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accompanying the

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Strategy for an internalisation of external costs

and the

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures

Summary of the Impact assessment on the internalisation of external costs

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Impact assessment on the internalisation of external costs

When amending Directive 1999/62/EC on charging heavy goods vehicles (HGV) for the use of infrastructure in May 2006, the European Parliament and the Council stipulated that: "*No later than 10 June 2008, the Commission shall present, after examining all options including environment, noise, congestion and health-related costs, a generally applicable, transparent and comprehensible model for the assessment of all external costs to serve as the basis for future calculations of infrastructure charges*". The amending directive adds that: "*This model shall be accompanied by an impact analysis of the internalisation of external costs for all modes of transport and a strategy for a stepwise implementation of the model for all modes of transport. The report and the model shall be accompanied, if appropriate, by proposals to the European Parliament and the Council for further revision of this Directive*".

The present impact assessment focuses on the internalisation of external costs of noise, air pollution, climate change, congestion and accidents from heavy goods vehicles and other transport means through market based instruments such as charges, taxes or tradable permits. It analyses the options for internalising external costs in HGV tolls in order to revise Directive 1999/62/EC and the options for internalising external costs in other modes of transport such as railways, aviation, maritime and inland waterways.

1. PROBLEM DEFINITION

Transport activities produces nuisances which have a cost for others. Most of the time, these costs are external, meaning that they are not borne by those who generate them, but by other transport users (congestion, accidents) and society (environmental costs).

Given its environmental externalities, transport is already exposed to a number of regulatory measures. In addition, transport activities, including vehicle purchase, ownership and use, are subject to numerous taxes and charges, which may overall compensate, and in some cases maybe even over-compensate, for some of their social costs. It is therefore is necessary to take into account the existing situation to avoid double charging for the same external cost. The question, however, is to ascertain to what extent existing measures allow external costs to be internalised, in other words whether the price signals given by these existing charges, taxes or subsidies incite the development of new technologies, new ways of transportation or a change in consumer behaviour.

Although there is some evidence that some degree of internalisation of external costs is already in place, transport users do not bear all these costs or they pay in ways not related to external costs. In most cases, government measures are fragmented and do not tackle explicitly these market failures. The problem is that the structure of existing levies does not give a price signal efficient enough to influence the mobility behaviour.

Leaving the situation unchanged would mean that transport would continue to generate nuisances that would not be borne by transport users. However, this is not to say that nothing would be done as there are other instruments either in existence (e.g. vehicle taxes, Euro classes) or being discussed at the EU institutions (e.g. ETS for aviation, CO2 and cars rules)

to fight external costs. Without internalisation, transport price would continue to give a wrong signal to users who would not have enough incentives to use cleaner vehicles and avoid congested routes at peak times.

2. OBJECTIVES

The general objective for the EU is to "ensure that our transport systems meet society economic, social and environmental needs whilst minimising their undesirable impacts on the economy, society and the environment".

However, this impact assessment is only concerned with a specific objective of the Commission which, following the precise request of the legislator, is to propose a strategy to internalise external costs generated by transport. By internalising external costs, transport prices are expected to give the right signal to transport users, to improve the efficiency of infrastructure use and contribute to reducing negative externalities such as congestion, accidents and environmental emissions. This objective should not hamper the competitiveness of the economy and should avoid any undue burden on transport.

The following operational objectives are to:

– propose a stepwise strategy to promote the internalisation of external costs for all modes of transport, creating incentives for users to make efficient use of transport infrastructure.

– as a first step, and taking into account the fact that a proposal for introducing an ETS in air transport has already been formulated enable and encourage Member State to implement in a consistent way on motorways and other roads efficient road usage charges leading to more sustainable mobility. This would lead to the revision of Directive 1999/62/EC.

3. POLICY OPTIONS

A set of policy options has been analysed, also with the help of modelling tools.

The **reference scenario** (no new actions) does not consider any new proposal to ensure the internalisation of external costs, but takes into account the forthcoming measures aimed at reducing environmental nuisances. These relate mostly to climate change external costs; they are not part of a comprehensive strategy for internalisation and do not cover all modes of transport.

The **second scenario** analyses the impact of charging for external costs in road freight transport. This policy option would lead to a revision of Directive 1999/62/EC. Three variants have been analysed:

– charging for air pollution and noise costs,

– charging for air pollution, noise and CO_2,

– charging for air pollution, noise and congestion.

