

Measure 61: Taxation of passenger cars according to environmental criteria

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Policy package:

1C: Road Pricing, taxation and financing

Measure 61

A review of the overall consistency of automobile taxes and the scope for creating a broader framework at Community level for the introduction of mechanisms for differentiating passenger vehicle taxes according to environmental criteria.

What is the problem being addressed ?

European Union policy in the area of passenger cars has two main strands:

- Functioning of the Internal Market: the operation of 15, and since 1st May 2004 of 25, different tax systems for passenger cars within the EU has resulted in tax obstacles such as double taxation, distortions and inefficiencies, which distort the functioning of the Internal Market. This also results in passenger car market fragmentation, important differences in pre-tax and consumer-tax prices, and in tax consequences of cross border transfer of cars. EU citizens currently face double payment of Registration Tax (RT), considerable administrative procedures and extra costs, time losses and various obstacles to the free movement of their passenger cars within the Community.
- Sustainability: optimal use of fiscal measures, together with the commitments taken with the car industry (ACEA, JAMA and KAMA) and consumer information, is a critical instrument in achieving the Community's target of 120 g CO₂ per Km. This target goes beyond the target of 140 g CO₂ per Km provided for in the commitments of the car industry, leaving a "gap" of 20 g CO₂ per Km to be closed by other measures and in particular by fiscal measures. The reduction in CO₂ emissions goes hand in hand with savings in the specific energy consumptions of cars. It, therefore, has also positive repercussions on the efficient use of energy products and contributes to improving the security of supply of energy.

Currently taxes on passenger cars in the EU Member States are very diversified in terms of structure and levels. They are based on one or a mix of elements such as fiscal horsepower, engine capacity, weight, price of the car, fuel consumption, or CO₂ emissions. Indeed, taxes and charges on passenger cars include:

- Registration Tax (RT) payable at the time of acquisition, or first putting into service, of a passenger car.
- Annual Circulation Tax (ACT) payable in connection with the ownership of the passenger car.
- Fuel Taxes (FT).
- Other taxes and charges, such as insurance taxes, registration fees, road user charges, road tolls etc.

The measure proposed, as documented in COM/2002/0431 "Communication from the Commission to the Council and the European Parliament - Taxation of passenger cars in the European Union - options for action at national and Community levels [SEC(2002) 858]", focuses on RT, ACT and to some extent fuel taxes (which are however the main subject of Measure 58 of this report), as they are by far the most important passenger car related taxes. The Communication explored possibilities to:

- modernize, simplify and, at a later stage, to approximate passenger car taxation systems, and to remove tax obstacles and distortions to free circulation of passenger cars within the Internal market;
- include new parameters in the tax bases of passenger car related taxes, in order to make them partially, or totally, CO₂ based.

Measure's costs and/or benefits:

From an Internal Market point of view the cost of keeping in place a costly, highly diversified, non transparent and de-motivating system is much higher than the transitional cost of replacing it by a more transparent, simpler, better manageable and flexible system. Indeed, the new system will continue to be managed at the same level (national or regional) as the previous system, and will not affect the global revenue for the national budgets, requiring only neutral shifts between car tax categories, i.e. from RT to ACT and to fuel taxes. Moreover, sufficient time is left to those Member States concerned to adapt the tax bases and apply the gradual transfer of revenue.

Transaction costs for the citizens will be reduced. Estimations carried out in 2001 evaluate the cost of a transfer of car in the Member State of destination, involving registration fee, temporary road permits, other costs, between 70 and 437 Euro. The citizen will need less effort to provide documents, less money for expert fees and administrative charges and will pay RT in the Member State where his car is actually used.

Legislative implementation at the EU level:

There is a communication from the Commission to the Council and the European Parliament "Taxation of passenger cars in the European Union - options for action at national and Community levels [SEC(2002) 858], COM/2002/0431". At this moment there is no agreement on this proposal on the European level. However, a consultation has recently been launched, and a Working Document to serve as the basis for the preparation of the Extended Impact Assessment of the proposal has been issued by the Commission on 12 July 2004.

What are the objectives ?

