



# EXTERNALITIES OF RAIL FREIGHT TRANSPORT IN THE LIGHT OF ENVIRONMENTALLY CONSCIOUS TRANSPORT

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**Abstract:** *The issue of transport as a primary environmental burden is of prime importance when making economic policy decisions in developed countries. To what extent do the external effects of transport, especially rail freight transport, burden the total national income of a country, what impact do they have on economic development, how much do they damage the present and influence the livable conditions of the future, these are the questions that are partially or completely waiting to be answered. The work is based on literature data and data from Hungarian railway transport companies. Companies interested in rail freight transport are making significant efforts, primarily in the field of mass goods transport, to increase the share of their performance.*

## • Introduction

Transport is considered one of the most serious sources of CO<sub>2</sub> pollution, yet many companies operating in the transport and logistics sector seem to lack environmental protection measures. This behavior can be traced back to two main reasons. On the one hand, the company's environmental behavior is influenced by its position in the supply chain. Companies in direct contact with end users started to implement and communicate sustainable behavior a long time ago. However, companies in the transport and logistics sector are now beginning to realize that sustainability is not always a "necessary evil" but can result in long-term added value. On the other hand, in addition to a few multinational companies, the transport sector is usually characterized by SMEs, which often do not have sufficient resources (e.g., capital and know-how) to deal with environmental challenges.

## • Material and method

The material of the study was compiled based on the processing of literature sources, data of the Central Statistical Office (KSH) and information from interviews with the managers of enterprises dealing with Hungarian rail freight transport.



## • Results and discussions

Developments at Rail Cargo Hungaria in terms of compliance with environmental regulations are focused on the following:

- streamlining the use of energy and fuel is a continuous activity, because economics also requires it. More and more electric locomotives, mainly from Austria, are used, the braking devices of which are equipped with energy recovery equipment, and the train drivers are further trained in the economical operation of the trains, all of which also has a favorable effect on CO<sub>2</sub> emissions;
- during the repair and maintenance of the vehicle fleet, the use of environmental pollutants and the generation of hazardous waste were reduced;
- during the repair of wheels and rolling parts, the bearings are replaced with less maintenance-requiring ones, which significantly reduce the use of machine grease, and generally also reduce the use of graphite grease, for example, by replacing friction parts with special plastics where possible.
- As a result of the above, the noise emissions of locomotives and freight cars have been significantly reduced.
- Only solvent-free (water-based) coating systems are permitted for surface treatment of vehicles.
- Environmentally friendly methods are used to wash and disinfect freight wagons.