A **third scenario** would ensure that external costs can be charged for, not only in road freight transport as in Policy Option 2, but also in all other modes of transport, i.e. rail, aviation,

maritime and inland waterways in order to ensure equal treatment in all modes of transport. Two variants have been analysed:

– charging for air pollution and noise costs in all modes of transport, charging for CO_2 in maritime, inland waterways and railways,

– charging for air pollution, noise and CO_2 in all modes of transport.

4. ANALYSIS OF IMPACT

In all policy options, internalisation of external costs does not hamper mobility in Europe although charging modifies the choice of transport users and influences modal split. However, it appears that charging for congestion in road transport leads to more positive effects as it contributes to saving time while decreasing fuel consumption and environmental nuisances.

The economic impact of internalising external costs is negative in the short term as the increase in transport costs outweighs the other effects. However, the share of transport costs varies in industrial sectors and would probably lead to an increased efficiency in the transport of goods. On the whole, there are grounds for believing that the reduction of external costs – congestion, environmental costs, and the reduction of fatalities will improve Europe's overall competitiveness as these costs are currently borne by European society at large. Moreover, charging for congestion induces time savings which will be translated into productivity gains for business.

The implementation of a charging scheme leads to an overall reduction in environmental external costs of about 1 billion euros per year. The strong reduction of CO_2 emissions in the case of congestion charging is mostly due to the reduction of fuel consumption. According to some studies, vehicle fuel consumption increases by approximately 10- 30% under heavy congestion.

The distributional impacts of internalisation are quite modest and do not contribute to increasing inequalities. This could stem from the fact that lower income people tend to use more public transport and do not feel impacted by charging of private cars. One aspect the models cannot capture is the positive effects of the reduction of external costs on health. The reduction of air pollution will have a positive impact on health, especially in densely populated areas and in alpine and other populated mountain valleys.

Taking the revenues from tolls in different policy options, operational costs would vary from 12% to 25% of revenues in the EU25. These estimates do not consider existing schemes. In some countries such as Germany, Austria or the Czech Republic, an electronic system is already in place and operational costs range between 15% and 20% of revenues. Accordingly, the estimates provided above might be lower in some Member States.

The use of the revenues from charging for externalities should take into account the advantages for the Community of international traffic. In the case of road freight transport, the share of international traffic in total road freight traffic in the EU-27 is 27%. However, in seven Member States, it is higher than 50% with a peak of 84% in Estonia and 77% in Luxembourg. Given the increase in international road freight traffic, its share of EU27 traffic is expected to reach 33% with a peak of 90% in Estonia. In the absence of earmarking, Member States would tend to maximise their national welfare without taking full account of the benefits of sustainable mobility at Community level.

The absence of transparency and accountability could result in some cases in overcharging of international transport, which in turn may impact negatively on mobility, freedom of movement and the internal market. Overcharging may also have negative impacts at local level. First experiences with tolled motorways in Hungary in the 1990s; for instance failed because charges were set at a level beyond the users' capacity to pay.

The most important provisions in the current Directive to ensure accountability of infrastructure costs are the recourse to a common method for calculating costs and the adoption of common charging principles. Member States can decide to recover only some of the costs calculated according to this common methodology. As to external cost charges, a similar approach could be envisaged.

5. COMPARING THE OPTIONS

The quantitative and qualitative analysis appears to show that the option including congestion charges offers the best results. First, the reduction of time spent induces positive effects in the economy as transport goods flow more easily. Second, congestion charging induces strong reduction of external costs. Freer flows impact on fuel consumption, which in turn induces less CO_2 emissions. For these reasons, welfare effects are higher in this scenario.

When charging all modes of transport, mobility is largely maintained while environmental emissions and fatalities decrease. Congestion is not analysed, therefore all the positive impacts due to congestion charging are not provided in this case. From an acceptability point of view, the public consultation has shown strong support for charging all modes of transport. However, the international dimension of maritime and air transport needs to be considered when implementing an internalisation strategy. In addition, in policy option 3, the impact on employment relies heavily on the use of revenues.

Preferred options: Strategy to internalise external costs in all modes

For reasons of fairness, all modes of transport should be concerned by internalisation. However, given the international framework of maritime, aviation and inland waterways, the strategy will be developed in a longer term perspective.