The specific objectives chosen for this measure, aiming to achieve the headline objectives of improving the functioning of the Internal Market and sustainability, include:

- Abolition of the Registration Tax over a ten year transitional period: RT represents a clear obstacle to the freedom of movement of cars in the Internal Market and negatively affects competitiveness of the European car industry. In order to ensure budget neutrality, a gradual and parallel transfer of revenue from RT to ACT and to fuel taxes is also proposed. The latter presents a more stable source of revenue for national budgets and shall reduce progressively the administrative and management costs.
- Establishment of a RT Refund system to apply during the transitional period: this system shall avoid excessive and often double payment of RT, ensure legal certainty and transparency for the European citizen, and reduce the number of complaints by citizens.
- Restructuring of both RT and ACT tax bases to include a CO₂ element: this step is necessary in order to allow individual Member States to introduce the fiscal measures needed to achieve the Community's target of 120 g CO₂ per Km.

It is important to note that the proposal does not envisage the harmonization of either passenger car tax bases and tax levels. It only targets the abolition of RT which is the main remaining obstacle disturbing the functioning of the Internal Market and the free movement of passenger cars, and introduce a CO₂ sensitive element whose concrete level will be left to each Member State to establish and administer.

Interactions with other WP measures:

There is a strong linkage with other fiscal measures concerning road transport, such as harmonization of commercial road transport fuel taxation (Measure 58), tax exemptions for biofuels (Measure 62), and infrastructure charging (Measure 57).

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Output indicators:

In relation to the specific objectives discussed above (see First Page), output indicators will include:

- Revenue from vehicle related taxes as % of total taxation in the Member States: this indicator shall present the total level and the composition of vehicle related taxes by main categories (RT, ACT, Petrol taxes, Diesel taxes). Indeed, data on taxation of passenger cars are very limited. In a study carried out by TIS for DG TAXUD in 2001 covering 9 Member States, the weight of passenger car related taxes as a percentage of total taxation revenue in 1999 varied between 4,5% and 10,2% in Ireland. This is shown in the figure below, together with the breakdown of vehicle related tax categories:

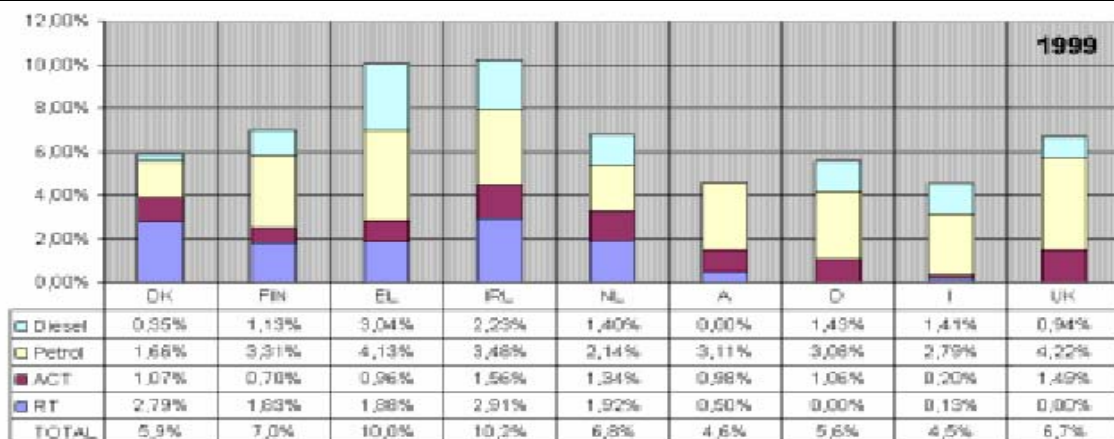


Figure 1: Revenue from vehicle related taxes as % of total taxation, in 1999

Source: TIS study³, Figure 26. For Austria petrol figures also include diesel figures.

Member States having a large car industry tend not to apply a RT, or they apply a lower RT, while car importing Member States tend to levy higher RT. In 1999, relatively high average RT levels were found, for example, in DK, FIN and NL, while five member states (D, F, L, S and UK) did not apply a RT. On the contrary, all Member States apart from France apply ACT at national level. In most Member States, diesel cars face higher ACT than petrol cars of the same size, mainly in order to compensate for the lower diesel fuel taxes.

