

COMMISSION OF THE EUROPEAN COMMUNITIES

COM(86) 750 final

Brussels, 10 December 1986

Elimination of Distortions of Competition of a fiscal nature
in the Transport of Goods by Road :
Study of Vehicle Taxes, Fuel Taxes and Road Tolls

(Communication from the Commission to the Council)

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A. INTRODUCTION

1. The problems relating to the taxation of commercial vehicles have been discussed in the Community since the mid 1960es. They have recently received a new impetus as part of the transport policy to be conducted in the context of the completion of the internal market by 1992.
2. Based on the ruling of the Court of Justice of 22 May 1985 and following the European Council of 1985, the Council decided on 14 November 1985 to create a free market for road transport without quantitative restrictions by 1992, to adapt current quota systems progressively and to eliminate distorsions in competitive conditions during the transitional period. At its meeting of 30 June 1986, the Council concluded that, in order to complete the elimination of distorsions in competition, it remained to "regulate the fiscal aspects". For that reason, the Commission was invited "to present as soon as possible and at the latest by 1 January 1987, a study on the taxation of motor vehicles, fuel excise taxes and tolls, as well as the relationships between these elements".
3. Discussion and studies of the problems of allocating the costs of infrastructure to its users in the 1960es led the Council in 1965 (1) to approve the principle of a common approach. The Commission put forward a formal proposal to implement the system, together with an explanatory memorandum, in 1971 (2). The basic idea was to make the users of each land transport mode (road, rail and inland waterway) pay the costs caused by them in a two-stage process which would first ensure the coverage of marginal (or variable) costs and then proceed to the recovery of total costs.

(1) Council Decision 65/271/EEC O.J. No 88 of 24 May 1965, p. 67.

(2) COM (71) 268 final - 24 March 1971.

4. In the final stage the following basic aims were to be attained :
- Allocation of economic and social infrastructure costs to users;
 - Harmonisation of competitive conditions both within and between modes of transport;
 - Sufficient tax revenue for each Member State;
 - Free and unhindered flow of goods and persons within the Community.

At a later stage an additional aim was to take into account the interests of non-Member Countries, especially of transit countries.

5. To start the process the Commission put forward in 1968 a proposal on the taxation of commercial vehicles (1). The proposal aimed at harmonising the tax structures first, to ensure that at least marginal costs would be covered, whilst providing options for recovering total costs. This approach was fully supported in 1969 by the European Parliament and the Economic and Social Committee and, at a meeting in 1975 to inform the three new Member States, the basic concept was not challenged.

6. In the face of this apparent consensus and following repeated Council discussions, the proposed directive was agreed in principle in June 1978 (2). However, it was never formally adopted, and the initial resistance by one Member State was followed by others. Although one Member State is currently applying the principles and methods proposed in the directive without difficulty, others have raised problems of various and contrasting kinds, such as the complexity of the methods, the absence of immediate results, reservations on a marginal approach, the charging of tolls, unwillingness to increase costs for hauliers etc.

(1) Proposal for a first Directive on the Adjustment of National Taxation Systems for Commercial Vehicles - J.O. C 95 of 21 September 1968 - p. 41.

(2) Council Doc. T/S12/78 (TRANS) - 20 June 1978.

7. For these reasons the Council, at its meeting on 30 June 1986, asked the Commission to carry out the present study of the effect of vehicle and fuel taxes and road tolls on competitive conditions in the transport of goods by road. Whilst this study is therefore limited in scope, it needs to bear in mind other relevant problems, even if it does not deal with them. For example, as far as harmonisation of competitive conditions between modes is concerned, attention should be drawn to the Commission's proposals for the improvement of the (financial) situation of the railways (1).
8. The questions that should be analysed may be summed up as follows:
- What are the present differences in national systems of vehicle taxes, fuel taxes and road tolls?
 - Do these differences give rise to distortions of competition at present and if so, to what extent?
 - Will such distortions be aggravated after 1992 when the international transport market will be freed from quotas and cabotage services become possible?
 - To what extent can such distortions be eliminated by a process of harmonizing or approximating vehicle and fuel taxes and solving road toll problems?
9. Following this analysis some thought should be given to the effects of the fiscal harmonisation process on the other long-term aims mentioned in para 4 above. It should also be borne in mind that an additional fiscal element which could influence competition is the level of tax on the acquisition of vehicles; differences between Member States here are very wide, ranging from the normal VAT rate in e.g. Luxembourg to tax rates which more than double the untaxed vehicle price in Greece and Denmark.

(1) O.J. No C 36 of 10 February 1984

B. THE CURRENT DIFFERENCES IN TAX AND TOLL RATES

General aspects of transport taxes and tolls

10. Specific transport taxation may be defined as excluding general taxation such as VAT, income taxes etc. Whilst such specific taxation varies between Member States, it usually consists of
- taxes on the ownership or use of vehicles (vehicle taxes)
 - excise duties on motor fuels (fuel taxes)

In considering the problems of infrastructure costs, a third element is included in those Member States where they are levied, i.e.

- road tolls.

A number of minor taxes/charges (registration taxes, parking charges) are excluded for this purpose as they hardly affect the problems under review.

11. Vehicle taxes are levied annually (or for shorter periods) and are linked in one way or another to the characteristics of the vehicle : engine power, net or gross weight, number of axles. In the Community and as a general rule, vehicles are subject to these taxes only in the country of registration. This taxation principle is referred to as one of "nationality".

12. Fuel taxes are not linked directly with vehicle characteristics. However, since the fiscal burden imposed by these taxes depends on fuel consumption, it has some connection with engine power, but is particularly dependent on the use made of the vehicle, i.e. mileage performed and load factor. The revenue accrues to the country in which fuel is purchased and may thus be described as taxation on the "territoriality" principle; the possibility that the fuel concerned may be consumed in a neighbouring country may constitute an offset to pure "territoriality".

13. The main reason for adhering to one of the two above taxation principles (national or territorial) is to avoid double taxation. Indeed, during the 1960es and 1970es many European States concluded bilateral agreements which provided for mutual exemption from paying vehicle taxes in both countries. That trend was interrupted in the 1980es when certain non-Member States started to introduce transit or other taxes linked to vehicle use, tonne-km etc.
14. Road tolls do not have the same fiscal nature as the above two taxes. They give a vehicle the right to use specific infrastructures or travel over a specific motorway stretch. Tolls are usually linked to simplified vehicle characteristics as well as to distance. They are levied on motorways in France, Italy, Spain, Portugal and Greece and on some specific tunnels, bridges or viaducts in these and other countries.
15. It should be noted that by virtue of the 1965 Council Decision referred to in paragraph 3 above, specific transport taxes on commercial transport, such as a tax per tonne/km transported, are no longer permitted in the Community. Such taxes do, however, exist in certain third countries, e.g. Austria, Sweden, Yugoslavia.
16. In view of the emphasis on competitive conditions in this study, data on taxes and tolls are first presented to show how they affect the costs of haulage and thus to compare the competitive position of hauliers from different Member States. To be able to do so, a number of simplifying assumptions have been made and typical transport operations selected, rather than trying to assess a global situation.
17. There are also overall national issues to be tackled which require data on Government revenues from transport and their importance in terms of total Government revenue, on the relationship between road revenue and road expenditure, and on possible imbalances in the use of Member States' infrastructure

by foreign and domestic vehicles. This analysis will be found in Chapter D.

18. Finally it must be strongly emphasized that the data available to the Commission for this report both from current statistical sources and in response to specific requests are distinctly patchy in quality, detail and reliability. Whilst it should be possible to improve quality and obtain more up-to-date figures, this may take considerable time; in this connection it is of interest to know that similar studies are being conducted by ECMT and the Federal Republic of Germany with the help of consultants, and that the French Government has also launched a study covering similar aspects.

Taxes and toll rates

19. Table 1 shows current or recent rates of vehicle tax applying to heavy goods vehicles of 12 tonnes gross vehicle weight or more. To make them comparable as between Member States assumptions have had to be made about vehicle characteristics, e.g. ratio of net to gross weight, number of axles, road trains or articulated combination, etc. The multiplicity of rates and the differences in structure make it necessary to select some representative vehicles.
20. In order to concentrate on vehicles used intensively in long-distance international road transport, we have chosen at the top of the range the 38-tonne combination (road train or articulated), because data are not yet available on the 5-axled "Euro-vehicle" of 40 tonnes GVW, instituted by directive 85/3/EEC (1). A second type used extensively in this sort of transport is the 4 axled 32 tonne combination. Current rates for these vehicles are shown in Table 2, which shows that the ratio between the highest and the lowest tax rate for 38 tonnes is as much as

(1) OJ L2 of 3 January 1985, p. 14.

14:1 (UK : Italy) and for 32 tonnes still 11:1 (again UK : Italy) (1).

21. In noting such differences, it should be borne in mind that the comparison is between full tax rates and does not take any reductions or exemptions into account. For example, in Belgium owners of at least 3 vehicles can obtain tax rebates which bring their effective tax payments to as little as 35% of the full rate, thus bringing their rates near to the lowest figures shown.
22. As regards fuel excise taxes, goods transport by vehicles over 3.5 tonnes gross weight is only concerned with diesel fuel. Nevertheless it has been considered of interest to show taxes on petrol as well, to provide a comparison and in view of the overall aspects of taxing all motor fuels. Table 3 shows the rates for 1980 and 1986, thus illustrating the wide differences in petrol and diesel taxes, both as between Member States and between the two fuels.
23. For example, the ratio between the highest and lowest petrol taxes is less than 3:1 (Italy : Luxembourg), but for diesel fuel it is 4:1 (Ireland : Netherlands or Denmark). As regards the diesel/petrol relationship, the tax rate on diesel is about 85% of the rate on petrol in Germany and the UK, but only 16% in Denmark and around 25% in Italy and the Netherlands (2). The average diesel tax in the Community is about 160 ECU per 1000 litres, whilst petrol tax averages at 305 ECU, almost double.

(1) Vehicle taxes in Spain vary considerably according to locality. The tax rate shown in Tables 1 and 2 is close to the Italian tax, but further study is required of its representative character.

