

EVALUATION OF THE EFFECTIVENESS OF LIBERALIZATION OF THE RAIL FREIGHT MARKET IN SLOVAKIA

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Abstract: Actual problems from the point of view of sustainable transport are limited capacity and level of transport infrastructure and major differences between the capacity and quality of transport infrastructure in western and eastern Europe. Subvention of multi-modal chains in the country is highly differentiated from high subvention towards environmentally friendly mode of transport to very little subvention from the state. The paper deals with legislation relative to conditions of the railway freight transport market liberalisation structure of international documents and national law, conditions of access companies to transport infrastructure and business conditions in the railway transport market. In Slovak republic it was changed of charging schemes for rail infrastructure from 1.1. 2011. We have researched impact this change to modal split. The paper presents measures to improve competitiveness of railway freight transport.

Keywords: RAIL FREIGHT MARKET, SUSTAINABLE TRANSPORT, MODAL SPLIT, TRAFFIC PERFORMANCE

1. Introduction

Among one of the important tools to ensure sustainable transport include the railway freight transport market liberalisation, whose main objective is to increase the competitiveness of railways transport and reducing the negative impacts of transport on the environment. Today the issue of competitiveness of rail transport deals Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area. The basic requirements 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 railway infrastructure should be qualified so that railway could meet a demand and these height should be at their own costs resulting from the operation of the train.

2. Legislation regulating business in the railway sector in Slovakia

The basic legislative conditions for railway construction, operation of railway infrastructure, operation of transport on railway infrastructure, as well as the rights and obligations of the natural and legal entities related to these activities are stipulated by the Act on railways and its implementing decree:

- Act of the National Council of the Slovak Republic No 513/2009 Coll. on Railways and on amendment and completion of certain acts as amended by later regulations (hereinafter "Act on Railways")
- Act of the National Council of the Slovak Republic No 514/2009 Coll. on Railway Transportation as amended by later regulations (hereinafter "Act on Railway Transportation")
- Act of the National Council of the Slovak Republic No 258/1993 Coll. on the ŽSR as amended by later regulations
- Decree of the Ministry of Transport, Posts and Telecommunications of the Slovak Republic No. 351/2010 on Railways Traffic Order as amended by later regulations
- Decree of the Ministry of Transport, Posts and Telecommunications No.205/2010 Coll. on Determined Technical Appliances and Determined Activities and Activities on Determined Technical Appliances
- Decree of the Railway Regulatory Authority No. 3/2010 of 2 December 2010 setting the charges for the access to railway infrastructure
- Decree of the Ministry of Transport, Posts and Telecommunications No.245/2010 Coll. on expert competences, physical and mental competences of persons in railway

operations and transport on railway as amended by later regulations

- Decree of the Railway Regulatory Authority No. 2/2010 of 18 August 2010 on the regulatory framework for laying down charges for the access to railway infrastructure
- Decree of the Railway Regulatory Authority No. 7/2012 of 24 May 2012 by which the Decree of the Railway Regulatory Authority No. 3/2010 of 2 December 2010 setting the charges for the access to railway infrastructure is being amended. [10]

The basic legislation regulating business conditions in rail transport in the SR is Act no. 514/2009 Coll. the service on track. General conditions of access to railway infrastructure are the following:

- A railway company (RC), legal person is the holder of a valid license for the rendition of services to the railway, which is issued by the licensing authority of a Member State
- RC is the holder of security certificate
- RC take out third party liability insurance during from the operation of rail transport
- RC has had allocated train path or performs services for a legal person who has had allocated train path
- RC has concluded a contract on access to rail infrastructure with the Manager of infrastructure
- RC has had concluded a contract with the Railway energy where he will carry on the service with driving railway vehicles of dependent traction
- RC has firmed up technological processes in originating and terminal railway station with Regional Directorate of ŽSR [7]

The Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area is a basic European legal enactment for activities Transport authority in the area of issue a license. The license is issued based on licence application.

