Council of Ministers

HARMONISATION IN ROAD TRANSPORT

Efficient Transport Taxes and Charges:
Conclusions and Recommendations

This document was noted by Ministers at their Session in Prague on 30-31 May 2000.

The full report will be published in 2000 together with the related Resolution on Charges and Taxes in Transport, particularly in International Road Haulage, adopted by the Council of Ministers.
Summary and Key Issues

According to classical economic theory, in order to maximise social welfare, transport charges should be based on social marginal costs\(^1\). That is the costs of providing an incremental unit of transport service including related external costs (mainly health, environment, accidents and congestion) to the extent that these can be defined. In order to achieve this the instruments used to levy taxes must be differentiated to reflect marginal costs as closely as is cost effective.

A shift towards differentiated territorial based charges (away from more purely fiscal, national charges) is required both for efficiency and to avoid problems of international competitiveness. This implies moving partially away from vehicle excise duties, fuel taxes and the Eurovignette towards electronic km-charges and road tolls that can be varied in function of time and place as far as politically feasible.

The accompanying Resolution CEMT/CS(2000)13 adopts these broad principles together with principles for avoiding discrimination in charges levied on international road haulage, in a coherent framework.

The analysis below highlights the following policy issues:

− what needs to be done to avoid differences in charges distorting competition;

− what forms of international tax harmonisation are desirable and where different levels of charges are to be expected and accepted;

− the choice to be made between efficiency in the use of infrastructure and infrastructure cost coverage.

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\(^1\) Practical considerations can, however, result in divergence from this theoretical norm. Budgetary pressures may mean sufficient public funds are simply not available to substitute for charges above marginal social costs in order to more fully cover total infrastructure costs. Some Governments also pursue as a principle the recovery of infrastructure costs.
EFFICIENT TRANSPORT TAXES AND CHARGES: CONCLUSIONS AND RECOMMENDATIONS

This report sets out a theoretical framework for establishing an efficient system of taxes and charges for transport. The accompanying report Efficient Transport Taxes [CEMT/CS(99)44/REV1] takes up the analysis in more detail and develops an accounting framework for making international comparisons of tax systems as they apply to road freight transport. This enables meaningful comparisons of the structure and level of taxation to be made. The work provides a framework for addressing the questions “what is the right level for transport taxes” and “what kinds of charges should be used”.

Nine neighbouring countries were examined in detail. Austria, Belgium, the Czech Republic, France, Germany, the Netherlands, Spain, Switzerland and the United Kingdom. The analysis is applied to road haulage but the framework can also be extended to cover rail freight and both road and rail passenger services. Preliminary work undertaken on these other modes and services is not reported here.

Competitiveness

In order to assess the impact of taxes on the competitiveness of national haulage industries, the taxation of labour and capital has to be taken account of in addition to transport taxes and charges. Although the analysis confirmed that there are large differences between countries in transport charges, it found that differences in labour and capital taxation cancel out most of the variation. The highest net effective rates of transport charges were three times those of the country with the lowest charges. Factoring in labour and capital taxes reduces the difference in marginal taxation to 36%.

Applying the analysis to a situation in which hauliers from each of the countries examined compete to undertake the same international haul (e.g. from Manchester to Zaragoza) revealed that differences in the impact of taxation on competitiveness are minimal. Thus differences in competitiveness that do currently exist in such transcontinental haulage markets arise from comparative advantage, differences in pre-tax prices of inputs and possibly other factors but not from differences in taxation.

Such multinational competition, however, represents only a small part of the haulage market. When the analysis was applied to particular pairs and groups of countries, differences in the structure of taxation were found to have a potentially substantial impact on the competitiveness of hauliers in some cases. Large differences were found between several pairs of national hauliers competing in each others markets. Even larger differences were found between some pairs of national hauliers potentially competing for hauls in third countries (details are given in the report [CEMT/CS(99)45/REV1]). The differences recorded in this part of the analysis are much larger than with the long distance international hauls because on the longer hauls, the more territorial charges (tolls, Eurovignette, fuel tax) that all pay on a more or less equal basis dilute the differences in the national charges (vehicle taxes).

The key factor within transport charges in determining the impact of taxation on the competitiveness of hauliers is the relative weight of more purely fiscal, national based taxes compared with more territorial charges, in the sum of taxes levied. Potential impacts on competitiveness can be avoided by limiting the weight of national charges (such as vehicle excise duty) in the country’s basket of transport taxes.

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2 The net effective rate of transport charges is simply the overall weight of charges obtained by summing all the various charges and taxes levied (vehicle taxes, fuel taxes, tolls etc.), subtracting any reimbursements, discounts etc. and expressing the overall figure in terms of a charge per ton km (or per km or per litre of fuel used or some other common denominator).
For vehicle taxes there are significant differences in levels of charges. Their impact on competitiveness was not fully determined but the analysis demonstrated that distortion of competition can be avoided by partially replacing vehicle charges with territorial charges.

Turning to fuel taxes, the data examined suggest that the market works well in preventing major differences in fuel taxation between most countries. Only the United Kingdom diverges from the general pattern among the countries studied. It is able to do this due to its geographical isolation which limits fuel-tank tourism.

**Efficiency**

Efficiency and competitiveness are separate issues. Efficiency, that is maximising social welfare, is the more important issue. Three broad categories of taxes can be identified in relation to efficiency:

- efficiency and welfare enhancing taxes – charges on external costs;
- welfare neutral taxes – e.g. taxation of economic rents on the production of natural resources;
- efficiency and welfare reducing taxes – most other forms of taxation.