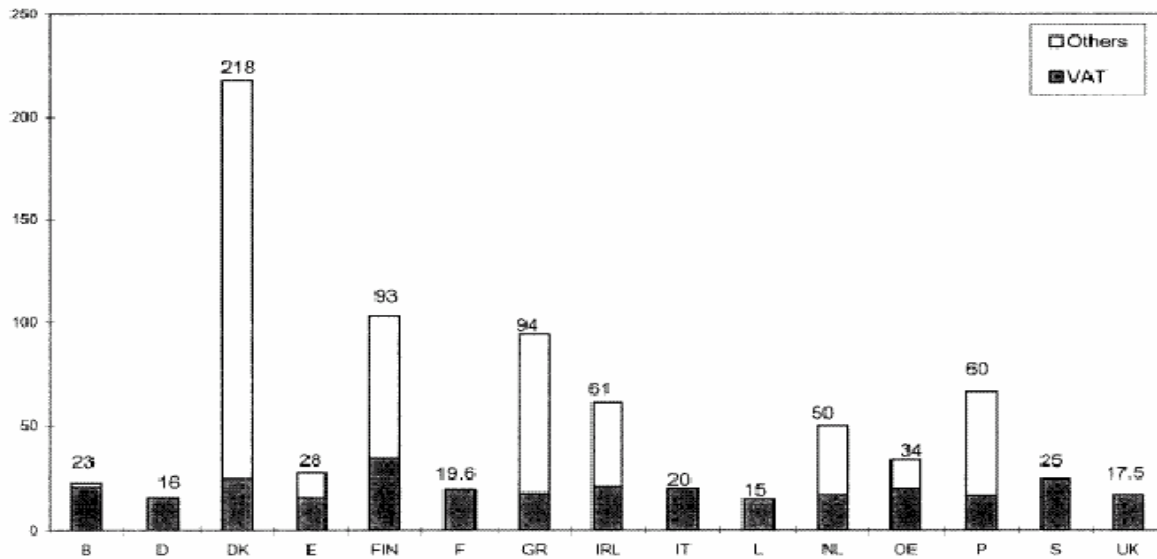
A further output indicator, with regard to the functioning of the RT Refund system, will be the “number of citizens’ complaints”, which should be reduced as an effect of the measure implementation.

Outcome indicators: intermediate impacts on transport markets

The impacts of this measure on the functioning of the Internal Market are obviously important. They include in particular the following aspects:

- Differences in pre-tax car prices: the car industry establishes recommended pre-tax prices, which consumers should pay for a particular car model, taking into account, among other factors, consumer purchasing power, and the level of taxation in each Member State. These prices are in general higher in Member States applying no, or low, RT. Since cross-border retailing and purchases in the Internal market do not take place to any significant extent, in response to high RT in some member States, car manufacturers fix pre-tax prices at a lower level than in Member States applying no, or low, RT. Different taxation levels can explain about 20% of the European car price differentials (see TIS Study). The proposed abolition of RT should considerably reduce car pre-tax price differentials. The gradual abolition of RT will imply higher car pre-tax prices in the high taxing Member States, but this increase will not be visible as the citizens will benefit from lower consumer prices due to lower levels of RT. However, in order to use this indicator, the car industry should provide some information concerning the expected levels of car pre-tax prices following the abolition of RT.
- Car retail price approximation: the gradual shift of taxation from RT to ACT and to some extent fuel tax should result in more vehicle tax approximation and, as a consequence, provide for car retail price approximation in the EU. This will also bring forward in some Member States significant retail car price reductions. Indeed, tax bases and tax levels currently applied are strongly diversified; tax levels range, in extreme cases, between zero and 180% of pre-tax car price. The figure below, presenting tax as % of the pre-tax price of the car, provides an example of how RT and VAT are affecting retail prices of a 2000 cc passenger vehicle in all EU Member States:

Car capacity: 2000 cc



Source: ACEA Guide, updated in April 2001

Comprehensive information about price differentials, pre and post tax prices in the EU is available in the biannual report on car prices, to be found at: http://europe.eu.int/comm/competition/car_sector/price_diffs/

