



BLINDAlley

*Long-distance freight transport: policy,
economic relationships, environmental
impacts and possible solutions*

Introduction

The Czech Republic's accession to the European Union was followed by a drastic increase in the number of trucks on Czech highways and motorways. From one month to the next, the number of vehicles crossing the border increased several-fold. Pollution and noise, both damaging to health, have increased correspondingly, as have costs for repair and maintenance, which are covered by the taxpayer. The Government is attempting to at least partially address the problem by introducing a road user fee.

The Apel study analyses societal relationships and looks at the question of how the current trend can be addressed, to what extent this is a technical transport design problem, to what extent it is related to the economic policies of the Government and the EU, and whether the issue concerns only trucks or other areas of transport policy as well.

European and Czech transport policy

Czech transport does not live in isolation, and domestic trends are affected by more than just national decisions and priorities. The joint policies of the European Union also influence domestic transport, especially its transport and economic policies, combined with the country's location in the centre of the continent.

Political documents and reality are often in contradiction. For instance, a large part of investments from the EU's ISPA fund for candidate countries went into additional infrastructure for truck transport. Only in some countries, the Czech Republic included, did the greater part of resources go into modernising rail corridors, but even here many resources were invested into highway projects: in the case of the Czech Republic, 58 million euros (around 33 %).

Both policies – on the one hand, the support of economic development through increased truck transport and the construction of highways for them, and limiting truck transport on the other – are clearly in conflict with one another.

One of the guiding principles of transport policy in many countries, including the Czech Republic, is the theory that “the construction of a dense motorway encourages and incites economic growth in stagnating regions”. This theory is often considered to be such an unassailable fact that politicians never attempt to question its truthfulness.

In the meanwhile, for almost ten years academic research and government analyses have pointed out that this is often not true at all. We thus see projects given the green light whose total budgets required several tens of billions of euros of public monies and undermine a key goal of transport policy – all on the basis of an unproven hypothesis that has been frequently disproved by empirical studies.

Trends of freight transport in the Czech Republic

The transport of goods in the Czech Republic continues to systematically grow, and forecasts expect this trend to continue in the next ten years as well. Between 1995 and 2003, the total volume of road and rail transport in tonne-kilometres increased by 16 %. According to the Brno-based Transport Research Centre (Centrum dopravního výzkumu, CDV), by 2015 this figure should be 150% higher than 1993 levels (and 130% higher than in 2003).

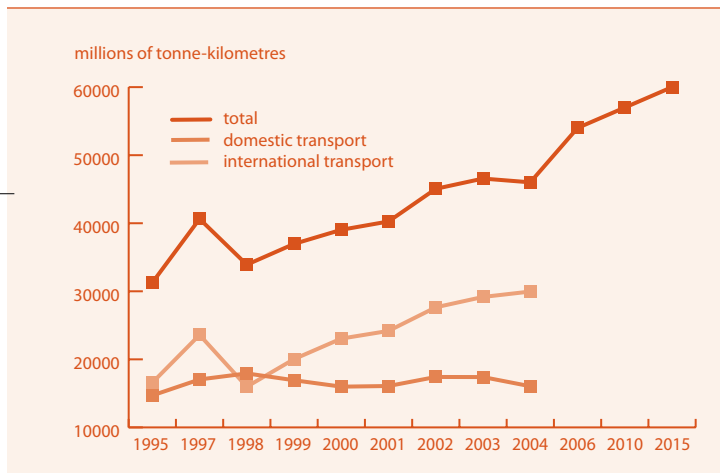
Road freight transport in the Czech Republic continues to systematically grow as well, having grown by 147% between 1995 and 2004. Rapid growth can also be seen in international transport (export, import and transit), which grew 180% in the same period and today is almost twice as high as domestic transport.

The Czech Republic's accession to the European Union in May of 2004 led to significant changes in the conditions of international truck transport. The number of transiting trucks especially began to grow in the north-south and north-southeastern directions. Another factor in this growth was the fact that short afterwards – in January 2005 – electronic road tolls were implemented on German motorways.

The result was a significant increase in transiting road freight traffic across the Czech Republic. With the country's accession to the EU, transporters no longer had to endure long waits at customs. The flip side is the drastic increase in transiting foreign trucks.

The Transport Research Centre forecasts anticipate additional growth in road freight traffic in the next years. In 2006 it should reach 115% of the 2003 levels, and increase to more than 122 % by the end of the decade. By the year 2015, it may total 60 billion tonne-kilometres per year, and increase of 129%.

