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

Taxation of aircraft fuel

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BACKGROUND

The structure of the taxation of mineral oils within the Community is currently governed by Council Directive 92/81/EEC of 19 October 1992 on the harmonisation of the structures of excise duties on mineral oils¹. Article 8(1)(b) of this Directive provides a compulsory exemption for Commercial aviation fuel. Article 8(7) of the same Directive requires the Council to review this mandatory exemption ‘on the basis of a report from the Commission and taking account of the external costs entailed in such means of transport and the implications for the environment and shall decide unanimously, on a proposal from the Commission, whether to abolish or modify these exemptions’.

This review was carried out in 1996 and the Commission in its report² recommended that excise duties on mineral oil should be extended to aviation kerosene ‘as soon as the international legal situation allows the Community to levy such a tax on all carriers including those from third countries’. This conclusion was reflected in Article 13(1)(c) of the Commission Proposal for a Council Directive restructuring the Community framework for the taxation of energy products³, which is intended to replace Directive 92/81. Article 13(2) also makes provision for Member States to tax, on an optional basis, National flights and flights between Member States on the basis of bilateral agreements.

Both the review and the subsequent Proposal for the taxation of energy products have been discussed in various Council working-Groups. The result of these discussions was that the Council requested the Commission, in its Resolution of 9 June 1997 concerning taxation of aircraft fuel, to provide further information on all aspects of the taxation of aircraft fuel.

In response to this request, the Commission has conducted a comprehensive study⁴ of this subject using an independent consultancy. This Communication sets out the results of that study and the Commission's reaction⁵.

¹ OJ L 316, 31.10.1992, p.12

² Report from the Commission to the Council and the European Parliament under Article 8(6) of Council Directive 92/81/EEC, on the situation with regard to the exemptions or reductions for specific policy considerations as set out in Article 8(4) of Directive 92/81 and concerning the obligatory exemption of mineral oils used as fuel for the purpose of air navigation other than private pleasure flying and the exemptions or reductions possible for navigation on inland waterways other than for private pleasure craft as set out in Article 8(1)(b) and 8(2)(b) of the same Directive, COM(96)549 final, 14.11.1996

³ OJ C 139, 6.5.1997, p.14

⁴ Analysis of the taxation of aircraft fuel, Resource Analysis, Delft 1998

⁵ See also Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions, Air Transport and the Environment, Towards meeting the Challenges of Sustainable Development, COM(1999)640 final, 1.12.1999

OVERVIEW OF THE STUDY

The study examined five possible tax coverage levels ranging from taxation of national flights only to taxation of all flights for all carriers to all destinations worldwide. Three possible levels of taxation-low, medium and high-were also applied to each of these giving a total of 15 possible taxation options. These options were then analysed using a sophisticated econometric modelling system to predict the likely effects of taxation in five specific areas covering both the socio-economic and environmental fields.

In addition, an analysis of the current international, Community and national legislative situation has been produced together with an examination of possible avoidance measures and, finally, an assessment of cost internalisation in the air transport sector in comparison with other modes of transport.

The results come in the form of a complete quantitative analysis for the year 2005 starting from a base year of 1992 and assuming that taxation is introduced in 1998. In addition, a sensitivity analysis is produced for the same year and, looking further ahead, a selective quantitative analysis is produced for the year 2015.

SUMMARY OF CONCLUSIONS

General

The study concludes that the environmental, revenue and other effects depend on two main factors: the level of taxation and the extent of coverage. It further concludes that the overall environmental effect of taxation would be comparatively small unless all flights to all destinations were taxed⁶. The positive environmental changes would result from a significant slowdown in the speed at which demand is supposed to increase anyway. There are also legal constraints in respect of certain scenarios. The results are briefly summarised below and in the annexed tables.

Socio-economic effects

The study considers the effects of taxation on a number of areas. These include air transport demand for both passengers and cargo, air transport supply, effects on aircraft operation and operational efficiency, and regional cohesion. The economic effects for specific actors (airlines, aircraft manufacturers and consumers) and macro-economic effects (gross value added, employment, fuel tax revenues) are estimated as well as the shift in the modal split in favour of ground transport volumes.