The licence application must contain:

- Business name, legal form, identification number of the state statistics, registered office
- Names and surnames of members of the statutory body responsible representative if it is established
- Data according to § 11 paragraph 3-6 of Act No. 514/2009 Coll. on Railroad Traffic as follow:
 - proof of special qualification of managers
 - adequate insurance cover for damage that may be caused by the rendition of transport services

- solvability for the rendition of transport services
- solvability is checked out annual accounts
- Indication of network or lines where the applicant wishes to provide transport services
- Type and volume of traffic at what applicant ask for licence
- Data on the number and type of operating rail vehicles
- Description transport line and time table [8]

An applicant who meets the requirements of § 11 of the Act on Railroad Traffic has the right to issue licenses. A license to provide rail services granted by the licensing authorities of other EU Member State is valid in the Slovak Republic as well as the license granted by the licensing authority under this Act.

The following table shows number of valid license for freight transport in selected European countries.

Table 1: The number of valid license per country

Country	Number of licenses			
	New	Amended	Suspended	Revoked
Germany	58	40	0	19
Poland	57	33	2	30
Czech Republic	46	4	0	1
Hungary	29	6	0	15
Slovak Republic	27	1	0	1
Italy	22	5	0	5
Lithuania	13	1	16	1
Spain	13	6	0	0
Sweden	13	7	0	9
Austria	12	0	0	0

Source: ERADIS

Railway companies have to conclude Contract on the access to the railway infrastructure of ŽSR after obtaining the license. This contract contains the terms and conditions for providing transport services on the railway network.

A railway undertaking, as a legal entity, may operate transport provided the following conditions:

- is a holder of a valid license for transport services on the railway infrastructure, issued by a licensing Member State's authority,
- path capacity has been allocated to the train operator, or the train operator is providing the transport services for a person, to whom the path capacity was allocated,
- is a holder of a valid safety certificate,
- has concluded a track access agreement with the infrastructure manager,
- for the whole period of transport operation has an insurance for damage liability resulting from transport operation on railway infrastructure,
- has concluded an Agreement with the Railway Power Engineering Centre, if the railway undertaking intends to provide transport operation by vehicles of dependant traction,
- has approved the technological procedures at railway stations, which are the departing and/or terminus station of the train operator's trains,
- has concluded an Agreement with the infrastructure manager on providing of activities regarding pumping of fuels into railway undertakings' motive power units in case, that the railway undertaking will operate the transport by motive power units of independent traction. [10]

On the day of launching of providing transport services on railway infrastructure operated on the base of the licence, the

railway undertaking must have a safety certificate. Safety certificate is issued by Transport Authority on the base of railway undertaking request.

3. Comparison of the development of traffic performance on the railway network ZSR

The aim of the liberalization of the rail transport market is to increase the competitiveness of rail transport to road transport. This aim should be to help on change of railway infrastructure charging system, which significantly reduced the charges for the use of railway infrastructure, mainly for through trains. The following figures show a comparison of transport performance in passenger and freight transport on the railway network ZSR. [1-4]



Fig. 1 Development of traffic performance in train-km



Fig. 2 Development of traffic performance in gross tonne-km

Development of traffic performance of passenger transport in train-km has a steady character since 2003 and varies from 31 to 32 mph. train-km per year. Traffic performance in gross tonne-km also develop equally, a slight decrease in last years is due to the use of electric motor train set eventually diesel motor train set whose net weight is considerably lower than a classic train set.

In goods traffic, there was a continual decrease in traffic performance from 2001 to 2009. We can see in Fig. 1 and Fig. 2 that the traffic performance increased slightly in 2014 compare to 2010.

The main railway freight operator is ZSSK Cargo Slovakia in the Slovak Republic. Its share of transport performance is approximately 80%. The following figures show a comparison of the share of transport operators on the traffic performance. [1-4]

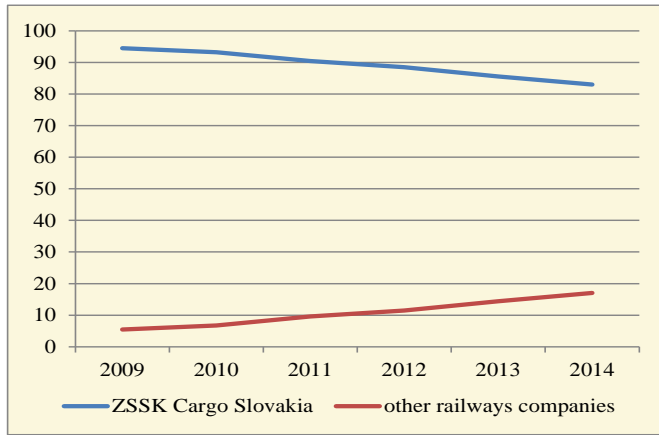


Fig. 3 Share of the transport operators on the traffic performance - number of train