- **Car ownership:** there is some evidence that car ownership is to some extent dependent on taxation levels since the latter is an important component of the car retail price. Car taxes paid on purchases (RT and VAT) seems to have higher effects on car ownership together with other factors like purchasing power and the existence of a car industry in the specific Member State. Car ownership has increased over the years in all Member States. As shown in the table below, the number of passenger cars went from 160 millions in 1995 to 187 millions in 2002 (+16,6%):

Number of passenger cars in the EU (14 countries)

| | (in 000 units) | | | | | | | |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| MEMBER STATES | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
| Austria | 3.594 | 3.691 | 3.783 | 3.887 | 4.010 | 4.097 | 4.182 | 3.987 |
| Belgium | 4.239 | 4.308 | 4.373 | 4.458 | 4.547 | 4.629 | 4.684 | 4.725 |
| Denmark | 1.685 | 1.744 | 1.788 | 1.822 | 1.847 | 1.843 | 1.875 | 1.890 |
| Finland | 1.888 | 1.930 | 1.935 | 2.008 | 2.069 | 2.121 | 2.146 | 2.180 |
| France | 25.100 | 25.500 | 26.090 | 26.810 | 27.480 | 28.060 | 28.700 | 29.160 |
| Germany | 40.404 | 40.988 | 41.372 | 41.674 | 42.324 | 43.772 | 44.383 | 44.657 |
| United Kingdom | 24.307 | 24.865 | 25.594 | 26.269 | 26.775 | 27.185 | 27.790 | 28.484 |
| Greece | 2.240 | 2.241 | 2.401 | 2.568 | 2.811 | 3.156 | 3.415 | 3.656 |
| Ireland | 990 | 1.057 | 1.134 | 1.197 | 1.269 | 1.319 | 1.385 | 1.448 |
| Italy | 30.301 | 29.911 | 30.155 | 31.056 | 32.038 | 32.584 | 33.239 | 33.706 |
| Netherlands | 5.633 | 5.740 | 5.931 | 6.120 | 6.343 | 6.539 | 6.710 | 6.855 |
| Portugal | 2.560 | 2.750 | 2.950 | 3.150 | 3.469 | 3.593 | 3.746 | 3.885 |
| Spain | 14.212 | 14.754 | 15.297 | 16.050 | 16.847 | 17.449 | 18.151 | 18.733 |
| Sweden | 3.631 | 3.655 | 3.701 | 3.791 | 3.890 | 3.999 | 4.019 | 4.043 |
| EU-14 | 160.784 | 163.133 | 166.505 | 170.859 | 175.720 | 180.346 | 184.426 | 187.409 |

Source: ACEA Website (ANFAC)

Compared to the number of all vehicles in circulation in the EU15, passenger cars steadily represent 87%-88% of them. However, in Member States with higher car ownership the marginal growth is smaller due to market saturation, which seems to be about 600 cars per 1000 inhabitants in the EU15 countries. Each

Member State's car market is in relation with the size of its population. Another important factor is the level of income, which is growing in the New Member States and Candidate Countries, causing an increase of car ownerships level per 1000 inhabitants.

- European car market: existing different tax systems result in a car market fragmentation which obliges the industry to adapt significantly car pre-tax prices, and cannot therefore benefit from economies of scale by applying the same specifications to passenger cars for the entire Internal market. Indeed, the industry raises pre-tax prices in Member States not applying RT to compensate for the losses/reduced profitability in Member States applying high RT. But industries are often obliged to accompany reduced pre-tax prices by different specifications and reduced accessories. This generates additional costs that undermine the competitiveness of the European car industry, and consequently, has negative repercussions on the employment situation in the EU. Total employment in the European car industry can be taken therefore as the key indicator in this respect. This should increase with the realisation of a truly Internal Market for passenger cars.