The study concludes, as might be expected, that the effects on demand resulting from the various taxation options-compared with a no tax scenario-increase with higher levels of taxation and wider coverage. The effect on RTK (Revenue Tonne Kilometres)⁷ for intra EU routes varies from a reduction of 0.5% for low tax options to 7% for high tax levels. However, the effect on the competitive position of EU carriers depends to a large degree on whether non-EU competitors are treated in the same way. Taxation of Community air carriers only

⁶ In addition, the positive environmental effects of taxation in all scenarios may be reduced by avoidance measures such as tankering or passenger switching carriers or destinations.

⁷ This is a revenue-earning payload of one tonne transported for a distance of one kilometre. (One passenger=100 kilograms).

would not only affect their competitive position but also worsen the ratio between environmental benefit and socio-economic impact for the Community aviation industry.

Although the economic analysis indicates a slight overcompensation of negative socio-economic effects to the Community's airline industry by positive effects for other economic actors, in case of acting within present legal constraints, the implications of discriminatory treatment of the home based industry remains a serious problem.

The effects on the Cohesion States were specifically studied to investigate whether fuel taxation works against Cohesion Fund policy. It was found that there were no indications that the direct effects in terms of aviation activity are more significant compared to the effects for the other Member States. However, further analysis indicated that a given percentage change in passenger demand might cause relatively greater economic disadvantage to the Cohesion States due to their greater reliance on air transport.

Environmental effects

Positive environmental effects increase in line with tax levels and coverage despite various avoidance. The study shows that the net reduction in CO₂ emissions in 2005 varies from 55000 tonnes in case a tax rate of € 10/1000 litres is applied on national routes only to 15 million tonnes in case of a tax rate of € 245/1000 litres on all routes. The higher figure represents a reduction of approximately 1.4% of EU CO₂ emissions from transport and 0.34% of total EU CO₂ emissions if compared to the baseline scenario. The equivalent figures for NO_x are 110 tonnes and 70000 tonnes. Again, the higher figure represents reductions of approximately 0.84% and 0.47% respectively. In case of taxing only intra-Community flights of Community air carriers the corresponding reductions would amount to 0.26% (CO₂) and 0.12% (NO_x) of all emissions from transport.

Legal constraints

The Chicago Convention of 1944 governs the treatment of fuel already on board an aircraft. The treatment of fuel loaded on to an aircraft is governed by a large number of bilateral Air Service Agreements (ASA's) which exist between individual Member States and also between Member States and third Countries. These usually contain a clause to the effect that both fuel in transit and fuel supplied in the territory of the contracting parties are exempt from fuel taxes. It is, of course, possible that the existing ASA's be renegotiated to remove the exemption for fuel supplied on the territory of the contracting parties. However, this could be a lengthy and cumbersome process.

Until re-negotiation of bilateral Air Service Agreements and of the relevant rules of the Chicago Convention has changed the tax position of fuel in transit, the danger of tax avoidance will remain. In addition, the current obligatory exemption contained in Directive 92/81 will apply until replaced by the optional taxation provision contained in the Proposal for the taxation of energy products.

Tax avoidance

It is possible to avoid the effects of taxation in several ways. The main one is tankering, in which more fuel is taken on board an aircraft than is necessary for one leg of a flight, thus avoiding refuelling. For short haul flights in the EU, it would be possible to carry enough fuel for a return flight rather than refuel after the first leg. On flights from North America, tankering can cover only some 25% of the fuel required for the return flight. However, this would still mean a 25% fuel tax reduction.

The advantage for operators gained by such action would depend on the level of taxation and the availability of untaxed fuel somewhere along the route. In addition, more fuel would need to be burned in order to carry the extra fuel and this would, in turn, reduce the environmental benefits of the measure. Other avoidance measures include passengers switching between carriers if not all are taxed and passengers changing destinations.

Cost internalisation

The extent to which external costs are covered is considered with emphasis on areas such as air pollution-including smog formation and acidification-and the effects on climate change caused by CO₂ and NO_x emissions. In addition, more specific mechanisms are considered such as water emissions at high altitudes, emissions of SO_x and soot and the effect of NO_x on ozone depletion.