Figure 1: Road freight transport in tonne-kilometres 1995-2004 and CDV forecast for 2006-2015



Source: Transport forecast for the 2010-2015 time horizon, CDV, Bmo 2004

Rail transport

The trends in rail transport are the exact opposite than in the case of truck transport. Rail transport has been gradually decreasing, with performance in 2003 at 70% of 1995 levels and domestic transport as low as 63% of 1995 levels. The volume amount of transported goods decreased by around 15 %.

Meanwhile, the costs of rail transport continue to grow. The railways must pay for the use of the rails – around 26 helers (1 eurocent) per tonne-kilometre, i.e. around 27% of operating costs. The competition (trucks) has highways and motorways practically for free.

Because of the decrease in demand the railways do not make adequate use of all their vehicles. What is more, the railways own an unsuitable range of freight vehicles whose numbers have dropped by 34% because of redundancy. There are no new and special vehicles to offer new services, and there are no resources for investment.

The CDV forecast anticipates further stagnation of rail transport until at least. By the end of the decade there should be a certain amount of growth, with more significant growth around the year 2015.

Canals across the continent

Also rooted in policies supporting long-distance transport across Europe is the billion-crown public expenditure on the controversial construction of shipping canals. Instead of trucks, the support is going to shipping, but the purpose is the same. But the projects often cause serious environmental damage.

Billions for marginal industries

The importance of water transport is quite small. Domestic water transport in the Czech Republic has a share of only 0.8 % and is continuously falling. The volume of kids transported by boat in the Czech Republic has decreased to a mere 18% of the volume at the beginning of the 1990s. The cause: the decline of heavy industry and less demand for the transport of gravel, sand, coal, iron ore, cement, grain, fertilize and similar goods. Transport performance continues to fall regardless of the number of shipping days in the individual years.

The Danube-Oder-Elbe canal

The Czech Ministry of Transport has openly indicated

that it is considering the creation of this more than 100-year-old proposal – a canal that would join the Danube, Oder, and Elbe (Labe) rivers. In the Czech Republic alone, the canal would require the construction of 23-24 locks, three giant boat-lifting devices, one ship bridge, two tunnels and would have to overcome a height differential of more than 200 metres.

According to the DOE Association, which is promoting the project, the budget should total roughly 180 billion crowns (€ 6.4 billion), although these calculation relate only to the actual canal and does not include other necessary work. So far, no complete analysis of the costs and benefits of the project has been performed. An analysis performed by Slovakia's Transport Research Institute (Výzkumný ústav dopravní) for the Danube-Hodonin section (along the Morava river) found that the required level of return on investment of at least 9.5% could not be achieved even if the canal was used for the concurrent production of electricity.

Despite this, the DOE canal was included in an appendix to the Czech Republic's EU accession agreement as a planned infrastructure project. The Government has also included the first phase of construction (Danube-Břeclav) as one of the priorities for financing from the Cohesion Fund for the years 2004-2006.

The canal would seriously damage or destroy some of the most valuable natural areas in Central Europe: meandering rivers, alluvial forests, meadows and wetlands.

Several of the affected Many areas are or will be part of the European network of protected areas, Natura 2000.: the system of alluvial forests and meadows at the confluence of the Dyje (Thaya) with the Morava; the Litovelské Pomoraví, Poodří, Záhorie (Slovakia) and March-Thaya Auen (Austria) protected landscape areas; and dozens of sites along the Polish stretch of the Oder.

The entire planned canal is paralleled by railway, sometimes even on both shores. The rails are being modernised and are included in the trans-European transport network. The railway running along the route of the proposed DOE canal have more empty capacity today than at any time in history.

Channelisation of the lower Elbe

Smaller but equally controversial is the planned channelisation of the wild Czech segment of the lower Elbe. Here, the river has kept its natural character, flowing and fluctuating naturally. Precisely these conditions have helped preserve several important biotopes in the river's floodplains, in particular alluvial forests and sand and gravel deposits.

Taxpayers would have to pay around 6.3 billion crowns (€ 223 million). Critics warn, however, that the project would represent a waste of money. The Supreme Audit Office and the World Bank both question the project's cost-effectiveness.

No decrease in truck traffic

Meanwhile, canals do nothing to reduce the number of trucks on the roads. Road and water transport barely compete with one another. Boats transport bulk goods for which transport times are of little importance. These kinds of materials are naturally not transported in trucks. Ships thus compete primarily against trains.