(2) There are some complications in these figures. In Denmark the tax is on energy and may, like VAT but unlike normal excise taxes, be refunded; moreover in the absence of a real diesel fuel tax a "compensatory tax" is levied on the vehicle for as long as it travels in Denmark. In Spain, the intervention of the petroleum monopoly CAMPSA provides tax income to the State roughly equivalent to an excise duty on the motor fuel concerned; this has been included in the table. If excluded, Spain's diesel excise would be the lowest in the Community.

24. Motorway toll rates are shown in Tables 4 - 7 for France, Italy, Greece and Spain for typical motorway stretches and for the class of vehicle with which this report is concerned. On average, for these vehicles they work out at 6.4 ECU per 100 vehicle/km in France, 8.3 ECU per 100 vehicle/km in Italy, and 11.0 ECU per 100 vehicle/km in Spain.
25. In looking at these averages, it is of interest to note that in 1984 rates on the recent, more expensive motorways in France were about twice those on the earlier, cheaper stretches. In Italy this ratio was almost 3:1 and in Spain about 1.7:1. In Greece, rates on the old stretches were quite low, but a direct weight factor for heavy vehicles is apparently being used on a more recent stretch, charging a 38 tonne vehicle about 7 times as much as a 3.5 tonne truck. In Portugal tariffs in 1986 ranged from 4.5 to 9.9 ECU per 100 vehicle/km, with an average of about 7.6 ECU.
26. Finally, it should be noted for the record that whilst there are occasional toll charges in some of the other Member States, they apply mainly to specific tunnels and bridges. For example, in the UK there are toll charges on the Humber Bridge and the Dartford Tunnel, in the Netherlands on some of the Rhine Delta crossings, in Ireland on a Dublin alternative route. They do not apply to a major part of the motorway or equivalent network.

C. DISTORTIONS IN COMPETITIVE CONDITIONS

Taxes and tolls in haulage costs

27. Having shown how taxes and tolls vary in the Member States, an attempt will be made in this section to measure their effect on the conditions of competition, by looking first at their importance of taxes and tolls in haulage costs. As this requires a number of important assumptions to be made, the analysis is provided against the background of some basic data on road and motorway networks in the Member States for 1982. Table 8 makes it clear that the motorway network is sufficiently widespread to provide a realistic assessment of international road movements whilst Table 9 shows the

number and capacity of the goods vehicle fleet, including trailers and semi-trailers.

28. Tables 10 to 12 show the costs of typical long distance haulage operations, broken down into major cost categories. As the figures were originally provided for purposes other than this report, they suffer from certain deficiencies. For example, the costs of NL hauliers using 38 tonne vehicles within Benelux and on journeys to and from France and Italy do not include the payment of tolls; moreover the data exclude VAT and thus VAT on fuel. Data for hauliers from other Member States (e.g. UK) were based on different performance assumptions or estimates : for example mileage varied from 80 000 km to 130 000 km annually, whilst load factors and fuel consumption also differed. Nevertheless the results appear sufficiently similar to indicate the importance of vehicle and fuel taxes and tolls.
29. In general terms fuel and vehicle taxes together account for 4 % to 10 % of international haulage costs, and vehicle taxes alone about 1 % to 5 %. The impact of tolls depends heavily on assumptions about mileage on such toll roads; consequently they may account for as much as 4 % of costs in France for the large vehicles using these roads as much as possible, to to just over 1 % for a Dutch or British haulier doing only 25 % of his annual mileage on toll motorways.
30. Relating such charges to costs is not the only possible yardstick for measuring their impact. Indeed in a competitive situation it would be of interest to consider them in relation to profits. Whilst no estimates of gross profit margins have been provided, one might use nominal rates of 5 % or 10 %; in such cases differences between the highest and lowest fuel plus vehicle taxes shown above would correspond to a substantial proportion of these profits. Differences between high and low vehicle taxes only would have less impact on gross profits, and if the tax rates were compared with a Community average rather than with each other, the impacts would of course be reduced.
31. The above analysis in terms of relative impacts needs to be illustrated by data in monetary terms. Moreover the four countries for which hauliers data are available exclude Italy and France which

it is important to analyse because tax rates are relatively low, but tolls relatively important. Table 13 therefore shows data for 5 countries including France and Italy, for 33 tonne vehicles performing 100,000 km per annum, under the following assumptions :

Scenario

- A : All mileage at home; toll roads not used
- B : " " " ; 50% on toll roads where they exist
- C : " " " ; 100% " " " "

- D : 75% mileage at home; 25% abroad) using toll
- E : 50% " " ; 50% ") roads to the
- F : 25% " " ; 75% ") maximum

- G : 25% " " ; 75% " : not using any toll roads

It will be clear that A to C represent purely domestic traffic, whilst D to G imply growing emphasis on international transport.

- 32. The tables are shown both in ECU and as indices based on NL vehicles = 100, this country being chosen because its burdens are mostly the lowest of the five. It should be added that the others fall between the extremes of the UK at the top of the range with Germany closely following and those at the lower end like the Netherlands, Italy, France (and, for that matter, Luxembourg and Belgium which have not been specifically analysed here).

- 33. The tables allow a comparison to be made of the differences
 - in fuel taxes (levied in accordance with the number of kilometres performed in each country),
 - in vehicle taxes, on the "nationality" principle, and
 - in tolls paid.

Thus depending on the extent of domestic and international mileage, the differences between the highest and lowest charges ranged

- from 1800 ECU to 7300 ECU for fuel taxes, and
- from 1100 ECU to 8300 ECU for tolls.

For vehicle taxes, the difference between highest and lowest was 4600 ECU for all cases.

When taxes and tolls are combined the differences between high and low burdens are as follows :

- from 5300 ECU to 10 800 ECU for all taxes and tolls and
- from 3500 ECU to 7200 ECU for vehicle taxes and tolls.

34. These results show that :

- a) differentials between total tax/toll burdens are reduced as vehicles travel more outside their own country;
- b) assumptions on mileage travelled and on the use of toll roads strongly influence results;
- c) inequalities between hauliers are greater for vehicle taxes than for fuel taxes, both relatively and in monetary terms;
- d) adding tolls to both these taxes tends to lessen the differentials both relatively and in ECU;
- e) of the countries analysed, NL vehicles appear to have the lowest tax/toll burden under most assumptions, with I and F also near the lower end of the scale. Clearly UK vehicles are at the top end of the range, with D in second place.

35. It is worth recalling that the above analysis has not made allowances for two aspects :

- the effects of rebates on vehicle taxes built into some of the systems;
- the effects of duty free fuel in vehicle tanks, i.e. fuel admitted without further payment of duty.

As a striking example of the first kind, the Belgian system allows very substantial vehicle tax rebates provided the owner has at least 3 vehicles. Thus the tax on a 38 tonne vehicle could be as low as 350 ECU, instead of the full 1000 ECU shown in the table. Table 14 provides some details.

36. Duty free fuel only plays a role as long as diesel fuel prices (and taxes) differ significantly in the Member States. The effect of a 200 or 600 liter franchise is analysed in Table 15, which shows how far a 38 tonne vehicle can travel in one direction on fuel bought close to the frontier, assuming

consumption is 40 litres/ 100 km. It should be remembered that hauliers with medium or large vehicle fleets often enjoy rebates on the official pump prices and may therefore not necessarily be better off buying diesel fuel across the border where it is cheaper. Also, large volumes of fuel add weight to the vehicle which in turn increases consumption slightly.

Present Distortions

37. The question that needs now to be answered is the extent to which the above inequalities amount to distortions of competition, in terms of economics or of transport policy or both. Economically, the differences found for fuel taxes, vehicle taxes and tolls - and the combination of these elements - do not appear significant in terms of transport costs, but they may influence the profit (or loss) situation of hauliers considerably. The extent to which such inequalities have contributed to the present situation in the international road transport market cannot be deduced from the above analysis. For international haulage within the Community, their effect will have been mitigated by the existing quantitative restrictions on transport services, as well as by certain tariff/rate regulations. For domestic traffic, the prohibition on cabotage operations makes them ineffective. (1)
38. As regards transport policy, the Treaty clearly aims to eliminate those inequalities which result from Government intervention in the economy and which affect trade between the Member States. Taxes of the kind analysed here are clearly a prime example of Government intervention of this nature. It is not an objective of the Treaty (and therefore the Common Transport Policy) to eliminate "natural" inequalities. Insofar as the latter cause differences in market share they are not regarded as "distortions".

(1) From an economic viewpoint, an exhaustive study would be required to try to isolate the effect of changes in the tax/toll position from other economic changes in the transport sector occurring over the same period; distortions cannot be measured in an existing (static) situation, but only when changes occur.

39. The conclusion must therefore be that there are at present distortions in competitive conditions due to the differences in transport taxes and tolls which should be eliminated in principle, failing proof that the effect is insignificant.

Potential distortions after 1992

40. If distortions exist presently, will they be aggravated after 1992 by the creation of a free market in transport services without quantitative restrictions? The answer is clearly positive unless measures are taken in the meantime. Indeed effects will be felt in competition both in international and in national road haulage. For the former, the free market will mean the removal of current quantitative controls on competition; for the latter the ability to carry out cabotage services.

41. It is clear that if existing tax/toll differentials between hauliers of different Member States, which provide cost advantages to some of them, were to continue they would affect the full range of international transport services. So far the application of bilateral quotas has served to limit these advantages to part of the market, though it should be clearly stated that other cost elements, and criteria such as reliability, punctuality and the type of service given play an important role in the choice of haulier.

42. As far as cabotage is concerned, the incidence of vehicle tax differences is of importance; if the present principle of "nationality" is maintained, a foreign haulier paying low vehicle taxes in his country would clearly be at an advantage over the domestic haulier. This suggests that either the tax rates should be harmonised or approximated, or that a "territorial" method should be found to ensure that competition takes place on more equal terms. This point will be dealt with in more detail in paragraph 59-63 below.

D. THE ELIMINATION OF DISTORTIONS

43. Before reviewing the actions already planned and other possibilities for eliminating the distortions in competition revealed by this report, it is important to remember that this is only one of the aims of the Common Transport Policy in the general field of infrastructure charging. Indeed we have so far looked only at the micro-economic elements of competition between hauliers from different Member States, without analysing macro-economic effects on governments and national economies.
44. As stated at the outset, there are five major Common Transport Policy aims in the area :
- a) the harmonisation of competitive conditions both within and between modes of transport;
 - b) the allocation of economic and social infrastructure costs to users;
 - c) sufficient tax revenue for Member States; and
 - d) the free flow of goods and persons within the Community; and
 - e) making reasonable transit arrangements with non-Member States.

