

## FACTS AND NEEDS IN TRANSPORT EVOLUTION REGARDING ROMANIA’S LATEST DECADES

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**ABSTRACT.** Romania registered different stages in its evolution regarding transportation, in the past years. There were improvements, but plenty of obstacles, all connected closely to the government public policy. The interdependence with other branches of the national economy had a permanent impact on both sides. Different modes of transport registered unequal development and today we see the differences and the need to cover the gaps locally and regionally.

**KEYWORDS:** transport infrastructure, modal transport development, economic policies.

Given the interdependence with different branches of the national economy and having, by their own specific, a public utility, transports have suffered and, in turn, have influenced changes and developments in Romanian economy and society.

The contribution of transport activity to the added value ranged from 5.4% (in 1990) to 11.5% (in 2005), amounting to 8.2% in 2010. However, the sector effort to gross domestic product (GDP) started from 4.9% in 1990 to 10.2% in 2005 and 7.3% in 2011, which shows a lopsided trend for this period. Meanwhile, within the entire transport sector, the reduction of activity volume was done continuously. This trend is not consistent with the GDP / capita trend or with the rate of inflation trend. [1]

So, we need to "decouple" the analysis of economic growth from the one of the evolution of transport demand - fact strongly urged in recent years also in the EU. Both the continued strong upward development of the value of GDP in Romania in the past twenty years and the inflation rate fluctuation in the same period did not affect the trend of transport activities for goods and for people. Moreover, by the year 2000, a permanent increase in inflation rate has led to a dramatic decrease in transport activities even after this year, when inflation has seen a strong downtrend. Work in transport hasn't experienced a "revival" but rather stagnation.

After the liberalization of transport activities in Romania, the state policy wasn't able to "channel" the movement of goods or persons from certain business segments to specific transport modes, so that the work of various subsystems developed unbalanced and inefficient without the introduction of effective economic levers; excepting some modes considered by state of a strategic interest, such as the railways, the rest were reformed, primarily from the perspective of the property.

The best example is the downright galloping growth of the road traffic intensity. Thus, in less than 10 years, the level of motorization of Romania almost tripled, mainly due to the increasing number of private vehicles. This phenomenon is extremely worrying when one considers that toxic emissions from motor vehicles seriously affect both the environment and, especially, human life. It has been reached the situation when, in a city like Bucharest, the concentration of pollutants from car traffic, as carbon monoxide, nitrogen dioxide or lead, has led to a decrease, with two to five years, of life expectancy for residents in the capital compared to the national average much lower, in turn, towards the European one.

The market share of the various modes of transport across the sector has seen various developments between freight and passenger transport. In commodities, there is a growing trend in the volume carried just for the river mode and, to some extent, for the rail one, while the road transport share has diminished.

For Romania, the prevailing transport activities during last decades after 1990 were those by road and rail. Other types of transport (inland waterways, air and combined) were extremely low. While the volume of goods transported by road has continuously declined over, the goods has significantly increased. This shows the current trend to carry low volume cargo, but with high added-value on larger and larger distances. Evolution comes both amid eliminating transportation restrictions imposed by the communist regime until 1990 and because of the "resettlement" of economic activities as intensity, structure and / or locations. [2]

Thus, in 1990 the carriage of goods by road represented 87.3% of total freight transport and 57.6% in 2011, while rail transport represented 9.9% in 1990 and 19.1% in 2011. The other transport modes had weights ranging from 0.5% in 1989 (river) and 12.2% in 2011, for the maritime mode (Figure 1a).

As passenger services (Figure 1b), the trends are somewhat different, as direction and intensity, to those of goods transport. Thus, in 1990, the road passenger transport represented 65.4% of total transport services for the population and the rail transport was 34.2%. In 2011, the proportions have changed, meaning that passenger transport by road has increased to 77.1% (11.7% more than in 1990), while the passenger transport on railways decreased to 19.4% (14.8% less than in 1990).