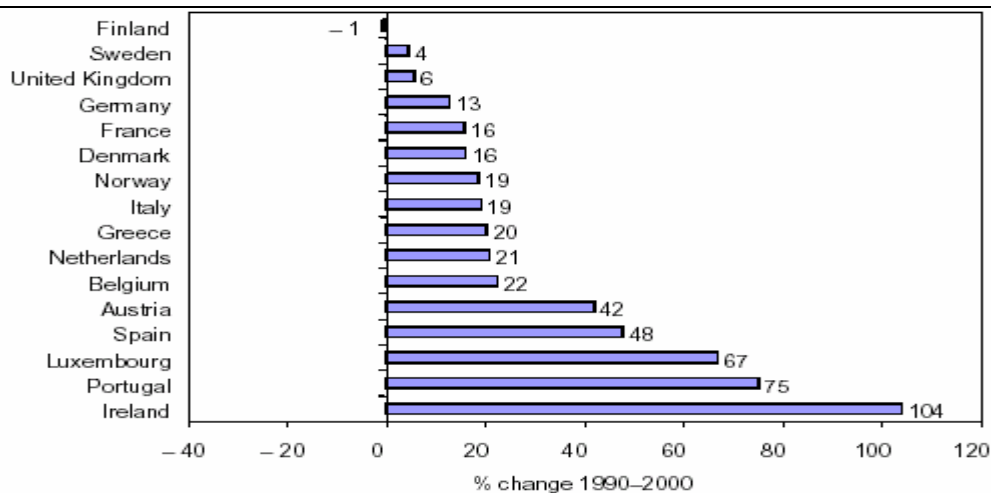
Outcome indicators: final impacts on transport users and non users

The final impacts to be considered for this measure are of two kinds:

- Social impacts on citizens: the provisions establishing a RT refund system clearly have a social impact as citizens will no longer have to pay RT twice or to pay disproportionate amounts of RT. Apart from the double taxation problem the citizen will certainly benefit from the simplification of the procedures necessary for moving a car from one Member State to another. The provision establishing the shift of tax revenue from RT to ACT will keep the global tax burden stable, but this does not exclude the possibility that some citizens will pay more and other less to keep the overall packet revenue neutral. In particular, the owners of old, high polluting vehicles will normally be asked to pay higher ACT or to replace their vehicles with new and less polluting vehicles. To avoid excessive ACT payments, the proposal provides for a gradual application over a period of ten years, which is even longer than the average car age in all EU15. A related indicator is therefore the "average age of passenger car fleet in each Member State": MS with older fleets will experience a more serious social impact.
- Environmental impacts: these are by far the most important final impacts expected from this measure, and are more extensively discussed below.

The first environmental target of fiscal measures on passenger cars was to reduce CO₂ emissions from passenger cars. It should be recalled that transport is responsible for 28% of total CO₂ emissions. Road transport alone currently represents 84% of all transport related CO₂ emissions; more than half is accounted for by passenger cars. According to the EEA-TERM source, emissions of CO₂ from transport (excluding international aviation and maritime transport) increased by 18% between 1990 and 2000, mainly due to growth in road transport. This general upward trend is due mainly to growing traffic volumes, as there has been very little change in average energy use per vehicle-km. Although all Member States (except Finland) saw their CO₂ emissions from transport increase between 1990 and 2000, there are significant differences in the Member States performances, as it is shown in the figure below (source EEA-TERM):

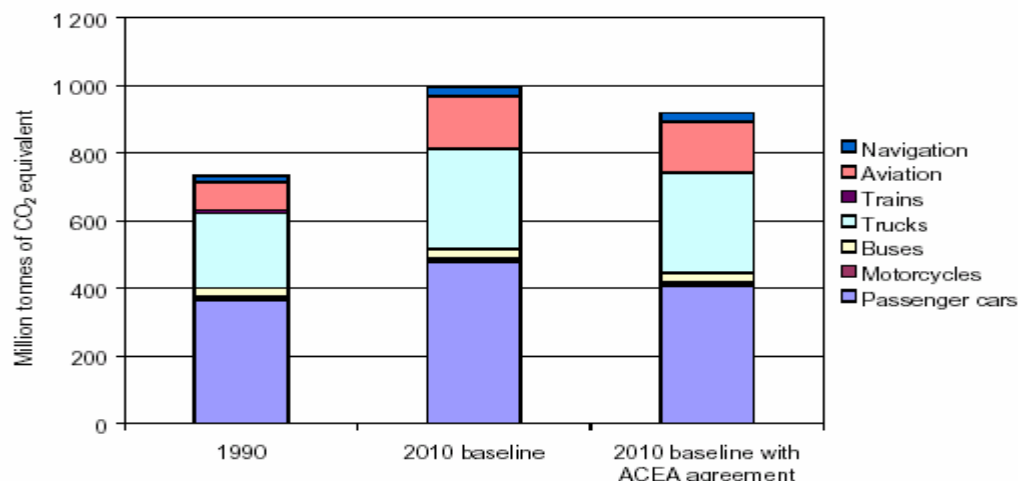
Change in CO₂ emissions from transport in each Member State (EU15) and Norway, 1990-2000 (%)



