace the transport taxes with more efficient instruments in order to integrate the infrastructure and external costs.

The Goteborg Council underlined that the sustainable policy has to reconsider the whole internalisation of the social costs, including the transport costs.

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