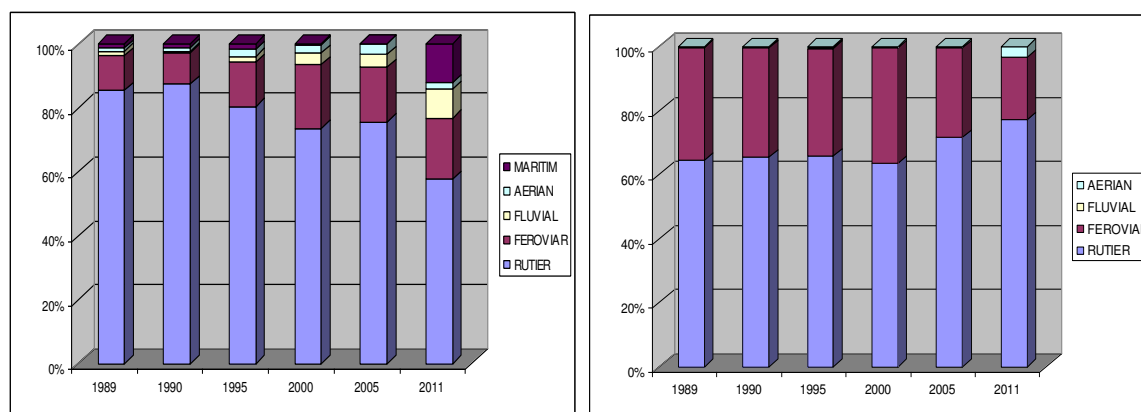


Figure 1 – (a) The evolution of the market share of different modes of freight transport in Romania, during 1989-2011;  
 (b) The evolution of the market share of different modes of passenger transport in Romania, during 1989-2011;

In the activities of trade (export / import), transport services have an important position. Thus, taking into consideration the services exported by Romania during 2002-2012, transports are on top positions, if the analysis is based on the best service exported in 2002 or in 2012 (GEA, 2013). Important to point out is that, in both analyzed variants, the market share of exported transport services increases by 30% in the past decade. If we also consider the category "travel", for which transport services are a major element, the market share of travel increases, pointing out, in this way, the crucial role of transports within the national economy of Romania.

Here are several issues that have affected the levels of competitiveness and efficiency of transportation sector. [3]

- a growth in a relatively slow pace of the public road network length by about 9%;
- maintaining a low share of upgraded roads in the total roads, of 24.2% in 1995, 26.3% in 2005 and only 32% in 2012;
- the length of the railway network decreased by about 3%, while the electrified network grew by only 2.6%;
- the existence of only 550 km of highway (end of 2012), Romania being placed last in the EU from this point of view;
- the striking increase of the share of road transport, both for freight and for passenger, at the same time with the sharp decline in transport by rail, sea or air;
- achieving an unbalanced distribution, in case of passenger transport, between road and rail;
- over 70% decrease in the number of passengers transported by rail, together with a significant reduction of the weight of this mode of transport, from 35% to 12%;
- Romanian naval transports experienced, during 1990 – 2012, two distinct stages of evolution. In the first phase, between 1990 and 2000, it has been shown the strong tendency of national maritime fleet liquidation and of transfer to the private sector of the river vessels. The second period, between the years 2001 and 2012, was conducted under the influence of actions linking the national legal system with the European requirements and later, after 2007, river transport experienced a period of accelerated recovery;
- the existence, throughout the period under review, of an air traffic far below the real market. The causes were many - the lack of a coherent strategy for developing national airline transport, the reduced flexibility of the national air transport company (TAROM), reduced investment in airport infrastructure, aso. The explosion in air traffic, particularly after 2005, was largely due to the entry of low- cost operators which, through the pricing policy adopted, managed to attract a large number of people to this mode of transport.

In Romania it is recognized that the situation of transport infrastructure is poor and that this state is one of the major reasons for the stagnation of economic development in Romania.

The current infrastructure network designed, built and modernized over many centuries is, from the spatial point of view, quite well balanced developed, covering the entire national territory. Almost every locality is equipped with at least one transport route for the connection to other areas. Unfortunately, however, in nowadays Romania, access to modern infrastructure is strongly differentiated from one region to another, from one locality to another. Social development tends to be higher in communes close to the city than in the distant ones or in settlements placed on "European road" compared to those which have access only to commune, county or national roads.

Incidentally, one of the main causes of inter and intra-regional development disparities is given by the different access regions have to the county, national and international transport infrastructure and by its poor quality, as well. [4]

An analysis conducted on nearly 90% of the 3,181 urban and rural localities indicate that the most developed settlements in Romania are the big cities, located in the proximity of major communication routes, with a strong attraction for commuters to work, located mainly in Banat, Transylvania and Dobrogea [4].

Here are some facts picked up from our recent transport history:

- across the whole network of transport routes, the share of those modernized brought to the requirements of the current and future society is small; this creates discomfort and a decrease in attractiveness as economic prospects. For example, of all public roads in 2012, only 32% were upgraded, and of the total simple length of railways in operation, under 38% were electrified;
- the maintenance and upgrading of existing transport infrastructure (especially railways) has been deficient in the allocation of funds, in preference to the construction of highways, some of which are not economically justified. It is almost certain that, for example, the Bucharest-Constanta highway will be profitable only if the activity of potentially navigable areas of the Black Sea and the Danube, would increase significantly, this final aspect, yet, requiring, firstly, modernization of naval infrastructure, which is not regarded a priority at this time;
- the "gain" obtained by the construction of a large national rail network as a prerequisite for a potential sustainable development of transport in Romania is lost permanently. In recent years, maintenance and modernization of the railway were permanently underfunded;
- within the infrastructure construction projects mostly political reasons prevailed, the economic requirements and justifications were, generally, secondary or unimportant. The best example is the construction of the Danube-Black Sea navigable channel, built with huge material and human efforts, which is almost unused;
- some areas of Romania are naturally endowed with naval transport infrastructure (areas in South and, especially, in South-East), but this advantage has been and is utilized to a small extent.