Subject to a number of scientific uncertainties when determining the level of external costs accurately the study concludes that when all factors including the costs to society of accidents, noise, air pollution and infrastructure costs are taken into account, in addition to the fact that a number of clear differences exist with respect to fiscal treatment and coverage of external costs, air transport does not currently cover external costs. The Commission believes that further research on the calculation of external costs of air-travel and long term implications for the environment is needed for a better understanding and policy focus.

Conclusions

The results of this study confirm the conclusions, which the Commission drew in its 1996 report on this question. Principally for 'economic' reasons, it would not be practicable or desirable for the Community as a whole to introduce taxation of aircraft fuel targeting exclusively intra-Community flights operated by Community air carriers at the present time. This conclusion remains unchanged in the light of the other results of the study, which show that the environmental effects of such unilateral action would be significantly less.

On the other hand, the study equally confirms that there would be significantly higher environmental benefits from the introduction of kerosene taxation targeting all operations from Community airports. In addition, the significant revenues accruing from such a measure would allow Member States to reduce other taxes and charges, notably those on labour as recommended in Article 1 of the Commission Proposal for the taxation of energy products.

The Commission therefore recommends that:

1. The Council proceeds with the adoption of the Commission Proposal for a Council Directive restructuring the Community framework for the taxation of energy products permitting Member States to levy tax on aviation fuel used on National flights, or by bilateral agreement, intra-Community movements.
2. Member States, in close co-operation with the Commission, intensify their work within the ICAO framework for the introduction of taxation on aviation fuel and other instruments with similar effects.
3. The Council reviews the situation on the basis of a Report from the Commission on the outcome of ongoing discussions and negotiations within the ICAO framework, targeting the 33rd ICAO Assembly.

ANNEX

Summary table: Summary of main impacts of taxation options for 2005
– EURO 245/1000 litres

Indicator	Unit	EU2005	Taxation options (taxation level: EURO 245/1000 litres)				
			(1) All routes from EU	(2) All routes from EU - EU carriers only	(3) Intra-EU routes	(4) Intra-EU routes - EU carriers only	(5) National routes in EU
<i>Air transport and aircraft operation</i>							
Intra EU routes							
Revenue Tonne km	10 ¹¹ RTK pa	0.3	-7.0 %	-6.8 %	-7.0 %	-6.8 %	-1.4 %
Routes to/from EU							
Revenue Tonne km	10 ¹¹ RTK pa	1.7	-7.5 %	-3.7 %	0.0 %	0.0 %	0.0 %
<i>Effects on airlines</i>							
EU carriers							
Operating result	10 ⁹ 1992 ECU	3.6	-14.7 %	-74.6 %	-7.1 %	-11.7 %	-2.7 %
Employment	10 ⁵ employees	7.2	-6.7 %	-6.8 %	-2.6 %	-2.7 %	-1.0 %
Other carriers							
Operating result	10 ⁹ 1992 ECU	8.6	-4.0 %	19.3 %	-0.2 %	2.1 %	0.0 %
Employment	10 ⁵ employees	2.7	-1.2 %	0.2 %	0.1 %	0.1 %	0.0 %
<i>Economic effects for other actors</i>							
Change con.surplus	10 ⁶ 1992 ECU	n.a.	-10,223	-6,572	-3,397	-3,284	-944
Revenue from	10 ⁶ 1992 ECU	n.a.	10,822	7,070	3,678	3,551	1,154
<i>Environmental effect</i>							
Fuel consumption	10 ⁸ tonnes pa	2.0	-2.4 %	-1.1 %	-0.5 %	-0.5 %	-0.2 %
<i>Legal obstacles</i>							
Required changes of ASAs		n.a.	Yes	No	Yes	No	No
<i>Tax avoidance by tankering</i>							
Reduction of revenues from taxation		n.a.	10-25%	10%	5-10%	5-10%	25-50%
Reduction of environmental benefits		n.a.	35-70%	35%	10-20%	10-20%	35-70%
<i>Tax avoidance by changing</i>							
Economic impacts of demand effects		n.a.	+	+/o	+	+	+

Table: Economic and environmental effects of policy options in context of EU2005 scenario
(charging level of EURO 245 per 1000 litres).