Such wide ranging ambitions cannot unfortunately always be reconciled. For example if harmonisation of tax rates were to lead to a reduction of these taxes in some Member States, the objectives of infrastructure cost coverage and sufficient government revenue might be endangered. There could be a different conflict between the free flow of transport which calls for the continued application of the "nationality" tax principle and improvements in infrastructure cost allocation to users which would favour taxation on a "territoriality" basis.

45. To enable Member States to assess policy options, the following paragraphs will provide data on global infrastructure costs and overall transport tax and toll revenues, and on their relative national importance.

The Importance of Transport Tax Revenue for Member States

46. Annual revenue in Member States from fuel taxes, vehicle taxes and tolls is shown for 1980 in Table 16. The figures are for transport as a whole, including private cars and show that
- fuel taxes made up 75% of transport tax revenue in the Community as a whole, vehicle taxes about 20% and tolls about 5%;
 - there were substantial variations in those percentages in Member States, with fuel taxes ranging from 60% to over 90% and vehicle taxes from 7% to 40%. Tolls in Italy made up 11% of revenue and in France 14%.
47. Table 17 shows these revenues, amounting to over 40 milliard ECU in 1980 for the 12, contributed a significant element in overall Government revenue of about 5%, ranging from 3% in the Netherlands to 6% or more in Ireland, the UK and Greece. In terms of Gross Domestic Product, transport tax revenues made up about 2% with a range of 1.6 to 2.4%. These figures exclude VAT.
48. Further analysis for fuel taxes only, provided in Table 18, shows that their relative significance has increased somewhat in recent years. As they are by far the largest element in transport revenues for Governments, the importance of the latter is likely to be higher now than at the beginning of the 1980es.
49. It is also of interest to ascertain whether such revenues cover expenditure on roads. Table 19 shows that in 1980, when road expenses were relatively high, expenditure apparently exceeded income in 5 Member States by 2% to 35%, whilst in the other 5 Member States, income was 25% to 80% higher than expenses; on balance revenue in the Community was about one quarter higher than income. A more recent OECD analysis of some Member States suggests that the trend towards obtaining more revenue and spending less on roads continued in the 1980es.

50. Whilst the above data are relevant for transport as a whole, most of the income is obtained from the private motorists. An attempt has been made in Table 20 to show the position for commercial transport only. Data are less reliable and in the absence of detailed breakdowns it has to be assumed that all diesel taxes should be credited to commercial transport, although diesel cars contribute a significant part of the market in some Member States. Bearing such reservations in mind, it looks as if commercial transport contributed about 20% of total transport tax/toll revenues in 1980, varying from 10% in Italy to 27% in the UK. Of this revenue, diesel fuel tax still contributed the largest share, but vehicle tax played a more important role, nearer 30% for commercial vehicles compared with less than 20% for cars.

51. It would be useful to compare these tax revenues from commercial transport with road expenses or costs attributable to that transport. Within the Community, such calculations have been made in the UK and Germany (1). They show that in the UK, heavy goods vehicles at present rates of tax fully cover the road costs attributable to them and indeed make some contribution to environmental costs. For Germany, 1981 data suggest that cost coverage for goods vehicles was about 45 %, ranging from 30 % - 60 % depending on the category, whilst foreign goods vehicles contributed about 20 %. At lower rates of return on capital, coverage was estimated at over 60 %.

It is clearly significant that in these two countries charging high vehicle taxes, commercial transport is considered to be paying its share or a substantial part of its share of infrastructure costs, so that reducing taxes to a European average would worsen cost coverage.

On the other hand commercial transport tax/toll revenues make up only 0.6% to 1.2% of total Government revenue, so that changes in taxation resulting from Community fiscal approximation would have quite small effects on overall Government finances.

(1) Detailed calculations exist in Switzerland, but are somewhat controversial as they show considerable differences in cost coverage depending on different assumptions made.

52. In the context of this macro-economic analysis, a further element of interest is the relative use of infrastructure by "foreign" vehicles and the resulting imbalances in terms of traffic performance. Table 21, based on work done in ECMT, shows that for some countries tonne-kms performed by its vehicles abroad exceed those performed by foreign vehicles on its territory - and vice versa. For example NL vehicles carry out some 12.0 milliard t/km abroad, as against 2.1 milliard t/km by foreign vehicles in the Netherlands; for Germany and France the imbalances are the reverse, resulting in a net "foreign" use of their roads of 8.4 and 9.7 mrd t/km respectively. The need here is to ascertain the extent to which other Member States' vehicles pay (or fail to pay) for their use of infrastructure as a result of the prevailing fuel tax/toll systems. Whilst this was done in Germany (see para 51 above) an overall analysis of this nature, especially in monetary terms, would require much further work, along the lines of the Austrian transit study carried out in 1984 by the Commission with the help of a consultant.

53. The above analysis in micro- and macro-economic terms has shown that the objective of eliminating distortions in competitive conditions between hauliers from different Member States must take into account the effect of remedies on the varying national and overall aims in infrastructure charging stated in paragraph 4. Indeed the analysis makes it clear that such aims may be difficult to reconcile. Before examining the options for and the effects of alternative remedies, the next section looks at the action already planned for fuel taxes.

Planned action for Fuel Tax

54. Approximation of fuel taxes is an integral part of the Community policy for completing the internal market and the target date for this process is also 1992. However, the Council has so far failed to adopt the Commission's 1973 proposal on the structure of mineral oil taxes (1) and indeed has not discussed it since 1978. The Commission believes this proposal can and should be adopted in the near future, say by mid-1987, which would leave the way clear for proposals to be made on the approximation of tax rates.

(1) O.J. C 92 of 31 October 1973 p. 36

55. A major problem in this area are the widely divergent rates for diesel motor fuel taxes, both as compared with petrol taxes and between Member States, as shown in Table 3. The preferred way would be to establish the tax structure first, so as to provide a common basis for the two main motor fuels. Here the main problem appears to be one of tax revenue to be obtained from motorists as final consumers, with petrol tax a relatively easy tax to impose and collect, without direct effects on industry and services.
56. Another aspect is the Commission's proposal - as part of the policy of abolishing unnecessary frontier controls - to raise the "duty-free" allowance for fuel in goods vehicles tanks from 200 to 600 litres. This has the unanimous support of the European Parliament and is opposed firmly by only one Member State, with some hesitations being expressed by a second Member State. It would clearly be desirable to avoid any distortions resulting from goods vehicles, travelling on cheaper home diesel fuel on and across the territory of other Member States without refuelling there. Table 15 shows the effect of the 200 and 600 litre franchise on hauliers and this clearly suggests that diesel fuel taxes should not diverge as at present.
57. In this light it may be necessary and indeed more realistic to try to "approximate" existing diesel tax rates to a relatively narrow band. Such proposals form part of the Internal Market White Paper and from the transport point of view it must be assumed that this "approximation" (substantial harmonisation) will have taken effect by 1992. In that connection a diesel tax band near the top of the range would provide better coverage of infrastructure costs, but would call for more drastic changes in Member States with low tax rates, than if the band were around the EEC average.

Possibilities for action on vehicle taxes and tolls

Vehicle taxes

58. Differences between Member States in taxes on heavy goods vehicles are substantial. One way of reducing them - and therefore eliminating competitive distortions between hauliers - would still be to adopt the Commission's proposed directive referred to in para 5, perhaps in a simplified form. This would have the advantage of also allowing for changes in diesel taxes referred in the preceding paragraphs.
59. An approach on the lines of an approximation of rates is an obvious alternative, in which the nationality principle would be maintained to avoid double taxation. Table 22 shows one or two possible methods for calculating a Community average or band, and the differences between this and current rates. As mentioned earlier, aligning vehicle tax rates on the average needs to be considered carefully from the infrastructure cost viewpoint. As long as fiscal revenues and infrastructure budgets are handled on national lines by Member States, infrastructure costs and their coverage by users will differ according to the country concerned. An increase in low rates of vehicle tax will help to cover a larger proportion of costs, but the converse is also true for countries with higher vehicle taxes. It may be, therefore, that "approximation" should concentrate on raising low vehicle taxes, whilst leaving higher rates unchanged, perhaps subject to a standstill arrangement.
60. In considering such action, which would no doubt take time to implement, regard should also be paid to the planned approximation of fuel taxes. Raising or lowering these will increase or decrease the extent of infrastructure cost coverage.
61. A third possibility is to consider the problem from the "territorial" point of view. As already noted, vehicle taxes are now levied on a "nationality" basis, only in the country where the vehicle is registered. To avoid the inequalities and distortions in competition between hauliers already discussed, they might be levied on a "territorial" basis. Early efforts in

the 1960es to institute an infrastructure charge on this basis to replace vehicle taxes failed for a number of reasons, including excessive administrative complexity and the need for extra frontier controls. Indeed, the draft tax directive agreed in principle in 1978 makes a specific point of leaving vehicle tax systems in the Member States intact.

62. A tacit underlying assumption for "nationality" taxation at that time was that there would be no substantial imbalances in the use of infrastructure by vehicles from different Member Countries. Alternatively, if such imbalances did occur, the advantages of avoiding frontier controls within the Community would be greater than the effects created by these imbalances. Para 52 has shown that this is no longer a tenable assumption. A solution to this problem might be found if by the use of informatics and devices like smart cards, automatic impulses etc. new and relatively cheap ways could be devised for ascertaining vehicle mileage in different Member States. In that case calculating a vehicle tax on the lines of the Scandinavian km/tax might become feasible. Whilst the home country would no doubt continue to collect the revenue from the tax, a compensation or equalisation accounting system between the Countries concerned could arrange for any necessary transfers. Problems of frontier controls would be minimised by computer techniques. Consequently whilst the introduction of such new systems might create administrative difficulties at first, the rapid pace of informatics developments suggests that they merit serious consideration for the longer term.

63. Finally pending the introduction of such a more "territorial" tax approach, further development could be envisaged for vehicle taxes. This might take the shape of looking at the Community's road infrastructure overall and trying to approximate vehicle taxes to meet "average" EEC road costs, giving credit for fuel taxes already paid on a harmonised basis.