Emissions from freight transport

Transport currently accounts for around 12% of Czech emissions of carbon dioxide, with nearly one third from truck transport. This is one of the few branches of the economy where CO² emissions have been systematically growing for several years already. CDV calculations predict that the trend should continue at least until the year 2015.

Wear and tear on highways and motorways

Heavy truck traffic causes rapid wear and tear of highways and motorways, thus requiring investments into repairs. Already today, neglected maintenance of the transport infrastructure – roads, motorway and rail – is around 800 billion (€ 28 billion).

External costs of automobile transport: environmental damages

Not only does truck transport damage the roads – which unlike the railways it has almost for free – but it is also polluting and the noise and other impacts cause serious environmental damage that can also be expressed in monetary terms. The Transport Research Centre calculates the damage caused in 2004 by Czech transport in terms of accidents, noise, local pollution and the emission of greenhouse gases at 127 billion crowns (€ 4.5 billion). Of this, roughly 42 billion crowns (€ 1.5 billion) was caused by trucks above 12 tonnes and trailers, and another 12 billion crowns (€ 0.4 billion) by trucks from 3.5 to 12 tonnes.

The role of road user fees in decreasing truck transport

Economic tools are an important measure that could help reduce truck transport on roads and highways while promoting the greater use of rail and local suppliers. The Government has so far placed its bets on the introduction of road user fees, which are being planned as a sort of financial measure for collecting money for the maintenance and repair of roads and motorways. This conception is doubtful at best. There exists another alternative: to use the road user fee as an active measure for reducing the volume of transport – and thus also local pollution, noise, carbon dioxide emissions and dependence on imported oil. This would of course require changing several key points of the system: work to expand it onto the entire highway network and to all freight vehicles, par-

tially differentiate fees according to the amount of environmental damage, and invest part of the income in rail and combined transport, among other things.

Main recommendations

Road fees

Road fees are one of the main measures that could be used to limit pollution and noise. The Government should thus use them not only to collect money for the repair of highways and motorways. The Ministry of Transport tentatively anticipates charging vehicles weighing 3.5-12 tonnes CZK 1.60 (6 eurocents) per kilometre (prospective) and CZK 4.20 (15 eurocents) for vehicles over 12 tonnes, almost the same as in Germany. According to Government calculations, the acquiring and operating the system should cost 17 billion crowns (€ 600 millions) by 2007 and ensure net income of 47 billion crowns (€ 1.7 billion). Especially worth recommending are four main changes to the proposal, which are described in more detail below:

- road fees should apply to the entire road network or to as large a portion as possible – not just to selected segments;
- charge all freight vehicles, not just trucks heavier than 12 tonnes – at least from the time when fees will apply to the entire network;
- the level of fees should vary according to four factors – location, time, emission characteristics and vehicle weight;
- part of the income should be used to finance rail and combined transport, i.e. to encourage the shift from road to rail.

Support for rail and combined transport

Road fees alone will not remove trucks from our motorways and highways. They need to be accompanied by a quality

alternative – rail and combined transport. The Government should therefore undertake concrete measures to support these alternatives. The Ministry of Transport has already worked out a “Programme for the Support of Combined Transport”, which was passed by the Government in October 2005. As of spring 2006, its practical application is still being prevented by the lack of notification on the part of the European Commission in Brussels. Among other things, the support would consist of the possibility of receiving state support for the acquisition of the necessary equipment capable of combining transport by road and rail.

There currently is a 40 percent discount for the use of rails when using combined transport via railway. The discount is only valid, however, for so-called “special-purpose” or direct trains. Direct trains can only be used when there is a strong enough stream of goods, which mainly include bulk commodities such as coal, ore, construction materials, new cars etc. The Czech Republic already has the necessary transfer points, but they are used only for reloading containers and are used only for overseas transport, not for transport within Europe.

Of prime importance is support for establishing an infrastructure of logistical centres on the railway network. Builders of logistical centres should receive public support of 60% and more of the costs of building railway sidings, just as is the case with the construction of connections to the highway network. The connection of rail, road and in some cases also air and water transport is vital to both regional and national economies.

Revision of the eurovignette directive

The Czech Republic should promote measure at the EU level that would make it possible to take effective steps at home towards limited truck transport – in particular to continuously push for a reform of the eurovignette directive that would allow member states to include external costs (such as environmental damage caused by noise and pollution, economic impacts of congestions, the impact of traffic acci-

dents) into road fees. This would above all mean the possibility of:

- different fees according to emission characteristics, costs of traffic accidents, noise, landscape, congestion;
- differentiation by time;
- differentiation by location.

This long-term revision should also ensure a connection among payment systems.

The summary

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