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## Interferences between sustainable mobility and economic development in Romania

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### Abstract

The working paper aims to analyse the development opportunities in Romania of the sustainable mobility concept and also the process influences on the national economy. Therefore, the paper presents the main characteristics of the sustainable mobility system and development conditions in Romania. From this perspective, an important part of the study will analyse the possibilities and requests of the development and modernization of multimodal transportation. Using analytical, comparative and descriptive methods, the working paper investigate the efficiency elements respecting the promotion of multimodal transportation compared to the road, rail or naval. Based on these researches, it is obvious that for supporting the sustainable mobility in Romania it is necessarily to develop the multimodal transportation. In this context, the study also presents the current situation and perspective of multimodal transportation in Romania. As a major conclusion, the Romania's economic policies, aiming to reduce the energetic consumptions, to rise the efficiency of goods and persons transportation within a better quality of transportation offer and to reduce the environmental negative effects due to transportation, will be positively and major influenced by achieving a sustainable mobility system.

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### 1. Introduction

The main constraint on the mobility is linked to the dependency of the transport system of fossil fuels and to a

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rapid increase of fuels price which will lead to a slowdown of growth rate of consumption. According to recent data, world primary energy consumption is estimated to increase by 39% in the next 20 years as compared with a 45% increase over the period 1990-2010, which means an average annual rate of 1.7% between 2010 and 2030 (Mark Finley, 2012).

According to the Directorate-General for Energy of the European Commission, energy developments in the next 30 years depends on the world energy market projections made by the International Energy Agency, which in the report for the year 2012 estimated a price at 116.91 U.S. dollars per barrel in 2015, at 126.68 U.S. dollars per barrel in 2020 and at 138.49 U.S. dollars per barrel in 2030 (U.S. Energy Information Administration – EIA, 2012).

In Romania, until last decade of the 20<sup>th</sup> century the economic policy based on the principle of saving currency funds imposed restrictions on fuel economy and on the choice of mode of transports. Although these issues have negative effects on the economy, they have also seen some positive effects. Outside of forced fuel savings were promoted “clean” transport modes development for the environment and population health, such as railway, especially for goods with long destinations, or public transport, at local level. These initiatives have favoured environmental protection but systems have entered in a state of collapse, because of his development with a lack of solid economic-ecological principles.

After the liberalization of transport activities, except for some areas that the State has considered of strategic interest, such as railways, the remaining transport modes have been reformed, firstly from the property perspective. Obviously, state policy could not “direct” steer the goods or persons from some segments of activity to certain modes of transport, so that, in the absence of the introduction of some efficient economic measures, the activity of different modes was unbalanced and ineffective. The best example is the galloping growth of the road traffic intensity. Thus, in the period 1991-2012 the degree of motorization of Romania has increased by 3.5 times, mainly due to the increase in the number of private cars. In comparison with the same period, the European average has known a 36 percent increase (Eurostat, Motorisation rate, 2014). This phenomenon is extremely worrying if we take into account the gravity of vehicle/engine toxic emissions for the environment and for the human health. It got to a very bad situation where, for example, in a city as Bucharest, concentration of traffic-related pollutants, such as carbon monoxide, nitrogen dioxide and lead, carried to a decreasing with two for five years for the life expectancy of the citizens compared to the national average, much lower than the European one (Fistung D., 1999).

The current evolution of transportation makes quick steps to a growing degree of movement of goods and passengers. The dynamics during the past shows a better development for the transport mode with a good coverage for the market applications using low costs. Unfortunately, almost always, this kind of approach gave points to two negative dimensions of sector: negative influence on the environment and lowering real competition between modes, some of them, particularly the road one, being sustained to grow disproportionately at the expense of the other. As a matter of course, the society has reacted promptly for decreasing those flaws, and so it has laid the foundation of a new concept development, namely the sustainable one. This new concept of transportation once implemented will lead to a simultaneously achievement of several objectives, of which the most important are: ensure efficient mobility for passengers and goods, reduce the energy consumption and protect the environment.

## **2. Highlights of the actual transportation system evolution in Romania**

In the last two decades, the contribution of transport activity at the value added tax, was in the case of Romania, between two limits, namely of 5.4% (for 1990) and 11.5% (for 2005). At the same time, the contribution of the sector to the gross domestic product (GDP) was between 4.9% in 1990 10.2% in 2005 and 7.3% in 2011, which shows an unbalanced evolution for this period. Throughout the entire transport sector, the decrease of activity volumes has been done continuously, in the mentioned period. This fact is neither in line with the trend of GDP/capita, nor with that of inflation. Once again, this fact highlights then necessity for “decoupling” the transport market demands analysis compared to the general economic evolution, insistently requested in the last years by the EU officials. It is clear that the net favourable GDP evolution of Romania during the review period, as well as the fluctuation of the inflation rate for the same period, have not influenced at all the trend for transport activities, for both goods and persons. Moreover, until 2000 the increasing inflation rate has lead to a dramatic fall for transport activities. Even after this year, when inflation has experienced a strong downtrend, transport activity has not known a “gradual recovery” but more a stagnation.

The market share of various transport mode of the sector as a whole has known different developments between the carriage of goods and passengers. For goods, there is a trend of increase in the volume transported only by river

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