

Innovation in Road Transport

Opportunities for Improving Efficiency

Seminar • 2 October 2009 • Lisbon, Portugal



ROAD CHARGING SYSTEM IN FINLAND

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1. Introduction

Finland is one of the few countries in Europe that does not have any road user charges (e.g. motorway tolls, congestion charges, bridge charges or vignette). However, during the last few years the implementation of road user charging has been actively studied in Finland and now some types of changes are on their way.

2. Road user charging for heavy goods vehicles

Road user charges for heavy goods vehicles have traditionally been seen in Finland merely as a cost increase for the Finnish industry. The charging has been in contradiction with one of the main transport policy goals: to lower the logistics costs.

Logistics costs for Finland's businesses are greater than in other European countries. The reasons are the structure of production, long transport journeys within the country and Finland's location on the edge of most export markets. The journey to European markets for Finnish goods is some 2–3 days longer than those from competitor countries.

In many countries one of the central motives for setting the road user charges for heavy goods vehicles has been transit traffic. The purpose has been that the foreign vehicles take also part in financing the road infrastructure they are using. The transit traffic problem exists also in Finland. At the moment nearly 10 % of the freight transport volumes on Finnish roads are operated by foreign vehicles (mainly transit traffic to Russia). Constantly increasing transit traffic has caused to rethink the road user charges. Now the political will is that foreign heavy goods vehicles should pay for the use of the Finnish road network.

Road user charges for heavy goods vehicles should fulfil four targets:

- Not to increase logistics costs
- Have positive environment effects
- Increase the efficiency of goods transport
- Foreign vehicles should also pay for the use of the Finnish road network.

The fulfilment of these targets has turned out to be very difficult.

Ministry of Transport and Communication Finland made in 2007 a study about how road user charging systems for heavy goods transport would influence transport and regional economy in south-eastern Finland. The transit traffic to Russia has concentrated mainly to the south-eastern part of Finnish road network.

Altogether four road user charging systems were under review: satellite positioning, local positioning, charging based on a registered route, and the electronic vignette. The satellite positioning system would clearly be the most expensive and the electronic vignette the cheapest charging system.

A 15-cent kilometre charge for the entire south-eastern road network would decrease the Finnish kilometrage for heavy goods transport by 0.5%. At regional level, however, the effects would be substantially bigger. In the region of Kotka and Hamina the ton kilometrage for heavy goods transport would decrease by 5.5%, in Kouvola region by 3.3% and in Southern Karelia by 2.7%.

The cost efficiency of the systems was assessed by means of expected costs and income. In every system the income would clearly exceed the costs for the systems. In south-eastern Finland, a system based on positioning would evidently cost the most, while the least expensive, and relatively the most profitable, system would be the electronic vignette.

A road user charge would have rather minor effects on business in south-eastern Finland. It would, however, decrease the local businesses' profitability and thus make south-eastern Finland less attractive as a business location and growth environment. In the long run, a road user charge applied only in south-eastern parts of the country would distort regional development and could slow down the growth of production and employment in comparison to other regions.

The main conclusion of the study was that a regional user charge for heavy goods vehicles is not an option in Finland and planning for a regional charge was stopped. Possible road user charge (km-charge) for heavy goods vehicles should apply the whole road network or at least the main roads. Technically this could be executed by satellite positioning or electronic vignette.

The kilometre charge, based on satellite positioning, for heavy goods vehicles for the whole road network is not economically feasible at the moment in a country like Finland, where road network is wide and the traffic volumes are low. Instead the Finnish Government decided on November 2008 that Finland will introduce a vignette charge for heavy goods vehicles. The aim is that the vignette charge will be in use in year 2011.

3. The Helsinki congestion charging study

The Ministry of Transport and Communications has conducted a study to examine the traffic impacts and the social, economic, environmental, safety and other impacts expected if congestion charging were to be introduced in the Helsinki region. The study was undertaken between spring 2008 and summer 2009. The study considered whether congestion charging could help achieve the transport policy objectives (e.g. improved traffic flow, enhanced competitiveness of public transport, reduced greenhouse gas emissions and improvements in road safety) and be beneficial to society at large, and whether it could do this in a cost-effective manner.

The study shows that congestion charging would be an effective tool for reducing congestion. The volume of traffic on main routes could be lowered to the desired level and

travel times would be shortened. At the same time there would be a significant increase in the use of public transport, an improvement in road safety and a reduction in emissions from traffic.

For companies in the region, the benefits of congestion charging at peak periods would outweigh the costs incurred from peak-period congestion charges. However, between the morning and evening peak periods the congestion charging costs incurred by companies would exceed the benefits that they would gain. Congestion charging would also stimulate the development of clusters of jobs, homes and services in locations served by rail and metro services, and in the longer term would probably lead to a more compact regional and urban structure within the Helsinki region. However, in the case of certain of the congestion charging models there could well be a 'boundary effect' on land use patterns.

The results of the study indicate that congestion charging would be an effective way of achieving the transport policy objectives. The socio-economic benefits of congestion charging would exceed the costs. As a transport policy tool, congestion charging would be a more cost-effective way of achieving the transport policy objectives for the Helsinki region than the other measures currently available (e.g. investment in roads, improvement of public transport). Congestion charging would, however, need to be accompanied by supporting measures, such as an increase in public transport provision.

The study produced an abundant and diverse array of information on the use of congestion charging as a transport policy tool. This information provides the basis for debate and decision-making on whether to go ahead with preparations for congestion charging in the Helsinki region.

The report can be downloaded from www.ruuhkamaksu.fi