

Road Charging Scheme: Europe - Germany

Type of Scheme

- National Motorway Charging Scheme for HGVs.

Date of Introduction

- 1 January 2005.

Background

- Germany has always been a transit route for lorries travelling across Europe - 35% of all lorry kilometres on Germany's motorways (autobahns) are made by foreign lorries.
- To move the funding method away from one based solely on tax revenue towards a fairer "user pays" system the German Government opted to introduce a national scheme of lorry road user charging.
- This scheme replaced the previous Eurovignette system in place throughout 6 European countries - although this remains in place in those countries bar Germany.
- There were initial teething problems and delays due to technical problems for which the German Government claimed compensation for lost revenues from the private operator in charge of running the scheme.



Aims

- Main aim is to raise additional revenue for the maintenance and further upgrading of road infrastructure.
- Secondary aim is to address the fact that heavy goods vehicles (HGVs) are responsible for a disproportionately high share of the costs of construction, maintenance and operation of motorways - road wear from a 40 tonne HGV can be up to 60,000 times higher than that of a car.

How it Works

Charges:

- All lorries weighing over 12 tonnes driving on motorways (autobahns) must pay a charge based on:
 - Distance travelled (kilometres)
 - Emissions class of vehicle
 - Number of axles

- The average charge is € 0.12 per km.
- The charge must be paid whether the lorry is full or empty.
- The charge can be paid in three ways: Using On-Board Units (OBU), manual payment terminals and via the internet.
- 85% of lorry drivers have opted to install the OBU inside the vehicle which automatically calculates the amount owed (see technology section below) and bills the driver.
- Payment can be made at up to 3500 payment terminals, such petrol stations, service areas and retail outlets, or by telephone or on the internet via www.toll-collect.de.



On-Board Unit (OBU)

Technology:

- The On-Board Unit system is based on GPS (Global Positioning Satellite) technology which automatically tracks a vehicle's position by communicating with the OBU inside the vehicle.
- The GPS system then calculates the appropriate fee on board and sends the amount and journey details to the toll collection centre via mobile radio signals.
- A bill is then generated and sent to the driver or lorry owner.
- The German constitution and law governing road pricing guarantees that this data cannot be accessed, even by police, unless explicitly agreed to by the driver.
- Government paid for the 450,000 OBUs currently in use, although lorry owners had to pay for their installation.

Enforcement:

- 10% of traffic must be monitored for violations.
- Almost 300 stationary toll checker gantries equipped with infrared detection equipment and high resolution cameras are able to identify the number plates of lorries (automatic number plate recognition) without a correctly functioning OBU or those that haven't paid the toll in advance.
- Almost 300 mobile enforcement vehicles with 540 Federal Officers of Freight also patrol the motorways.
- Officers have the authority to request lorries to pull over for examination to see if they have paid the charge or not.
- In the first 8 months of the scheme, around 11.6 million lorries were monitored with the result that violations to date are less than 2%.





Federal Officer of Freight

Revenue

- The scheme raises about €3bn a year (minus around €500 million on running costs).

Benefits/Results

- Reliability of OBUs has been consistently above 99%.
- Over 99% of all payments and fines have been collected.
- Charging system that is graduated according to emissions class of lorry has provided incentive to purchase cleaner vehicles or to convert high emission vehicles.
- Results show an improvement in haulage load per vehicle and the number of empty trips has decreased by 6%.
- There has also been a 6% shift to rail from road freight transport.
- These latter two results help decrease emissions of carbon dioxide and other pollutants.

Problems

- There have been some negative impacts with some lorries diverting off the motorways on to other roads to avoid paying the charge which brings problems such as noise and congestion on these routes.

Websites

Toll Collect:

www.toll-collect.de.

German Federal Transport Ministry:

www.bmwbw.de.

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