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Liberalization of the railway freight market in the context of a sustainable transport system

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Abstract

Transport is one of the most important economic sectors; it directly employs around 10 million people and it is concerned in GDP approximately 5% in the European Union (EU). The White Paper of 2011 underlines the need to create new traffic models that will make it possible to meet increasing demands for services through the effective use of various modes of transport and multimodal chains to reduce the external costs of transport. One of the important tools required to ensure sustainable transport is the liberalization of the railway freight transport market, whose main objective is to increase the competitiveness of railway transport reducing the negative impacts of transport on the environment. Actual problems from the view of sustainable transport are mainly those to do with in limited capacity and the level of transport infrastructure and the major differences between the capacity and quality of transport infrastructure in Western and Eastern Europe. The aim of our research is to design measures for the creation of free and undisturbed competition in freight transport to reduce the use of public resources, improving the quality of service even while reducing the social costs of transport. Support for this primary goal will be represented by the definition and description of the complex characteristics of: traffic flows and demand on logistic systems, multimodal chain, business conditions in the transport market, the role of managers of the railway infrastructure in the railway market, system of tolls of the railway infrastructure in terms of minimum access package and additional services in selected EU countries, the social costs of transport, including quantification of external effects, natural and value indicators in relation to the quality of transport processes. The paper deals with research conditions of the liberalization of the railway freight market in the context of a sustainable transport system. We have analysed the charging of the railway infrastructure in the V4 countries and Austria in order to compare charges for model trains. The paper presents a comparative analysis of the number of rail freight operators in individual countries vs rail freight transport

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performance. Based on this analysis, we investigated whether the liberalization of the rail freight market is reflected in the modal split for the benefit of rail transport.

1. Introduction

The process of liberalization of the rail market is possible only on the basis of compliance with the rules set by the European Union (EU) and individual Member States, which must be controlled by the regulating body in order to produce non-discriminatory terms for all railway operators.

In the European Community several legislative measures have been taken whose task was to create conditions for the liberalization of rail transport in order to ensure a common European railway area, which should be based on competition among existing and new transport companies. The actual liberalization of the rail freight market in the European Community was initialized in 1991 by the implementation of Council Directive 440/1997 EEC on the development of the Community. The aim of the directive was to facilitate railway companies to adapt to the new conditions and to provide a more attractive rail freight market.

The liberalization of the rail market continued with the adoption of the three railway packages, which aimed at harmonizing the technical and security measures and the opening up of the rail market. In order to ensure that the adopted legislation, under Regulation No. 881/2004, concerning the liberalization of rail transport was effective at Community level, a supranational regulatory body was set up – the European Railway Agency (ERA).

Today, the DIRECTIVE 2012/34/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 November 2012 deals with the issue of competitiveness of rail transport, establishing a single European railway area. The basic requirements of this directive include the creation of appropriate procedures for the allocation of railway infrastructure capacity in order to achieve a better balance between modes of transport. The fee for the use of the railway infrastructure should be qualified so that the railway can meet demand and these fees height should be at their own costs resulting from the operation of the train. Fulfilment of this requirement necessarily requires public funds. In order that these measures are effective from a social point of view, appropriate procedures should be created for the allocation and charging of railway infrastructure capacity with respect to quality of the different elements of the railway infrastructure (railways, stations, terminals) and the different types of trains.

Nomenclature

U_{mp}	total reimbursement for the use of the railway infrastructure,
U_{1i}	maximum reimbursement for ordering and allocating capacity,
U_{2i}	maximum reimbursement for managing and organizing transport,
U_{3i}	maximum reimbursement for ensuring the operability of the railway infrastructure,
L_i	total track length of the competent category between single transport points in kilometres,
Q_i	total gross weight of the train rounded to the whole ton,
k_e	coefficient which takes into account the movement of the train with an active driving rail vehicle using diesel traction on electrified tracks, the size of this coefficient being 1.2. The coefficient for the other trains is 1.0
Q	total gross weight of train harnessed on electrified track rounded to the whole ton
L_e	length of electrified stretch utilized in kilometres,
U_e	maximum reimbursement in €thousands of gross ton kilometres for electrical supply used,
P_{Pj}	number of train accesses according to the respective category of transport points for freight transport trains,
U_{Nj}	maximum reimbursement in €for access of freight transport trains
C_m	maximal price for use of the internal traffic road, state-wide and regional road for one train for one traffic road,