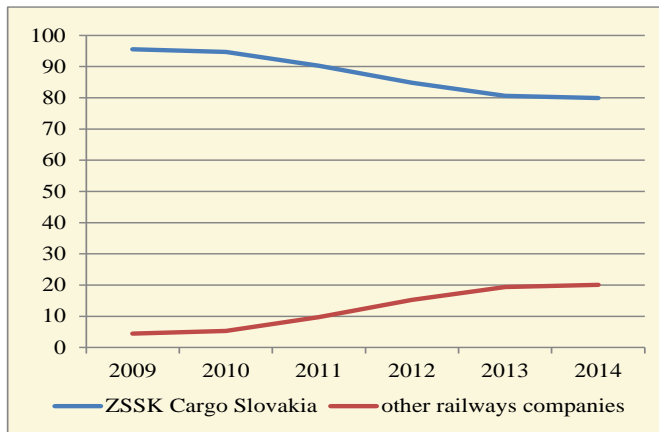


Fig. 4 Share of the transport operators on the traffic performance - train-km

Share of state railway operator ZSSK Cargo Slovakia is decreased continually in the rail transport market. While in 2009 the share of ZSSK Cargo was nearly 95% in 2014 was only 80%. At the same time traffic performances of private railway operators increase. The best share of all private railway operators had METRANS Danubia, their share was 4.0 % of the train km and 3.9% of gross tonnes km in 2014. The following table shows comparison the share of train km of top ten railway freight operators.

Table 2: The share of train km of railway freight operators

Carrier	2013	2014
ZSSK Cargo Slovakia, a. s.	82.5 %	80.6 %
METRANS /DANUBIA/, a. s.	3.6 %	4.0 %
CENTRAL RAILWAYS, a. s.	1.9 %	3.0 %
Express Group, a. s.	2.0 %	2.6 %
Prvá Slovenská železničná, a. s.	2.5 %	2.2 %
Railtrans International, s. r. o.	0.4 %	1.5 %
PKP CARGO, S. A.	0.3 %	0.3 %
LOKORAIL, a. s.	1.9 %	0.7 %
LTE Logistik a Transport., Slovakia, s. r. o.	0.9 %	0.9 %
SŽDC, BA	0.7 %	0.9 %

Source: ZSR

Increasing the share of private companies in the train kilometres as well as in the gross tonne kilometres is most often caused by an alteration in percentage distribution (due to a decrease in the share of transport activities ZSSK CARGO Slovakia) and not increasing the volume of goods transported. Nowadays the valid license has 49 railway companies but actually 20 private companies realize traffic in the network of ŽSR.

4. Modal split

The main actors in the transport market include freight carriers, haulers, state and forwarding organizations. Each of the entities located in this market follows its interests. Hauler requires the transport with high quality at a reasonable price, carriers and forwarders organizations require a reasonable profit, the state role of the state is the tendency of sustainable mobility. [9]

The following figures shows the modal split in the Slovak republic. Figure 5 shows the modal split before the full liberalization of the rail freight market. [5, 12]

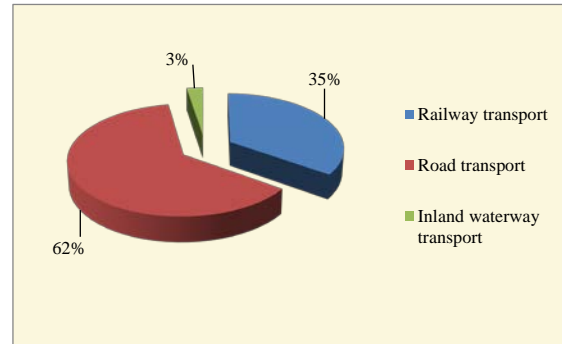


Fig. 5 Modal split in freight transport 2001 - 2006

Figure 6 shows the modal split from full liberalization to change of charging system of railway infrastructure. [5, 12]

