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Summary:

The railway infrastructure charge in Norway
Documentation report

Background

On commission from the Ministry of Transport and Communication, the Institute of Transport Economics (TØI) has revised the Norwegian railway infrastructure charge. The project is documented in this report, and there is a summary report in Norwegian, TØI report 472/2000 "Jernbanens kjørevegsavgift – Sammendragsrapport.".

Issues

The main issues in the project have been:

1) How should the Norwegian scheme for user charges for railway infrastructure be?
2) At what level should the railway infrastructure charge be in Norway?

The structure of the report

The report is in two main parts: Chapters 2-5 give an overview of the background and the "framework" of the Norwegian system of user charges of railway infrastructure. Chapters 6-10 revise the principles of the scheme, the empirical data and level of the charges.

The purposes of the charge

The railway infrastructure charge was introduced for freight transport in Norway in 1990, as part of a new regulatory system for the national railway company Norges Statsbaner (NSB).

The purpose of the charge is outlined in St meld nr 54 (1988-89). It is pointed out that the user charge shall have two main functions: to signal the costs of producing the infrastructure service (i.e. also externality costs like pollution and noise) and to obtain revenue for financing the railway infrastructure. The most important reason for the charge is to give incentives to efficient use of society's resources.

Because of an aim of "a level playing field" the government has reduced the charge from the level of marginal cost pricing to a level where rail covers the same share of the traffic related costs through the traffic volume related taxes as competing road transport modes through their traffic volume related taxes. The relevant costs are infrastructure, environmental and accident costs, whereas the benchmark modes in the calculations have been buss (for passenger transport) and truck (for the freight transport). Passenger traffic has not been charged and the main reason is that bus traffic has not been charged a diesel tax.

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The charge is set every year in the national budget. In 2000 the charge for the ordinary freight transport is 1,00 øre per gross ton km. Intermodal transport has been exempted from the charge since 1998.

EU directives and Norwegian regulations

In chapter 4 we give an overview of the most relevant EU publications and regulations. We also take a look at the Norwegian regulations concerning the charge.

Today Directive 95/19 is the EU legislation that regulates the railway infrastructure charge. The directive is incorporated in the Norwegian railway regulations. There is a proposal for a Council Directive relating to the levying of charges for the use of railway infrastructure that will possibly replace Directive 95/19. In the report we look at some important elements of this proposal.

Our recommendations for the charge scheme

In chapter 6 we discuss different principles and recommend a system for the charge scheme.

The charge should be based on *short run marginal costs (SRMC)*, i.e. short run infrastructure costs (traffic volume related operation costs and wear and tear), external congestion costs, environmental costs (pollution, noise etc) and external accidental costs.

We recommend to reduce the charge from SRMC through a principle of *second best* when competing transport modes do not pay for their external costs. Our recommendation is to use the same rule for calculation as before, but to base the principle on efficiency considerations and not, as earlier, on non-discrimination.

Calculations of external costs

Chapter 7 gives an overview of the methods and data used when calculating the cost figures for the computation of the charge in chapter 9. The calculations are new in this revision of the charge. We stress the fact that the uncertainty in the calculations of the cost figures is significant.

Other relevant taxes

In chapter 8 we give an overview of other relevant taxes. We classify the taxes in two main categories: a) *Traffic volume related taxes* and b) *Fixed taxes*, which are not correlated with the traffic volumes. We use category a) in the calculations of the infrastructure charges.

Computation of the railway infrastructure charge

In the computations of the railway infrastructure charge we compare the SRMC from chapter 7 with the traffic volume related taxes, for both rail and competing road transport modes. The charge is then calculated by the recommended principle of second best from chapter 6, i.e. both rail and road transport will pay the same share of the SRMC trough the traffic volume related taxes.

Table S1 shows the calculated railway infrastructure charges for different categories of trains under the assumption of second best. The calculations for passenger trains apply when the diesel tax for buses is refunded (as it is today).

Table S1. Calculated charges (NOK) for different categories of trains per gross ton km under the assumption of second best. The calculations for passenger trains apply when the diesel tax for buses is refunded (as it is today).

	FREIGHT		PASSENGER	
	Diesel	**El**	**Diesel**	**El**
Railway infrastructure charge per gros ton km	0,022	0,012	-0,001	-0,001

Table S2 shows the charges differentiated. The pollution costs are charged on the use of diesel, noise and accident costs are charged on train km and infrastructure costs are charged on gross ton km. Such differentiation should give incentives for efficient train operation.

Table S2. The charges (NOK) differentiated as the pollution costs are charged on the use of diesel, noise and accident costs are charged on train km and infrastructure costs are charges on gross ton km.

	FREIGHT		PASSENGER	
	Diesel	**El**	**Diesel**	**El**
Charge per litre diesel	1,065	0	0,021	0
Charge per train km	0,69	0,69	-0,049	-0,049
Charge per gross ton km	0,011	0,011	-0,001	-0,001