Tolls

64. The question of motorway tolls was first raised in connection with private cars and its economic and political importance seems greater in this field than for commercial vehicles. Undoubtedly hauliers in high tax/no toll countries like Germany and the UK

may feel they should not pay further charges in, say France, Italy or Spain. On the other hand the figures presented earlier have shown that, if anything, the need for domestic traffic in the toll road countries to use motorways and thus pay tolls tends to reduce, rather than increase, competitive inequalities.

65. Toll roads were built mainly because the investment funds/loans had to be repaid and it was thought best to do so specifically. In these circumstances, the relatively small share of commercial traffic is not the determining factor in the question of whether tolls should be abolished (or not) when motorway concessions expire. Nevertheless it may well be that in countries where tolls are levied, vehicle taxes are low because adding these taxes to tolls will ensure that domestic hauliers cover the infrastructure costs attributable to them to a reasonable degree. In other words in setting vehicle tax rates, the authorities could take into account only the costs of the non-toll road network or, if they use total network costs, they could make a reduction for tolls paid. Information at the Commission's disposal is insufficient to confirm or invalidate this reasoning, but if it is correct, foreign hauliers may claim that they are being charged twice - once at home by vehicle taxes levied according to the "nationality" principle and covering the whole national network and again, on a "territorial" basis, when they pay tolls. The argument on the other side is that

- a) foreign hauliers are not compelled to use toll motorways, and
- b) all users are paying the same rates.

66. As a first step towards finding solutions in this area, it is important to eliminate any obvious existing forms of discrimination. For example, in France hauliers obtain a rebate of their vehicle tax (axle tax) if they use motorways, which amounts to complete exemption at 100,000 km per annum. This practice should either be abolished or made available to other Community vehicles in a concrete manner, bearing in mind that because of the "nationality" principle they do not pay the French axle tax.

67. The solution of the problem of motorway tolls would appear to be linked to the solution chosen for eliminating rate differences in vehicle tax. If the vehicle taxes continue to be levied on the nationality principle, whilst their rates are approximated, any motorway tolls could be charged independently, on the basis of the territoriality principle, for national and foreign goods vehicles alike without causing any distortion.

If, on the other hand, vehicle taxes for lorries were transformed into a new system based on the territoriality principle, motorway tolls should either be calculated as part of this new tax, (and the corresponding revenue transferred to the concession holder) or they might be levied as a supplement to the vehicle tax for any national or foreign lorry using the motorway. In the latter case the new informatics devices described in § 62 should be designed in such a way that they could also be used on toll roads.

Options in the light of policy objectives

68. The foregoing analysis has indicated the planned fuel tax approximation and several alternatives for vehicle tax harmonisation; it has also discussed the impact of tolls. These possibilities need to be examined in more depth in their various combinations, as regards their effects both on competition between hauliers and on the other long term aims in infrastructure charging, in order to enable the Commission to present appropriate legislative proposals.

69. The potential conflict between the needs of equal competition between road hauliers and an adequate coverage of infrastructure costs has been discussed, as have the respective merits of "nationality" and "territoriality" taxation, and their role in a wider system including transit countries. Another aspect is competition between modes, especially between road and rail. The Commission's answer here lies in its long standing proposal - recently updated (1) - that railways should receive infrastructure support to the extent that puts their contribution to infrastructure costs on the same footing as that of the other modes. The objective of sufficient revenue is also important, especially for Ministers of Finance. It should be quite possible, however, to safeguard total revenue from transport, whilst effecting internal reallocation in line with transport policy aims.

E. FURTHER PROCEDURE

70. This report has concentrated on the situation in transport taxes and tolls and their interrelationship, both in the present situation and potential developments up to and after 1992. It has indicated some possible lines of action to eliminate distortions in competition.

71. To carry this process forward, with a view to making specific proposals, the Commission intends to consult a group of Member States' experts. This work concerns Transport and Finance Ministries, and to maintain progress on both fronts, experts from both areas should take part. It may be necessary to proceed by stages, e.g. separately for the interim period until 1992 and for the transport market in its post-1992 form. In any case the target is for proposals to be submitted in 1987.

(1) O.J. No. C 36 of 10 February 1984

1

Study of Vehicle Taxes, Fuel Taxes and TollsList of Tables and Graphs

Table

No

1. Vehicle taxes for 12 tonne GVW vehicles and upwards
2. Vehicle taxes for 32 and 38 tonne vehicles
3. Fuel excise taxes 1980 and 1986
4. Motorway tolls : France 1984
5. Motorway tolls : Italy 1984
6. Motorway tolls : Greece
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8. Road and motorway networks in Member States
9. Goods vehicle fleet : Numbers and Capacity
10. Taxes as haulage cost elements : B, D, F, NL
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14. Tax rebates
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17. Relative importance of transport tax/toll revenues : All transport
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19. Transport revenues and road expenses
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23. Motor fuel consumption 1980 and 1984
24. ECU conversion values

- Graphs :
1. Tax incidence in diesel price
 2. Share of diesel in total motor fuel consumption
 3. Vehicle taxes : 38 tonne GVW

Table 1

ANNUAL VEHICLE TAXES FOR HEAVY GOODS VEHICLES OF 12 t GVW AND OVER

		1984											in LCU	
GVW a) Tonnes	Net Weight b) Tonnes	B	DK	D	GR	E	F	IRL	I	L	NL	P c)	GB	
12	5	380	381	801	237		350	229	130	198	697	154	485	
13	5.5	425	461	909	254		350	271	130	225	761	167	686	
14	6	456	548	1027	271		350	312	146	242	804	180	886	
15	6.5	501	642	1222	288		<u>350</u>	368	167	269	873	193	1070	
16	6.5	501	743	<u>1494</u>	322		52	368	167	269	873	205	<u>1422</u>	
17	7	531	852	1494	339		204	424	214	286	920	218	568	
18	7.5	533	<u>968</u>	1700	355		438	479	214	312	991	231	769	
19	8	607	639	1915	372		<u>730</u>	535	214	<u>330</u>	1037	244	769	
20	8.5	638	709	2139	389		350	590	214	348	<u>1108</u>	257	1037	
21	8.5	638	795	2371	423		350	<u>646</u>	214	348	1108	269	1037	
22	9	683	889	2613	440		350	401	214	374	1155	382	<u>1305</u>	
23	9	683	984	2364	474		350	412	214	374	1155	295	819	
24	9.3	699	<u>1086</u>	3113	488		<u>350</u>	412	214	389	1202	308	1154	
25	9.4	699	785	3363	533		146	412	<u>214</u>	389	1202	321	1154	
26	9.5	<u>714</u>	801	<u>3629</u>	559		146	426	285	<u>400</u>	1225	334	1556	
27	9.5	750	820	2874	592		394	426	307	423	1225	346	1556	
28	9.7	768	841	2935	609		642	426	330	429	1248	359	2007	
29	9.8	780	869	3000	651		1314	443	344	435	1248	372	2007	
30	9.9	814	898	3070	688		1401	443	356	448	<u>1248</u>	385	<u>3513</u>	
31	10	853	931	3146	710		<u>2102</u>	<u>443</u>	356	463	1360	398	2611	
32	10.8	874	937	3228	722		146	491	375	470	1379	411	4099	
33	11	896	1019	3117	738		321	508	396	478	1397	423	4099	
34	11.7	920	1073	3414	757		555	540	417	486	1416	436	4099	
35	12	945	1131	3522	776		<u>817</u>	589	446	494	1434	449	4601	
36	12.6	972	1197	3640	794		234	605	446	501	1455	462	4601	
37	13	987	1270	3835	813		496	638	446	509	1475	475	5187	
38	13.5	1001	<u>1369</u>	<u>4107</u>	829	365 ^{d)}	<u>759</u>	670	446	517	1496	488	<u>5187</u>	
39	13.9	1017	1150						446	525	1536			
40	14.3	1032	1197						446	<u>532</u>	1601			
41	14.6		1268						446		1668			
42	14.9		1328						446		1692			
43	15.3		1398						446		1738			
44	15.7		1471						446		1752			

a) Gross Vehicle Weight in tonnes

b) Unladen vehicle weight in tonnes

c) 1985

d) Approx. estimate 1986

N.B. The horizontal lines indicate changes in vehicle category, usually by the number of axles.

Source : National data

Annual Vehicle Tax for Heavy Goods Vehicle Combinations ^{a)}

- 1986 -

In ECU and indices

Member State	32 t Vehicle		38 t Vehicle	
	ECU	Index	ECU	Index
B	906 *	260	980 *	284
DK	3 220	933	3 406	987
D	3 169	919	4 335	1 257
GR	653	189	726	210
E	n.a.	n.a.	365 ^{d)}	106
F	433 ^{b)}	126	433 ^{b)}	126
IRL	525 *	152	540 *	157
I	345 *	100	345 *	100
L	542 *	157	589 *	171
NL	1 410 *	409	1 514 *	439
P	411 ^{c)}	119	488 ^{c)}	141
UK	3 850	1 116	4 870	1 412

a) Articulated 4 axled for 32 t GVW and 5 axled for 38 t GVW ;

b) 1985 data

c) type of combination unknown

d) Estimated national average

* Indicates road train

Source : Various, mainly Federal German Min. of Transport and hauliers associations ; some national contributions

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Excise duties on motor fuels
and Rate of VAT

1980 and 1986

in ECU per 1000 litres

Country	Petrol			Diesel			VAT rate in %
	1980	1986	Increase % 1986/ 1980	1980	1986	Increase % 1986 1980	1986
B	208	248	19	69	116	68	25
DK	232	462	99	38a)	76a)	100	22
D	174	244	40	165	203	23	14
GR	n.a.	418		n.a.	120		-c)
E	n.a.	202		n.a.	87d)		12
F	248	393	58	130	193	48	19
IRL	207	382	85	123	294	139	25
I	292	533	83	21	120	114	18
L	171	198	16	49	95	94	12
NL	190	288	52	67	75	12	19
P	n.a.	408	-	n.a.	184		8
UK	136	305	224	155	258	66	15
EEC average b)		315			160		

a) Excluding Compensatory Tax

b) Weighted average based on fuel consumption

c) VAT yet introduced

d) Direct tax of 32 ECU plus monopoly revenue from CAMPSA

n.a. = not available

Source : Commission Excise duty tables (Doc XXI/797/86)

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Motorway Toll RatesFrance, 1984

(per 100 vehicle/km)

Network	Basic average tariff		Tariff for heavy vehicles	
	FF	ECU	FF	ECU
Paris-Normandy	22	3,2	44	6,4
Paris-Rhine-Rhône	24	3,5	48	7,0
North-East	24	3,5	48	7,0
South	28	4,1	56	8,2
Paris-East-Lorraine	30	4,4	60	8,7
Esterel-Côted'Azur	35	5,2	70	10,2
Mont-Blanc	38	5,5	76	11,1
Rhône-Alpes	40	5,8	80	11,6
Basque Coast	43	6,3	86	12,5

Source : OECD/Road Research

National Contribution France (February/March 1985)

Motorway Toll RatesItaly 1984.