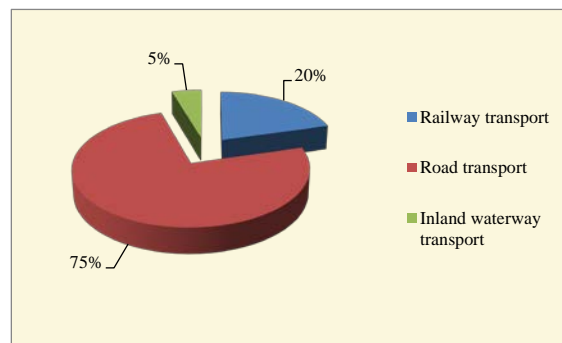


Fig. 6 Modal split in freight transport 2007 - 2010

Figure 7 shows the modal split after change of charging system of railway infrastructure. [5, 12]

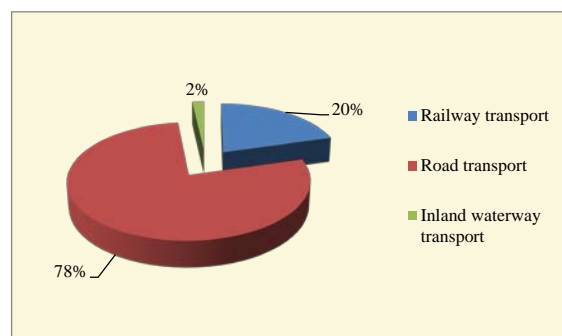


Fig. 7 Modal split in freight transport 2011 - 2014

Modal split in freight transport is somewhat simplified by some transport may take place only certain types of traffic due to the characteristics of goods and operational and technical characteristics of the department of transport. However, currently dominate the production of such products whose specific characteristics allow transport of various modes of transport and the carrier has a choice by comparing the price and quality. [6]

Modal split in the Slovak Republic is comparable to modal split in the EU. It is characterized by a high proportion of road freight transport and the ever decreasing share of rail freight transport.

5. Result and discussion

Comparative analysis showed that the liberalization of the railway market as well as the change of the charging scheme of railway infrastructure in Slovakia has not yet produced the desired effect. Performance of goods rail traffic is volatile downward trend, whereas the average annual decrease since 2001 is more than 3%. In contrast, the performance of road freight transport recorded after a slight dip in 2009, in 2011 increase again and move to the level of 2008 and it increase continually since.

The main reason of this decrease can be defined as follows:

- Change of productions in the national economy
- Low flexibility of providing transport services
- Low portfolio of additional transport services
- Problems with interoperability railway vehicles as soon as train crews and drivers
- Dependence on manager of infrastructure
- High capital and running costs
- Challenging maintenance of rail vehicles
- Closing of line to traffic of manager of infrastructure
- Norms of weight or length train in the regional line is not enough
- Longer term of delivery compare to road transport
- High cost during transport small number of wagons in the train
- High costs of operation, maintenance and managements of railway siding
- Need for professional employees with specific skills etc.

We realized the pilot research in the some selected industrial companies with a view to find out what influence costumers when choosing a mode of transport. The research was realized through personal questioning in the largest companies in two region with different economic level. Choice of regions was done designedly with a view to find out differences between economically developed and economically weaker regions.

The majority of addressed companies carries their product to medium and longer distances. Half of these companies used the services of road haulage operator, 33% of rail freight traffic and 17% of companies have own vehicles.

We determined these factors based on previous research:

- Price
- Speed of transport
- Meeting delivery terms
- Safety
- Environmental aspect
- Providing additional services

The companies considered the price as the most important factor when choosing a mode of transport for transportation of their products and the least important factor was environmental aspect in the both regions. Different results were only at two factors – speed of transport and meeting delivery terms. The companies in the regions with higher economic level considered speed of transport more important than meeting delivery terms and in the companies in the region with lower economic level it was other way round.

6. Conclusion

One of the aims of European transport policy and Slovak transport policy too is improving competitiveness of railway transport in the transport market. In the Slovak republic has been realized a number of measures from full liberalization of freight railway transport to change charging schemes of railway infrastructure since 2001. Despite these measures the share of the railway transport in the transport market didn't increase.

In the market economy freight transport it is part of the logistics management, which plays an important role in safeguarding corporate activities and affects the quality of processes. The role of the carrier is to know customer needs and respond on them to supply of needed transport services. Nowadays, the companies in Slovak republic consider the price as a major factor which influence choose of transport mode.

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