Source: EEA, 2002a (data for Norway from EIONET, 2002).

According to the year 2001 DG ENV Study “Economic evaluation of sectoral emission reduction objectives for climate change”, CO₂ emissions from transport are projected to increase by 35% to 2010, without the ACEA agreement. With the latter, the increase would be 25%:

CO₂ emissions per transport mode, 1990 and 2010 (projected)



Source: European Commission, 2001c.

The potential of fiscal measures to reduce CO₂ emissions from new passenger cars has been the subject of a study published in December 2001 (COWI Study – available at: http://europa.eu.int/comm/taxation_customs/taxation/vehicles_taxation/index.htm). The results of this study confirmed that the replacement of existing taxes by purely CO₂ dependent taxes provides, in most cases, the largest CO₂ reduction. The highest possible CO₂ reductions can be achieved if efforts are focused on that vehicle tax which, in absolute terms, has the higher level (in practice RT or ACT), turning it into a purely CO₂ based tax. Based on the COWI Study model projections on road transport CO₂ emissions, it has been estimated that the CO₂ emissions would change in the period 1995 to 2010 as follows:

- without additional measures: + 17%
- with car industries commitments being implemented (target 140 g/km): + 7%
- with Community target being implemented (target 120 g/km): + 3%

This means that if the 120 g/km target could be met the upward trend in total CO₂ emissions from road transport could be nearly broken and emissions could be more or less stabilised, around 1995 levels, somewhere between 2005 and 2010.

Although the proposal only focuses on CO₂ emissions from passenger cars, it is obvious that Member States can use fiscal incentives for also reducing other polluting emissions which are regulated for type-approval, such as Nox and particulate matters. When revising their national passenger car taxation systems Member States could consider whether additional environmental improvements can be achieved by increasing proportionately the tax rate as a function of car age, as newer cars have major environmental benefits compared to older cars. To give an example: if the ACT is based on the cylinder capacity of a passenger car, two particular vehicles of 1500 cc pay the same ACT, irrespective of their fuel consumption, weight, age or technology. **Tax differentiation** means that the owner of a fuel-efficient passenger car should pay lower ACT, compared to the owners of a similar but less fuel-efficient car. The total tax revenue for the state should, nevertheless, remain stable. Currently only one Member State (UK) applies a CO₂ based ACT: a passenger car emitting less than 150g CO₂ per Km is charged 159 Euro, while more polluting cars are charged by a tax amount increasing gradually to reach the level of 246 Euro for those cars emitting more than 150g CO₂ per Km. The spreading in the EU of this tax differentiation will become a key parameter for improving the fuel efficiency of passenger cars, and it will give a strong incentive to the renewal of the national vehicle fleets.

Therefore, an accelerated renewal of passenger car fleets is expected as a consequence of tax differentiation according to environmental criteria. This would have in turn two consequences:

- increased production of new cleaner cars bringing in increased employment, competitiveness and productivity in the European car industry;
- potential reduction of fuel consumption (and related fuel tax losses) due to the expected higher fuel efficiency of future passenger car generations.

From the above discussion it is clear that, besides the transport CO₂ emissions of new cars (for which data are available in the context of the commitments of the car manufactures – see http://europa.eu.int/comm/environment/co2/co2_monitoring.htm), key outcome indicators related to Measure 61 include also:

- Total emission of air pollutants (in particular NO_x, PM₁₀)
- Total fuel consumption
- Employment and turnover of the European car industry (this indicator is already considered among the market indicators, but it would be relevant to assess the impact of a faster renewal triggered by environmental taxation).