(per 100 vehicle/km)

Company	Tariff for Medium Passenger Car		Tariff for 38 tonne Vehicle	
	Lire	ECU	Lire	ECU
Brescia-Padua	2 226	1.6	2 725	2.0
Venice-Padua	2 643	1.9	3 348	2.4
Autorie-Venete	2 585	1.9	3 716	2.7
Messina-Catania	2 797	2.0	3 816	2.8
Meridionale	2 364	1.7	3 856	2.8
Turin-Milan	2 415	1.7	4 319	3.1
Messina-Palermo	3 535	2.6	4 510	3.3
Central Po Valley	3 179	2.3	4 632	3.4
AUTOSTRADE	3 524	2.6	4 715	3.4
Valdestico	3 524	2.6	4 715	3.4
S.A.T.A.P.	3 712	2.7	4 968	3.6
Brenner	3 736	2.7	5 001	3.6
Turin-Savona	3 299	2.4	6 872	5.0

Note : 1. The above are "closed" systems with several access/exit points. Rates are arranged in ascending order for heavy vehicles ; car rates do not vary in the same way .

2. Between 1980 and 1983 average motorway tariffs in Italy rose from 2.0 Ecu to 2.9 ECU per 100 km.

Source : OECD/Road Research - National Contribution, Italy (Feb/March 1985)

Motorway Toll RatesGreece 1984

Motorway	Private passenger cars		Trucks over 15 tonnes Gross weight	
	Drachmas	ECU	Drachmas	ECU
Athens-Korinth	30	0.3	50	0.6
Korinth-Patras	35	0.4	80	0.9
Athens-Lamia	40	0.5	80	0.9
Lamia-Larissa	30	0.3	60	0.7
Larissa-Katerini	40	0.5	790 ^{a)}	8.9 ^{a)}

a) Calculated for a 38 tonne vehicle

Note : The above toll rates are total tariffs ; rates per 100 vehicle/km
are not available

Source : OECD - Road Research - National Contribution.

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Motorway Toll RatesSpain 1985

(Tariffs per 100 vehicle/km)

<u>Motorway</u>	<u>Commercial vehicles</u> (4 axles or more)	
	<u>Pesetas</u>	<u>ECU</u>
Barcelona-La Junquera	1 126	8.7
Valencia-Alicante	1 192	9.2
Zaragoza-Vendrell	1 200	9.3
Bilbao-Behoria	1 883	14.6
Bilbao-Zaragoza	1 696	13.1

Source : Contribution nationale, Oct. 1986

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ROAD NETWORK and BASIC DATA 1982

Member State	Surface in 1000 km ²	Population in mio	Motorways			Other roads (1000 km)
			length in km	per 1000 km ²	per 1000 inhabit.	
	(1)	(2)	(3)	(4)=3:1	(5)=3:2	(6)
B	30.5	9.9	1 388	45.5	0.14	123
DK	43.0	5.1	516	12.0	0.10	69
D	249.0	61.6	7 919	31.8	0.13	482
E	504.8	37.9	2 072	4.1	0.05	
GR	132.0	9.8	91	0.7	0.01	37
F	547.0	54.2	5 290	9.7	0.10	796
IRL	70.3	3.5	-	-	-	92
I	301.3	56.6	5 901	19.6	0.10	291
L	2.6	0.4	44	16.9	0.12	5
NL	41.2	14.3	1 841	44.7	0.13	94
P	92.1	10.0	132	1.4	0.01	
UK	244.0	56.3	2 765	11.3	0.05	364
EEC (12)	2 257.7	319.7	22 755	11.4	0.08	2 353 ^{a)}

Source: Statistical Yearbook Transport, Communications, Tourism (1970-1983)

a) Excl. Spain and Portugal

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Stocks of goods vehicles in Member States 1982

(In 000's)

Member State	No of Vehicles (000)				Load Capacity (000 tonnes)			
	Motor Vehicles	Trailers	Semi trailers	Road Tractors	Motor Vehicles	Trailers	Semi trailers	Total
B	227	27	31	18	702	108	71	1 521
DK	231	147	10	11	426	146	205	778
D	1 291	256	69	243	3 817	1 820	1 457	7 091
GR	500	3	3	0.4	974	67	60	1 100
E	1 462	n.a.	n.a.	n.a.				
F	2 739	23	123	132	4 018	248	2 619	6 886
IRL	68	n.a.	n.a.	1				
I	1 809	293	36	37				
L	9	n.a.	n.a.	1				
NL	319	45	32	24	814	305	751	1 870
P	79 ^{a)}	n.a.	n.a.	n.a.				
UK	1 610	n.a.	203	92	3 302	n.a.	n.a.	n.a.
EEC(12)	10 344							
EEC(b)	8 726	794	507	557				

a) 1981 n.a. not available

b) Excluding Spain, Ireland, Luxembourg, Portugal.

Source : Eurostat Transport 1970-83

Fuel and vehicle taxes
as haulage cost elements in international journeys

1986 in %

Destination	Germany		Netherlands		Belgium/Luxemburg	
	NL	B	B	D	D	NL
Haulier						
Vehicle tax	1.5	1.0	1.2	3.8	3.8	1.7
Fuel excise tax ^{a)}	4.8					2.6
Fuel, other ^{a)}	<u>12.1</u>					<u>10.9</u>
Fuel, total	16.9	19.3	15.3	14.0	14.9	13.5
Maint./Deprec.	23.4	23.9	24.7	22.8	22.5	23.5
Driver	32.6	29.1	33.9	32.8	32.5	37.9
Interest, Insur.	9.7	8.8	9.4	10.1	10.0	10.1
Overheads	15.8	17.9	15.5	16.3	16.3	13.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Destination	France			Italy		
	NL	B	D	NL	B	D
Vehicle tax	1.6	1.0	4.0	1.5	1.0	3.7
Fuel excise tax	4.3			4.7		
Fuel, other	<u>10.3</u>			<u>13.6</u>		
Fuel total	14.6	19.3	14.1	18.3	19.4	14.3
Maint./Deprec.	23.0	23.3	22.5	23.5	22.4	22.4
Driver	35.3	29.8	32.8	32.8	30.4	33.3
Interest, Insur.	10.0	9.0	10.3	9.5	9.3	9.8
Overheads	15.5	12.6	16.3	15.5	17.4	16.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Market Observation System

a) Estimated breakdown not available for Belgian and German hauliers.

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Fuel and Vehicle taxes
as haulage cost elements

1986 - U.K. Heavy goods vehicles in domestic traffic

Vehicle - GVW	32.5 t	38 t	40 t
- Type	4 axle artic.	5 axle artic.	5 axle artic.
Annual mileage (km)	70 400	91 500	95 000
Fuel consumption l/100km	35.7	39.2	40.3
<u>Cost elements in %</u>			
Vehicle tax	5.3	5.5	5.7
Fuel excise tax	9.0	10.5	10.4
Fuel other	<u>10.8</u>	<u>12.6</u>	<u>12.5</u>
Fuel total	19.8	23.1	22.9
Maint./Deprec.	24.4	26.4	26.6
Driver	26.2	22.3	22.3
Interest, Insur.	10.7	10.2	10.3
Overheads	13.5	12.5	12.2
TOTAL	100.0	100.0	100.0

Vehicle + fuel taxes (%)

14.3

16.0

16.1

Source: Hauliers Association

Variations in Road Haulage Cost Elements 1982-1986Basis 1982 = 100

Member State	Cost Element	1982	1983	1984	1985	1986
Belgium	Fuel	100	104.6	101.2	105.5	102.1
	Vehicle Tax	100	92.4	89.2	93.2	93.9
	Wages	100	99.7	100.3	111.7	114.9
	Total Costs	100	101.8	101.8	110.1	112.8
Germany	Fuel	100	105.5	102.5	109.7	105.2
	Vehicle Tax	100	106.7	108.6	109.8	112.6
	Wages	100	111.0	116.5	121.0	127.4
	Total Costs	100	109.0	112.2	115.5	119.0
France	Fuel	100	111.8	106.6	118.7	114.0
	Vehicle Tax	100	98.9	101.0	102.7	106.7
	Wages	100	110.0	116.8	124.3	136.5
	Total Costs	100	108.5	111.3	120.1	124.2
Netherlands	Fuel	100	105.3	103.3	99.5	98.2
	Vehicle Tax	100	105.9	106.5	107.4	110.4
	Wages	100	111.8	112.0	115.3	125.8
	Total Costs	100	108.6	108.8	111.0	117.7
UK	Fuel	100	103.3	109.3	114.8	121.7
	Vehicle Tax	100	112.8	147.6	150.9	156.3
	Wages	100	98.7	109.9	109.2	111.7
	Total Costs	100	100.4	111.7	111.9	114.1

Note : Indices are based on ECU figures.

Source : Market Observation System.

14

Annual Vehicle and Fuel Taxes and Toll Charges
on 38 tonne vehicles registered in different Member States

Basic data and assumptions

1. Member States : D, F, I, NL, UK
2. Vehicle : 38 Tonne GVW Combination
3. Mileage : 100 000 km/year
4. Fuel consumption : 40 l/100 km
5. Road tolls : France 6.4 Ecu/100 veh /km
 Italy 8.3 Ecu/100 veh /km
6. Location and type of roads used : Seven scenarios A-G

Mileage (km)	A	B	C	D	E	F	G
a) At home	100 000	100.000	100 000	75 000	50 000	25 000	25 000
- of which toll roads if they exist	-	50 000	100 000	75 000	50 000	25 000	-
b) Abroad *	-	-	-	25 000	50 000	75 000	75 000
- of which toll roads in F	-	-	-	12 500	25 000	37 500	-
- of which toll roads in I	-	-	-	12 500	25 000	37 500	-

* French vehicles are assumed to travel 50% of mileage abroad on Italian toll roads, the rest on non-toll roads; Italian vehicles 50% mileage abroad on French toll roads.