Thus because of the nature of the impact of taxes on economic activity, the efficiency of transport taxation depends largely on its relation to external costs. All governments require revenues over and above those that can be raised by taxing externalities. The aim should be to select the least welfare-reducing tax package to raise the necessary additional revenues.

In the absence of externalities, taxes on intermediate products such as road haulage distort markets. They alter the allocation of resources in production sectors and thereby reduce the net output of the economy. They are therefore strongly welfare-reducing. Ideally taxes on intermediate products should be avoided. It is less inefficient to tax inputs (labour and capital) and outputs (VAT and profit taxes) as they do not effect the efficiency of the production sector.

This implies that the taxation of intermediate goods (such as commercial transport) should be set at the level of marginal social costs and no higher. This provides for different tax treatment between freight and passenger transport. For example VAT should generally be levied on passenger transport (as it is generally considered final consumption) but not on freight transport. This is indeed generally the case, although not always.

In order to avoid distorting the allocation of production factors, rates of taxes on labour and capital should be identical for every sector of the economy. Thus there should be no special regimes for labour or capital taxes for haulage or for any other sector of the economy. It is always better to address income distribution concerns via taxes on final consumption and on income rather than taxes on specific production sectors. Therefore distributional issues should also play no role in determining the taxation of freight transport.

**Tax instruments**

Transport taxes and charges are under review in many ECMT Member countries in response to political pressure to ensure charges are fair and as part of the wider reform of taxation to underpin the improvement of environmental protection in the economy as a whole. The analysis in the main report discusses in some detail how existing transport tax structures can be made more efficient by shifting from national charges (such as annual vehicle excise duties) towards more purely territorial charges (such as electronic km charges or tolls). This means restructuring and reducing some taxes and introducing or increasing others. For example, replacing the existing Eurovignette with an electronic km-charge would increase efficiency.

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3 See also the section on infrastructure cost coverage and footnote 1.
Fuel taxation has been a key element in strategies to relate transport taxes to external environmental costs and a shift from national taxes to fuel tax (which is weakly territorial) can in many cases be recommended. However, except for CO₂ emissions, fuel tax is a relatively blunt instrument for tackling many elements of the social costs of transport. Technological progress is now making the introduction of more accurate and better targeted charges cost effective. Electronic km-charges for trucks are the leading example. The introduction of such marginal cost based charges is recommended and could allow for a reduction in the level of fuel tax.

*International Coherence in Taxation*

As marginal social costs vary by location, one should not expect efficient transport charges to be uniform. Territorial charges should vary with costs. General harmonisation of the level of such charges is therefore inappropriate. Harmonisation of the basis for such taxation, e.g. in the methodologies use for determining marginal social costs, is more appropriate.

As noted, market forces tend to limit the divergence of tax structures and levels between neighbouring countries in an open economy. Differences between countries co-operating in the European Union’s single market are therefore likely to be small. However, if Governments wish to maintain substantial national charges (such as vehicle excise duty) an agreed minimum rate is required, or else the floor rate of taxation may come under pressure from third countries. The same applies in the case of fuel tax, hence the existing EU minimum rates.

Although market forces imply no need for maximum rates of tax, transit countries are in a position to set monopolistic rent seeking prices. Ensuring charges are non-discriminatory will limit the tendency for this to happen. However, a country with large transit traffic could maximise national revenues by increasing charges beyond marginal social costs. A maximum limit may be needed for territorial charges (although no maximum is needed for vehicle or fuel taxes, as discussed in the previous paragraph).

Thus there should be freedom to set territorial charges nationally or locally according to marginal costs but exploitation of the potential for monopoly pricing of transit traffic may need to be curtailed.

It should be acknowledged that due to their geographical location some countries, such as the United Kingdom, Russia and Turkey, enjoy a certain degree of freedom to diverge from the structure and level of taxes imposed by competition in neighbouring markets, although the same principles for efficient taxation apply to all countries and the remarks on limiting monopoly pricing also apply to all.

Russia and some neighbouring countries may be forced to diverge from the recommended structure of taxes while they continue to experience severe difficulties in collecting many categories of tax. However, this will be a transient phase, it is to be hoped. In the long term welfare will be maximised by adopting the recommended structure and level of taxation.
Infrastructure cost coverage

An important conclusion that results from the principles for efficient taxation is that 100% coverage of infrastructure expenditures is not an appropriate basis for ensuring efficiency. Increasing returns to scale, such as exhibited by railways, mean that marginal social cost based pricing will not cover total costs. This is because marginal costs are below average costs in these industries. Transfers (subsidies) will be required to cover the difference and ensure an efficient outcome\(^4\). Work to date suggests that efficient pricing will require transfers amounting to around at least 40%\(^5\) of total infrastructure costs for railway systems.

Road networks do not exhibit quite the same degree of increasing returns to scale. At the same time, road use often occasions a high incidence of external costs. Taxing on the basis of marginal social costs as recommended will result in revenues that exceed infrastructure expenditure for the road network as a whole. Current research covering a number of Member countries suggests that revenues from efficient taxation could exceed 150% of infrastructure costs at the national level\(^6\). This surplus of revenues will be pronounced in urban areas. But in the case of rural roads and some trunk inter-city roads, revenues are likely to fall below infrastructure costs in an efficient taxation system. The urban/rural differences are accounted for by congestion, air pollution and noise which are all highly site specific. Efficient taxation thus implies that revenues will differ from expenditures both within and across the various modes of transport.

\(^4\) See footnote 1.
\(^5\) See ECMT/CS(99)44Rev1.
\(^6\) See ECMT/CS(99)44Rev1.