The comparison of scenarios gives some indication of the preferred policy option. Option 3B covers other modes and would involve internalising air pollution, noise and CO_2 in the other modes. Extending internalisation to other modes of transport improves overall sustainability.

On this basis, a work programme would be elaborated, taking into consideration the desirability of charging for external costs (air pollution, noise, CO_2) in other modes of transport.

In the railways directive, the impact assessment mentions that charging for external costs was already envisaged in the existing EU legislation (Directive 2001/14/EC). Once the Eurovignette has been revised to allow internalisation, railways would have further opportunities to internalise external costs.

In air transport, inclusion in the ETS is an important step to fight CO_2 emissions. Ongoing work on the reduction of Nox emissions would give the opportunity to analyse a pricing mechanism in this context.

In maritime transport, the growth of CO_2 and air pollutants emissions shows the need to take actions in this field. Given the international framework for maritime, a solution such as the ETS could be one of the outcomes of the analysis.

Finally, consideration will also be given to inland waterways, taking into account the fact that many of them have their specific regulatory environment, e.g. the Manheim Convention.

Preferred options: Revision of Directive 1999/62/EC in June 2008

As mentioned above, road freight transport contributes to a large share of external costs. Internalising these costs, which requires Directive 1999/62/EC to be amended is therefore an essential component of the broader strategy to internalise external costs in all modes of transport.

Tackling road freight transport external costs is not the first step in this broader strategy since a proposal has already been made for inclusion of aviation in ETS The revision of Directive 1999/62/EC is also necessary to unblock the legislative bottleneck that prevents tackling externalities in rail transport.

Acting in road transport while other policy initiatives in other modes are being developed would not negatively affect the trend in externalities, since it would be consistent with higher relative charging of the mode with larger externalities.

In the framework of this analysis, the policy options corresponding to charging air pollution, noise and congestion in freight road transport seem to offer the best combination in terms of mobility and sustainability. A differentiated charging scheme based on the costs of air pollution and noise allows local environmental externalities to be taken into account. Integrating a congestion charge into such schemes produces time savings which lead to a positive impact on the economy at large. Congestion charging is more efficient if passenger and freight transport are concerned as both compete for the same infrastructure. This element is supported by the result of the public consultation which was in favour of an option "charging for freight and passenger cars". In addition, the reduction of travel time also contributes to reducing CO_2 emissions. Interestingly, charging for freight and passenger cars leads to a reduction of environmental costs similar to policy options that include a specific CO_2 mark-up.

The analysis assumed that all Member States are charging. However, the benefits and drawbacks of a mandatory versus and optional/empowering approach have been considered together with the link with subsidiarity issues. A number of considerations suggest considering first an empowering approach:

– There may still be uncertainties related to the costs, benefits and enforcement of the required tolling systems on the networks of some Member States with lower traffic and thus with low levels of externalities.

– A binding approach based on a mandatory charge would constitute a radical change compared with the current Directive and could hardly be envisaged without a transitional period.

– Member States have traditionally followed differing approaches regarding infrastructure charging and consequently have different levels of experience with the tolling technology involved. Interoperability issues are not yet solved.

– A flexible and gradual phasing in approach would allow the new charging schemes and tolling technology to be trialled in Member States where the geographical conditions are the most appropriate.

– The actual implementation and operational experience gathered in the early adopter Member States would allow a thorough stocktaking to be carried out at a later stage. A joint assessment of the pros and cons of making external cost charging mandatory for all Member States and the required degree of EU co-ordination can then be reviewed.

Such a policy option, based on an enabling approach, would entail the revision of Directive 1999/62/EC as a first step in the internalisation strategy. The main amendments would be: to authorise the calculation of road charges on the basis of the external costs, namely air pollution, noise and congestion and to differentiate the charges accordingly. Such charging schemes would be subject to a number of conditions to improve their efficiency and their chance of success such as the use of electronic free flow tolling technologies to facilitate implementation by reducing costs, and local inconveniences and allowing subsequent extension to all roads. For subsidiarity reasons, the Directive will not cover passenger cars. However, charging to reduce congestion is more effective if other road users outside the scope of this Directive are also covered by a similar scheme. This positive impact should be acknowledged.