7. Fuel Tax : Calculated pro-rata to mileage travelled in each country.

Annual Taxes and Tolls

Scenario A

Vehicles registered in	UK	D	F	I	NL
<u>in ECU</u>					
1. Vehicle tax	5 030	4 288	433	446	1 496
2. Tolls	-	-	-	-	-
3. Fuel taxes	10 320	8 120	7 720	4 800	3 000
4. Total (1+2+3)	15 350	12 408	8 153	5 246	4 496
5. Veh.tax+tolls (1+2)	See line 1				
<u>Indices (NL = 100)</u>					
1. Vehicle tax	336	287	29	30	100
2. Tolls	-	-	-	-	-
3. Fuel Taxes	344	271	257	160	100
4. Total (1+2+3)	341	276	181	117	100
5. Veh.tax+tolls (1+2)	See line 1				

Note : Mileage 100 000 km at home ; none on toll roads.

Annual taxes and tollsScenario B

Vehicles registered in in ECU	UK	D	F	I	NL
1. Vehicle tax	5 030	4 288	433 ^{b)}	446	1 496
2. Tolls	-	-	3 200	4 150	-
3. Fuel taxes	10 320	8 120	7 720	4 800	3 000
4. Total (1+2+3)	15 350	12 408	11 353	9 396	4 496
5. Vehic. tax+tolls (1+2)	5 030	4 288	3 633	4 596	1 496
<u>Indices</u> (NL = 100)					
1. Vehicle tax	336	287	29	30	100
2. Tolls ^{a)}	-	-	-	-	-
3. Fuel taxes	344	271	252	160	100
4. Total (1+2+3)	341	276	253	209	
5. Vehic. tax+tolls (1+2)	336	287	243	307	100

Note : Mileage 100,000 km at home, of which 50% on toll roads for F and I.

a) Not applicable

b) No allowance made for rebate based on toll road usage

Annual taxes and tollsScenario C

Vehicles registered in	UK	D	F	I	NL
<u>in ECU</u>					
1. Vehicle tax	5 030	4 288	433 ^{b)}	446	1 496
2. Tolls	-	-	6 400	8 300	-
3. Fuel taxes	10 320	8 120	7 720	4 800	3 000
4. Total (1+2+3)	15 350	12 408	14 553	13 546	4 496
5. Vehic. tax+tolls	5 030	4 288	6 833	8 746	1 496
<u>Indices (NL=100)</u>					
1. Vehicle tax	336	287	29	30	100
2. Tolls ^{a)}	-	-	-	-	-
3. Fuel taxes	344	271	257	160	100
4. Total (1+2+3)	341	276	324	300	100
5. Vehic. tax+tolls	336	287	457	585	100

Note : Mileage 100 000 km at home (on toll roads for F and I)

a) Not applicable

b) No allowance made for rebate based on toll road usage

Annual taxes and tollsScenario D

Vehicles registered in	UK	D	F	I	NL
<u>in ECU</u>					
1. Vehicle tax	5 030	4 288	433	446	1 496
2. Tolls	1 838	1 838	5 838	7 025	1 838
3. Fuel taxes	9 309	7 671	6 968	5 591	3 828
4. Total (1+2+3)	16 177	13 791	13 239	13 062	7 220
5. Vehic. tax+tolls (1+2)	6 868	6 126	6 271	7 471	3 392
<u>Indices</u>					
1. Vehicle tax	336	287	29	30	100
2. Tolls	100	100	318	382	100
3. Fuel taxes	243	200	182	146	100
4. Total (1+2+3)	224	191	183	181	100
5. Vehic. tax+tolls (1+2)	203	181	185	220	100

Note : Mileage at home : 75 000 km (on toll roads for F and I)

Mileage abroad : 25 000 km on toll roads

(F : 12 500 km on toll roads in I

I : 12 500 km on toll roads in F)

a) No allowance made for rebate based on toll road usage.

Annual taxes and tollsScenario E

Vehicles registered in	UK	D	F	I	NL
<u>In ECU</u>					
1. Vehicle tax	5 030	4 288	433 ^{a)}	446	1 496
2. Tolls	3 675	3 675	6 275	5 750	3 675
3. Fuel taxes	8 292	7 200	6 220	6 368	4 638
4. Total (1+2+3)	16 997	15 163	12 928	12 564	9 809
5. Vehic.+tolls (1+2)	8 705	7 963	6 708	6 196	5 171
<u>Indices</u>					
1. Vehicle tax	336	287	29	30	100
2. Tolls	100	100	171	157	100
3. Fuel taxes	179	155	134	137	100
4. Total (1+2+3)	173	155	132	128	100
5. Vehic. tax+tolls	168	154	130	120	100

Note : Mileage at home : 50 000 km (on toll roads for F and I)

Mileage abroad : 50 000 km on toll roads (F : 25 000 km on tollroads in I
I : 25 000 km on toll roads in F).

a) No allowance made for rebate based on toll road usage.

Annual taxes and tolls

Scenario F

Vehicles registered in	UK	D	F	I	NL
<u>in ECU</u>					
1. Vehicle tax	5 030	4 288	433 ^{a)}	446	1 496
2. Tolls	5 513	5 513	4 713	4 475	5 513
3. Fuel taxes	7 276	6 730	5 477	7 146	5 449
4. Total (1+2+3)	17 819	16 531	10 623	12 067	12 458
5. Vehicle tax + tolls (1+2)	10 543	9 801	5 146	4 921	7 009
<u>Indices</u> (NL = 100)					
1. Vehicle tax	336	287	29	30	100
2. Tolls	100	100	117	95	100
3. Fuel taxes	134	124	101	131	100
4. Total (1+2+3)	143	133	85	97	100
5. Vehicle tax + tolls (1+2)	150	140	73	70	100

Note : Mileage at home : 25 000 km (on toll roads for F and I)
Mileage abroad : 75 000 km on toll roads

(F : 37 500 km on toll roads in I
I : 37 500 km on toll roads in F)

a) No allowance for rebate based on toll road usage.

Annual taxes and tollsScenario C

Vehicles registered in	UK	D	F	I	NL
<u>in ECU</u>					
1. Vehicle tax	5 030	4 288	433	446	1 514
2. Tolls	-	-	-	-	-
3. Fuel taxes	7 276	6 730	5 477	7 146	5 449
4. Total (1+2+3)	12 306	11 018	5 910	7 592	6 963
5. Vehic. tax+tolls		see line 1			
<u>Indices</u>					
1. Vehicle tax	336	287	29	30	100
2. Tolls	-	-	-	-	-
3. Fuel taxes	134	124	101	131	100
4. Total (1+2+3)	177	158	85	109	100
5. Vehic. tax+toll (1+2)		see line 1			

Note : Mileage : 25 000 km at home ; 75 000 km abroad ; no toll roads.

(F : 37 500 km in I)

(I : 37 500 km in F)

Tax rebates available in Member StatesVehicle Taxes (examples)A. Belgium

A system of 3 different rebates exists:

1. Reduction of 10% on each vehicle if the haulier has more than 2 motor vehicles.
2. Reduction of 40% on each vehicle if the haulier
 - has more than 2 motor vehicles of minimum 7 tons, and
 - possesses a general licence for road transport.
3. Reduction of 25% (cumulative with 1. or 2.) for vehicles which are registered for 5 years or more.
4. The maximum reduction obtainable is therefore 65% on motor vehicles.

B. France

The French government reimburses the axle tax pro rata to the number of kilometers driven on toll motorways. The tariff of reimbursement is 5% per 5 000 km. As a consequence, a French haulier driving 100 000 km on toll motorways will, on balance, pay no axle tax. The system does not apply to goods vehicles subject to the "vignette" type of vehicle tax.

C. Denmark.

In Denmark a compensatory diesel tax exists. A rebate is given for each day spent abroad; information available so far indicates that a Danish haulier operating in international haulage could only benefit from a 55% reduction of this tax.

Duty free FuelExamples of effect on fuel taxes paid in international haulage

	Dutch haulier	German haulier
<u>Basic assumptions</u>		
- 38 t GVM Combination		
- Fuel consumption : 40 l/100 km		
- Location	on NL/D border	150 km S. of border
- Voyage to Italy one way	1500 km	1350 km
- Duty free fuel : 200 or 600 l		
No restriction on Austrian transit		

	Duty rate ECU/	km	litres	duty ECU	km	litres	duty ECU
<u>A. 200 litre franchise</u>							
<u>1. Outward trip</u>							
Fuel bought in NL	.075	500	200	15.00	-	-	-
Fuel bought in D	.203	400	160	32.48	750	300	60.90
Fuel bought in I	.120	600	240	28.80	600	240	28.80
Total Outward		1500	600	76.28	1350	540	89.70
<u>2. Return trip</u>							
Fuel bought in I	.120	1100	440	52.80	1100	440	52.80
Fuel bought in D	.203	400	160	32.48	250	100	20.30
Total Return		1500	600	85.28	1350	540	73.10
3. Total trip		3000	1200	161.56	2700	1080	162.80
Average duty paid per km			0.52	=====		0.60	=====

<u>P. 600 litre franchise</u>							
<u>1. Outward trip</u>							
Fuel bought in NL	.075	1500	600	45.00			
Fuel bought in D	.203	-	-	-	750	300	60.90
Fuel bought in I	.120	-	-	-	600	240	28.80
Total Outward		1500	600	45.00	1350	540	89.70
<u>2. Return trip</u>							
Fuel bought in I	.120	1500	600	72.00	1350	540	64.80
3. Total trip		3000	1200	117.00	2700	1080	154.50
Average duty paid per km			0.39	=====		0.57	=====

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Estimated Tax and Toll Revenue
from all road transport

1980

• million ECU and %

Member State	Revenue from				% Share of			
	Fuel Taxes	Vehicle Taxes	Tolls	Total	Fuel Taxes	Vehicle Tax	Tolls	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
B	1014	320	-	1334	76	24	-	100
DK	455	280 ^{b)}	-	735	62	38	-	100
D ^{a)}	7936	2623		10559	75	25	-	100
GR	473	97	1	571	83	17	-	100
E								100
F	6342	1054	1135	8531	74	12	14	100
IRL	304	28		332	92	8	-	100
I	5155	420 ^{a)}	710	6287	82	7	11	100
L	57	9		66	86	14	-	100
NL	1151	809		1960	59	41	-	100
P	244	18	0	262	93	7	-	100
UK	5504	2212		7716	71	29		100
EEC (11) ^{c)}	28635	7870	1846	38351	75	20	5	100

a) 1981

b) 1982

c) Excl. Spain

Source: National Contributions.