		Scenario		Policy results of fuel taxation of 245 EURO per 1000 litres (change w.r.t. scenario)									
		EU 2005		(1) All routes from EU		(2) All routes from EU - EU carriers only		(3) Intra-EU routes		(4) Intra-EU routes - EU carriers only		(5) National routes in EU	
Indicator	Unit	EU	Other	EU	Other	EU	Other	EU	Other	EU	Other	EU	Other
Economic effects for specific actors													
<i>Airlines</i>													
Fuel costs	1992 ECU pa	7.5E+09	2.8E+10	86.5 %	12.3 %	86.5 %	0.4 %	44.4 %	0.6 %	44.4 %	0.0 %	13.9 %	0.0 %
Operating costs	1992 ECU pa	9.7E+10	3.1E+11	1.0 %	0.2 %	0.4 %	0.4 %	0.7 %	0.0 %	0.6 %	0.0 %	0.1 %	0.0 %
Operating revenues	1992 ECU pa	1.0E+11	3.1E+11	0.5 %	0.0 %	-2.3 %	0.9 %	0.4 %	0.0 %	0.2 %	0.1 %	0.0 %	0.0 %
Chng. oper. result	1992 ECU pa	3.6E+09	8.6E+09	-5.3E+08	-3.4E+08	-2.7E+09	1.7E+09	-2.6E+08	-1.5E+07	-4.2E+08	1.8E+08	-9.9E+07	0.0
Result as % revenue ¹⁾	%	3.6 %	2.7 %	3.1 %	2.6 %	0.9 %	3.2 %	3.3 %	2.7 %	3.2 %	2.8 %	3.5 %	2.7 %
Costs per RTK	1992 ECU/RTK	0.8	0.7	8.3 %	1.6 %	8.7 %	0.2 %	2.4 %	0.0 %	2.4 %	0.0 %	0.5 %	0.0 %
<i>Aircraft manufacturers</i>													
Fleet size	Aircraft	4.3E+03	2.0E+04	-6.3 %	-0.4 %	-6.4 %	0.2 %	-4.5 %	0.0 %	-4.5 %	0.0 %	-2.5 %	0.0 %
<i>Consumers</i>													
Chng. cons. Expenses	1992 ECU pa	<i>n.a.</i>	<i>n.a.</i>	4.5E+08	1.4E+08	-2.3E+09	2.8E+09	4.5E+08	2.4E+07	1.8E+08	2.8E+08	3.0E+07	0.0
Chng. cons. Surplus	1992 ECU pa	<i>n.a.</i>	<i>n.a.</i>	-6.7E+09	-3.6E+09	-4.8E+09	-1.8E+09	-3.3E+09	-1.4E+08	-3.1E+09	-1.5E+08	-9.4E+08	0.0