Considering the influence of transport activity to the development of national economy over the past years, and also the trends and requirements of European and national markets, it comes as a necessity to achieve a sustainable transport system. It is necessary to work for the development of transport alternatives against polluting modes and for the internalization of all external costs. [5]

Given the increased need for mobility and the low level of modernity in the infrastructure networks of Romania and for the favorable evolution of the socio-economic environment, at national and regional levels, several key measures require attention for the coming period of time:

- ◆ Development of a coherent sustainable transport system. Constant encouraging for those transport subsystems that support sustainable development processes. Concrete action is to internalize external costs.

- ◆ Reorient budgetary financial allocations from highway construction to modernization and increase of the capacity for European, national and county roads. Taking into account a minimum of two million Euros for the construction of a km of motorway and 300,000 Euros for modernization / rehabilitation of one km of national / European road, we conclude that a full recovery of the current network of national roads, under increased requirements and European parameters, would cost, on average, as the construction of 2,000 km of highways and would generate more jobs, thanks to the extent and geographical distribution of the works.
- ◆ Attracting private investment in the construction of highways, according to the French model. Romania is too poor to afford to support from the state budget expensive highway construction.
- ◆ Reorient freight transport activities from road sector, currently predominant, to intermodal transport, rail or barge. Simultaneously, steps should be taken for: upgrading / construction of specific infrastructure (multimodal terminals), upgrading / completion of specialized fleet of vehicles, implementing an integrated management system of transport, the adoption of performing monitoring systems to the goods itinerary, the personnel qualification aso. The effects obtained will be both ecologically (decrease negative environmental effects) and economical (reduced travel time and transport costs calculated per ton of commodity, increasing jobs aso).
- ◆ Construction of new modern air terminals, in "key" areas of Romania (as, for example, in the Brasov area or at Turnu Severin), able to satisfy, simultaneously, the carriage of passengers and freight, both on international and domestic routes.
- ◆ In the river transport, it should be further supported the establishment of joint ventures and the sale of ships to the crews, following the Dutch model, doubled by actions to facilitate the European cooperation in freight transport, on the Danube.
- ◆ Development of high capacity transport networks and having low negative impacts on the environment, in areas where this is possible. In this context, an important place is aimed at modernizing and developing rail infrastructure and multimodal terminals. Construction / upgrading of one km of railway creates, on average, two times more jobs than the modernization activities of one km of road.
- ◆ Reduce regional disparities through balanced development of all types of transport infrastructure. It aims, therefore, setting the stage for a balanced economic development of all regions of Romania, considering that at present, some of these are disadvantaged, not attractive due to inadequate quality or lack of transport infrastructure.
- ◆ Create economic incentives for achieving business “incubators” meant to financially support the development / modernization of transport infrastructure at regional level.

Referring to the reorientation process of traffic from polluting to the most efficient modes, from the ecological and economic perspective, the river transport along the Danube would be of great importance, in the future. [6].

Danube transits regions of large economic diversity, with different levels of development in terms of growth and the traffic might dramatically increase in perspective, leading to significant growth in riparian areas and beyond. On the other hand, the Danube could become an opportunity for logistic cohesion, as well. [7]. Improvement of the river activity in Romania might bring the following benefits:

- facilitates the acquisition of a significant share of the goods transported by road, reducing overall the environmental effects from transport and decreasing transport costs per ton of cargo;
- reduces the risk of damage to goods and contamination of the environment by using "container" transportation; [8].
- stimulates creation of new jobs through the development of services specific to river and intermodal technologies, as well as through the industrial production of the necessary equipment.

The past and present stages of economic development, both at EU-regional and, especially, at national level, represent favorable conditions to the future development of the transport system in Romania, only if it will be implemented a legislative framework convergent with EU regulations in the field and with actual, present and future needs of Romania. In this way, observing the principle of free enterprise, it should not be pursued an unfair competition among different modes and not be negatively affected the correlation between needs and the transport potential within domestic traffic. Regarding external traffic, it is necessary that the bilateral agreements or other legal instruments to support the interests of Romanian transporters and their more pronounced penetration on the market, converged with EU and international regulations. [9]

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