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Relative importance of tax revenue from transport 1980in milliard ECU and %

	Tax Revenue from Transport			Government revenue in % of GDP
	in milliard ECU	% of GDP ^{a)}	% of Government revenue	
	(1)	(2)	(3)	
B	1 334	1.6	3.6	44.6
DK	35	2.4	4.5	52.9
D	10 567	1.8	4.0	45.3
GR	583	2.0	6.6	30.2
E	n.a.			
F	8 521 ^{c)}	1.8	3.9	46.6
IRL	332	2.4	6.4	37.7
I	6 287 ^{c)}	2.2	5.8	38.1
L	75	2.3	4.4	52.7
NL	1 964	1.6	3.0	53.6
p ^{b)}	262			
UK	7 716	2.0	5.1	39.5
EEC	38 376 ^{d)}	1.9	4.3	43.7

a) Gross Domestic Product

b) 1985

c) Including road tolls

d) Excluding Spain

Source: Eurostat and national contributions

Relative importance of Fuel Tax Revenue
1980 and 1983

in mio ECU and %

Member State	Fuel Tax Revenue					
	in mio. ECU			in % of Government Revenue		
	1980	1983	% increase 1983/80	1980	1983	% increase ^{a)} 1983/80
B	1 014	1 118	10	2.7	2.7	-
DK	455	691	51	2.8	2.4	(14) ^{c)}
D	7 936	10 279	30	3.0	3.5	17
F	6 342	8 799	39	2.9	3.4	17
IRL	304	541	78	5.9	6.8	14
I	5 155	9 161	78	4.8	5.5	15
L	57	67	18	3.8	4.2	11
NL	1 151	1 443	25	1.8	2.0	10
UK	5 504	9 158	66	4.7	4.7	-
EEC (9)	27 918	44 257	48	3.6 ^{b)}	3.9	8 ^{b)}

a) Approximate rates, due to rounding off

b) Estimate

c) Decrease

Source: 1983: Eurostat not yet published
1980: Tables 16 and 17

Transport tax and toll revenue
compared with expenditure on roads

1980 Estimates million ECU

	Transport Tax and Toll Revenue	Expend- iture on Roads	Excess/(Shortfall) Revenue over Expenditure	
			ECU	%
	(1)	(2)	(3) = 1 - 2	(4) = $\frac{3}{2} \times 100$
B	1 334	1 777	(443)	(25)
DK	735	751	(16)	(2)
D	10 559	11 029	(470)	(4)
GR	571	334	237	42
E				
F	8 531	6 413	2 118	25
IRL	332	213	119	56
I	6 191	3 464	2 727	79
L	66	101	(35)	(35)
NL	1 960	2 310	(350)	(15)
P	262 ^{a)}	n.a.		
UK	7 716	4 286	3 430	80
b) EEC (10)	38 089	30 678	7 411	24

a) 1985

b) Excl. Spain and Portugal

Source: Revenue: Table 16.

Expenditure: 12th Commission Report on Infrastructure Expenditure and use

Estimated Tax and Toll Revenue
from Commercial Transport e)

1980

million ECU and %

Member State	Revenue from				% Share of				Commercial Revenue Share of all Revenues %
	Diesel Tax	Vehicle Taxes	Tolls	Total	Diesel Tax	Vehicle Tax	Tolls	Total	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)*
B	142	64		206	69	31		100	15
DK	77 ^a	44		121	64	36		100	16
D	1667	876		2543	66	34		100	24
GR	64	37	-	101	63	37		100	18
E ^{c)}	520	71	302	893	58	8	34	100	
F	1273	350 ^{d)}	375 ^{d)}	1998	64	12	19	100	23
IRL	41	16		57	72	28		100	17
I	320	60	233	621	53	10	37	100	10
L	5	4	-	9	55	45		100	14
NL	236	145	-	381	62	38		100	19
P									
UK	1463	655		2118	69	31		100	27
EEC (10) ^{f)}	5296	2251	608	8155	65	28	7	100	21

a) incl. compensatory tax

b) 1981

c) 1984/5

d) Estimated by DG VII

e) Assuming all diesel tax is paid by commercial vehicles. This assumption leads to excessively high figures in M.S. with a large diesel car fleet (D,B, etc.)

f) Excl. E + P

* (9) = (4) : (4 Table 16)

Source : Various National Contributions

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Estimated International Road Haulage Output : 1982
(billion T/km)

Country	Trucks registered in the country operating at home (1)	Trucks registered in the country operating abroad (2)	Foreign trucks operating within the country (3)	Difference between 2 and 3 (4)
Germany	9.6	11.6	20.0	-8.4
France	9.4	5.3	15.0	-9.7
Italy	7.2	6.7	9.4	-2.7
Netherl.	4.5	12.0	2.1	+9.9
Belgium	2.7	7.5	4.9	+2.6
Luxemburg	0.1	0.7	0.1	+0.6
Ireland	0.1	0.5	0.1	+0.4
UK	1.4	1.8	1.9	-0.1
Greece	0.1	0.5	0.1	+0.4
Denmark	1.2	3.3	0.8	+2.5

Source : ECMT Round Table 71 - page 69.

Note : These figures should be considered as approximate estimates and of an indicative nature only.

Average EEC Vehicle Tax CalculationPossible methods

Using the 1986 vehicle tax rate in Table 2, an average rate for the EEC can be calculated for a particular vehicle type (38 tonne GVW) as follows :

	<u>ECU/year</u>
1. Arithmetical average of ratio	1550
2. Weighted average using	
a) Numbers of goods vehicles (1982)	1860
b) Load capacity of goods vehicles (1982)	1810

Comment

- a) It must be emphasized that the figures are rounded off and largely based on estimates. Load capacity data for 2b) are available for only seven Member States; their weighted average vehicle tax would be 2540 ECU. The other five countries (E, IRL, I, L, P) were estimated, assuming an average load capacity of 3 tonnes, the same as for the seven. The substantially lower average of 1810 ECU is due to the fact that these 5 countries all have low tax rates.
- b) Other methods may of course be devised. All of them need to take into account that tax systems applying to all vehicles registered in a Member State must be consistent with both domestic and international use and should lead to a comprehensible and logical tax structure. This would not necessarily result from calculating European averages of existing rates, as these are based on quite different systems of assessment.

Table 23

Motor Fuel Consumption of Gasoline and Diesel 1980 and 1984

1.000 tonnes

Member States	1980				1984			
	Gasoline	Diesel	Total ^{b)}	Diesel %	Gasoline	Diesel	Total	Diesel %
B	3.093	1.814	4.907	37.0	2.721	2.175	4.896	44.4
DK	1.540	692	2.232	31.0	1.508	983	2.491	39.5
D	25.376	9.982	35.358	28.2	25.360	11.449	36.809	31.1
GR	1.395	895	2.290	39.1	1.699	1.174	2.873	40.9
E	6.000 ^{a)}	5.000 ^{a)}	11.000 ^{a)}	45.5	6.081	5.227	11.308	46.2
F	18.410	9.191	27.601	33.3	19.011	10.368	29.379	35.3
IRL	1.071	384	1.455	26.4	931	373	1.304	28.6
I	12.505	8.593	21.098	40.7	11.864	10.688	22.552	47.4
L	296	115	411	28.0	308	159	467	34.0
NL	4.047	2.006	6.053	33.1	3.794	2.475	6.269	39.0
P	800 ^{a)}	1.200 ^{a)}	2.000 ^{a)}	60.0	850	1.223	2.073	59.0
UK	20.120	5.914	26.034	22.7	21.256	6.825	28.081	24.3
EUR (12)	94.653	45.786	140.439	32.7	95.383	53.119	148.502	35.8
EUR (10) c)	87.853	39.586	127.439	31.1	88.452	46.669	135.121	34.5

a) Estimate

b) Excluding LPG

c) Excluding E and P

Source : Eurostat/DG VII - Doc. VII/193/86

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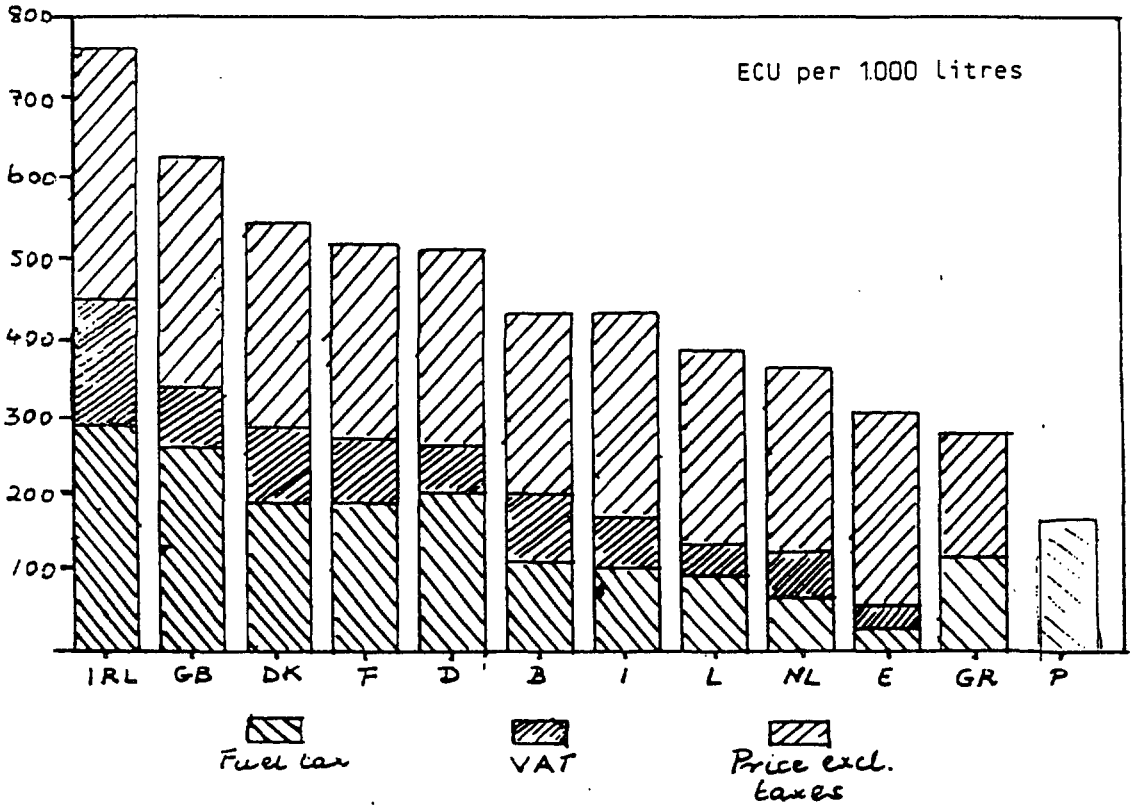
Conversion Values of the ECU in national currencies : 1980-1986