Macro-economic effects													
Gross value added	1992 ECU pa	4.8E+10	1.7E+11	-6.9 %	-1.1 %	-11.7 %	1.2 %	-2.8 %	0.0 %	-3.3 %	0.2 %	-1.1 %	0.0 %
Total employment	Employees	7.2E+05	2.7E+06	-6.7 %	-1.2 %	-6.8 %	0.2 %	-2.6 %	0.1 %	-2.7 %	0.1 %	-1.0 %	0.0 %
Revenue from taxation	1992 ECU pa	<i>n.a.</i>	<i>n.a.</i>	1.1E+10	0.0	7.0E+09	0.0	3.7E+09	0.0	3.5E+09	0.0	1.2E+09	0.0
Transportation market													
<i>Distortion of competition between airlines</i>													
Scheduled pax-km	Pax-km pa	6.3E+11	3.0E+12	-6.1 %	-1.1 %	-7.3 %	0.3 %	-1.0 %	0.0 %	-1.1 %	0.0 %	-0.4 %	0.0 %
Charter pax-km	Pax-km pa	2.6E+11	1.7E+11	-8.5 %	-3.9 %	-8.8 %	1.1 %	-4.2 %	-0.2 %	-4.3 %	0.0 %	-0.3 %	0.0 %
Total pax-km	Pax-km pa	8.9E+11	3.2E+12	-6.8 %	-1.2 %	-7.7 %	0.3 %	-1.9 %	0.0 %	-2.0 %	0.0 %	-0.4 %	0.0 %
Scheduled cargo-km	Tonnes-km pa	2.9E+10	1.2E+11	-6.6 %	-1.8 %	-7.5 %	0.0 %	-0.8 %	0.0 %	-0.8 %	0.0 %	-0.3 %	0.0 %
Charter cargo-km	Tonnes-km pa	2.5E+09	2.0E+10	-5.4 %	-2.6 %	-4.8 %	-0.6 %	-1.3 %	0.0 %	-1.5 %	0.0 %	-0.5 %	0.0 %
Total cargo-km	Tonnes-km pa	3.2E+10	1.4E+11	-6.5 %	-1.9 %	-7.3 %	-0.1 %	-0.8 %	0.0 %	-0.9 %	0.0 %	-0.3 %	0.0 %
Total revenue tonne-km	Tonnes-km pa	1.2E+11	4.6E+11	-6.7 %	-1.4 %	-7.6 %	0.2 %	-1.6 %	0.0 %	-1.7 %	0.0 %	-0.3 %	0.0 %
<i>Change in ground transport</i>													
Car transport (pax) ²⁾	Vehicle-km pa	<i>n.a.</i>	<i>n.a.</i>	3.3E+08	1.3E+07	3.1E+08	6.8E+06	3.2E+08	0.0	3.1E+08	0.0	2.0E+08	0.0
Car transport (cargo) ²⁾	Vehicle-km pa	<i>n.a.</i>	<i>n.a.</i>	1.1E+07	3.9E+05	9.6E+06	1.9E+05	1.0E+07	0.0	9.3E+06	0.0	4.7E+06	0.0
HSL transport ²⁾	Pax-km pa	<i>n.a.</i>	<i>n.a.</i>	5.2E+07	0.0E+00	4.8E+07	0.0E+00	5.2E+07	0.0	4.8E+07	0.0	2.2E+07	0.0
Other rail transport ²⁾	Pax-km pa	<i>n.a.</i>	<i>n.a.</i>	3.8E+08	1.1E+07	3.6E+08	5.5E+06	3.6E+08	0.0	3.6E+08	0.0	2.8E+08	0.0

Environmental effects													
<i>Fuel burn and emissions air transport sector</i>													
Total fuel consumption	Kg pa	4.1E+10	1.6E+11	-7.1 %	-1.2 %	-7.1 %	0.4 %	-2.3 %	0.0 %	-2.3 %	0.0 %	-0.8 %	0.0 %
CO2 emissions	Kg pa	1.3E+11	5.0E+11	-7.1 %	-1.2 %	-7.1 %	0.4 %	-2.3 %	0.0 %	-2.3 %	0.0 %	-0.8 %	0.0 %
Nox emissions	Kg pa	5.6E+08	2.2E+09	-7.3 %	-1.4 %	-7.2 %	0.3 %	-2.2 %	0.1 %	-2.3 %	0.1 %	-0.7 %	0.0 %
<i>Emissions land transport sector</i>													
CO2 emissions ²⁾	Kg pa	7.9E+11	3.7E+12	7.7E+07	3.0E+06	7.3E+07	1.5E+06	7.4E+07	0.0	7.1E+07	0.0	4.6E+07	0.0
Nox emissions ²⁾	Kg pa	7.6E+09	3.2E+10	5.0E+05	2.0E+04	4.7E+05	1.0E+04	4.8E+05	0.0	4.6E+05	0.0	2.9E+05	0.0

¹⁾ Both for the scenario EU2005 and the various policies the operating result is presented as a percentage of revenues.

²⁾ For these indicators 'EU' and 'Other' relate to the geographic region EU versus other geographic regions. For all other indicators 'EU' and 'Other' relate to carrier groups