	1980	1981	1982	1983	1984	1985	1986 Jan/Mar
BFR/LFR	40,60	41,29	44,68	45,44	45,44	44,91	44,35
DKR	7,83	7,92	8,15	8,13	8,15	8,02	7,98
DM	2,53	2,51	2,38	2,27	2,24	2,23	2,17
DR	59,24	61,62	65,30	78,09	88,44	105,7	133,2
PTA		102,7	107,6	127,5	126,6	129,1	136,2
FF	5,87	6,04	6,43	6,77	6,87	6,80	6,66
IRL	0,676	0,691	0,690	0,715	0,726	0,715	0,715
LIT	1189	1263	1324	1350	1381	1447	1476
HFL	2,76	2,78	2,62	2,54	2,52	2,51	2,45
ESC		68,5	78,0	98,7	116,3	130,2	141,3
UKL	0,598	0,553	0,561	0,587	0,591	0,589	0,642

Source : Eurostat

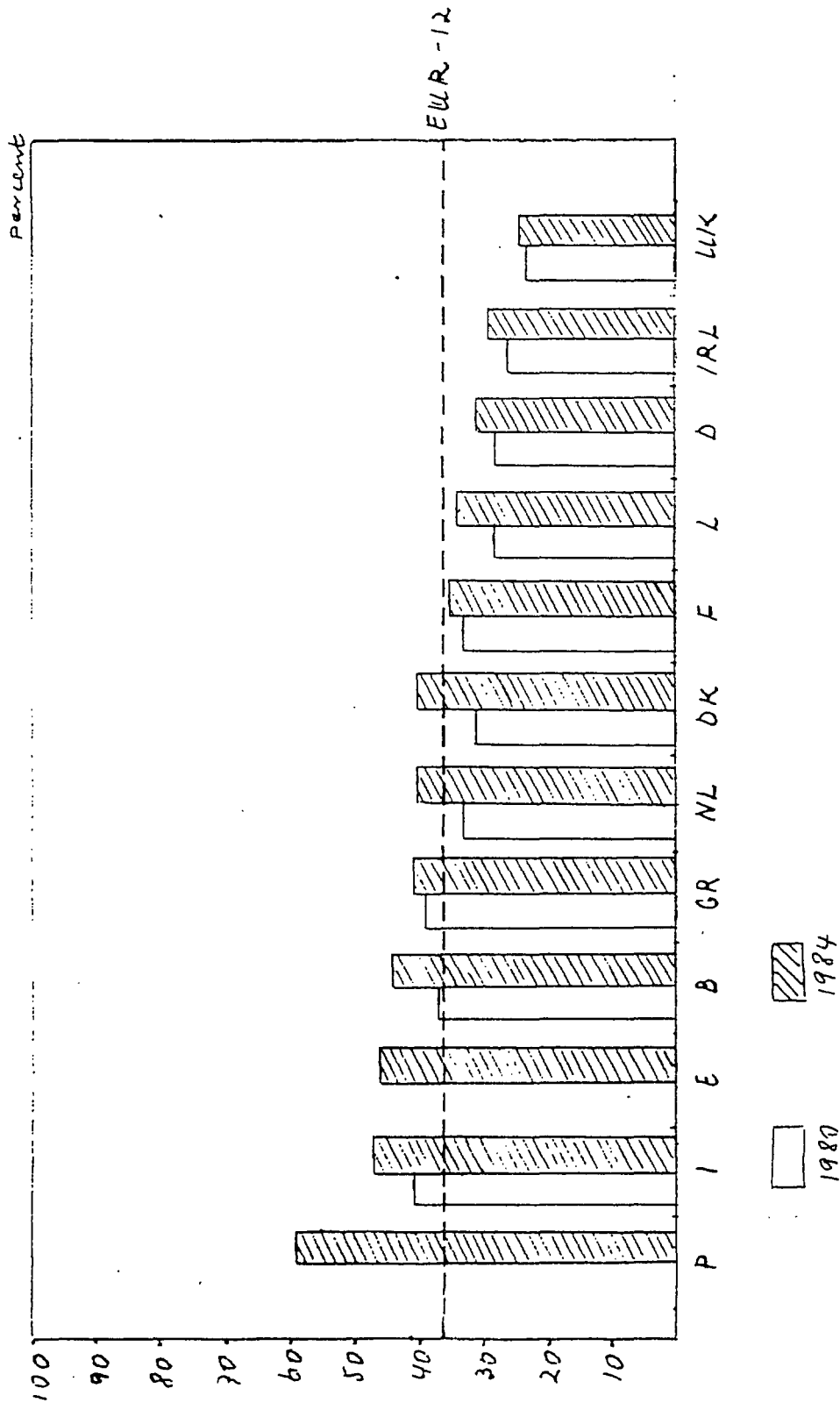
TAX INCIDENCE IN THE RETAIL PRICE DIESEL FUEL :

1 April 1986



FUEL CONSUMPTION IN ROAD TRANSPORT IN MEMBER STATES 1980 AND 1984

SHARE OF DIESEL FUEL IN TOTAL PETROL + DIESEL



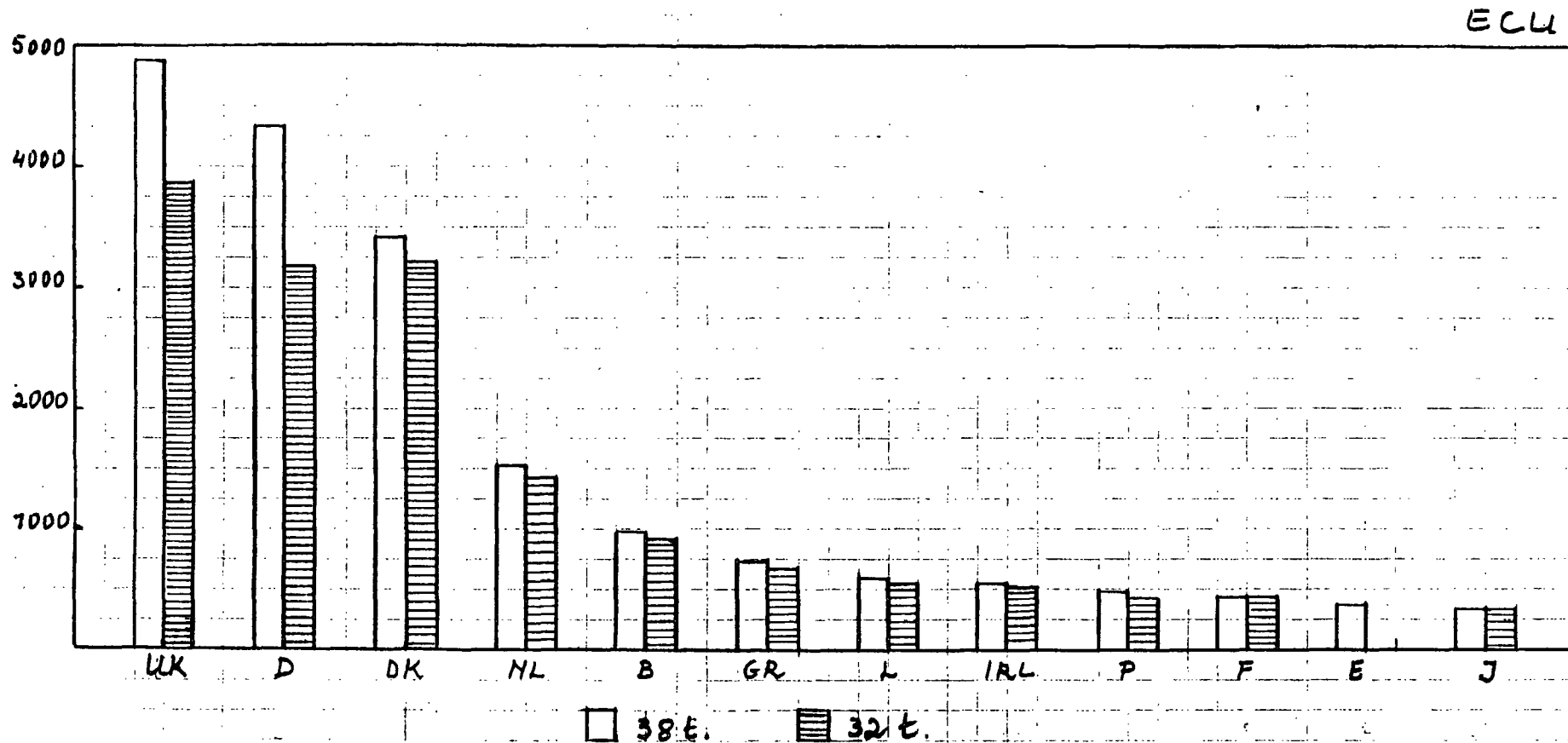
Source: Commission of the European Communities - Energy Consumption in the Transport Sector 1973-1984

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ANNUAL VEHICLE TAX FOR 38T. AND 32T. HEAVY GOODS VEHICLE COMBINATIONS

- 1986 -

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Source: Various, mainly Federal German Min. of Transport and hauliers associations; some national contributions