ASSIST - Assessing the social and economic impacts of past and future sustainable transport policy in Europe

Workpackage 2: Transport Policy Measure Impact Assessment

FACT SHEET NO.: 2/2 **PERFORMED BY: FÖMTERV**

A GENERAL INFORMATION

A 1	**Category**	**Taxation**
A 2	**Subcategory**	**Transport Taxation**
A 3	**Transport policy measure (TPM)**	**Vehicle taxation (circulation & registration taxes)**
A 4	**Description of TPM**	Vehicle taxes are imposed in numerous countries around the world. They can be levied annual (known as vehicle circulation tax), on the new vehicles' first registration, or on the changes of the vehicles' ownership as well. In many cases the revenue is earmarked and must be spent on transport infrastrucure. Tax rates are usually depend on the vehicle's environmental or engine performance, weight, age, or value. In the area of passenger cars the proper functioning of the Internal Market faces important problems. Disproportionate RT levels contribute considerably to pre-tax price differentials among Member State markets and keep car retail prices high. Concerning RT the tax bases and tax levels currently applied are very diverse and tax levels range, in extreme cases, between zero and 180% of pre-tax car price. Concerning the Annual Circulation Taxes (ACT) the tax bases used are equally very diversified and in absolute terms the average paid in 1999 ranged from 30 EUR/vehicle, to 463 EUR/vehicle. Road transport alone represents about 84% of all transport related CO2 emissions of which more than half is accounted for by EN 3 EN passenger cars. The genuine use of fiscal measures to meet Community's target of 120 g CO2 per Km is fundamental to the Community strategy. Fiscal measures provide a strong incentive value, for example, by encouraging the rapid renewal of the car fleet and influencing consumer's behaviour towards more fuel-efficient passenger cars. [5]
A 5	**Implementation examples**	In all the 27 states of the european Comission
A 6	**Objectives of TPM**	-to improve the functioning of the Internal Market -to implement the Community's strategy to reduce CO2 emissions from passenger cars -Ensures funding for road maintenance and development, discourages using of polluting vehicles or modes of transport. '
A 7	**Key changes concerning:**	
A 7.1	- Choice of transport mode / Multimodality:	Makes road transport less competitive (by rising the costs)
A 7.2	- Origin and/or destination of trip:	No impact
A 7.3	- Trip frequency:	No impact
A 7.4	- Choice of route:	No impact
A 7.5	- Timing (day, hour):	No impact
A 7.6	- Occupancy rate / Loading factor:	Low, but increasing impact (car pooling)
A 7.7	- Energy efficiency / Energy usage:	Favorable tax rates on low-energy vehicles can decrease fossil fuel consumption
A 8	**Main source**	[1,4,5]

B IMPACTS

B 1 OVERVIEW ON IMPACTS

		AFFECTED SEGMENTS															Geographical level		Source	
		Passengers					Transport operators													
		Road	Rail	Air	Public transport	Slow modes	Road	Rail	IWW	Air	Maritime	Public transport	**Employees in transport**	**Residents**	**Economy**	**Public bodies**	**Society**	1st level	2nd level	Source of assessment	Spatial level of source
B 1.1	**Overall tendency**																	I	N	S	I
	The overall impacts include lower vehicle mileage and risk of congestion known as traffic impacts. IN economical terms, transport costs for private car users increases as well as public income. IN social terms, increasing safety and health level are identified. Environental impacts include reduced pollutants (air, noise), climate effects, and possible increase for alternative energy sources.																			
B 1.2	**Overall tendency: Income groups**	for low income citizens the replacement of their old cars becomes more difficult (eg registration tax)																			
B 1.3	**Overall tendency: Age groups**																				
B 1.4	**Overall tendency: Disabled people**																				
B 1.5	**Overall tendency: Gender groups**																				
B 1.6	**Overall tendency: Ethnic groups**																				

B 2 TRAFFIC IMPACTS

		AFFECTED SEGMENTS															Geographical level		Source	
		Passengers					Transport operators													
		Road	Rail	Air	Public transport	Slow modes	Road	Rail	IWW	Air	Maritime	Public transport	**Employees in transport**	**Residents**	**Economy**	**Public bodies**	**Society**	1st level	2nd level	Source of assessment	Spatial level of source
B 2.1	Travel or transport time																				
B 2.2	Risk of congestion	↘																I	N	S	I
B 2.3	Vehicle mileage	↘			↗	↗	↘					↗						I	N	S	I
B 2.4	Service and comfort																				
B 2.I	**Overall impacts on social groups**																				
B 2.II	**Implementation phase**																				
B 2.III	**Operation phase**																				
B 2.IV	**Summary / comments concerning the main traffic impacts**	Vehicle taxation can be an effective tool against excessive motorization in overpopulated cities where congestion is a serious problem. However, in most countries this tax is imposed in order to raise revenues or deter motorists from buying polluting vehicles rather than manage traffic problems. The well identified impact is the reduction of vehicle mileage for private cars, and as a secondary effect public transport and slow modes mileage increases. [1,2,5]																			
B 2.V	**Quantification of impacts**																				

B 3 ECONOMIC IMPACTS

		AFFECTED SEGMENTS															Geographical level		Source	
		Passengers					Transport operators													
		Road	Rail	Air	Public transport	Slow modes	Road	Rail	IWW	Air	Maritime	Public transport	**Employees in transport**	**Residents**	**Economy**	**Public bodies**	**Society**	1st level	2nd level	Source of assessment	Spatial level of source
B 3.1	Transport costs	↗																I	N	S	I
B 3.2	Private income / commercial turn over																				
B 3.3	Revenues in the transport sector																				
B 3.4	Sectoral competitiveness	↘																I	N	S	I
B 3.5	Spatial competitiveness																				
B 3.6	Housing expenditures																				
B 3.7	Insurance costs																				
B 3.8	Health service costs																				
B 3.9	Public authorities & adm. burdens on businesses															↗		I	N	S	I
B 3.10	Public income (e.g.: taxes, charges)															↑		I	N	S	I
B 3.11	Third countries and international relations																				
B 3.I	**Overall impacts on social groups**																				
B 3.II	**Implementation phase**																				
B 3.III	**Operation phase**																				
B 3.IV	**Summary / comments concerning the main traffic impacts**	Costs for privat car usage significantly increases. While public income increases, the administrative burdens also increase. [1,2,5]																			
B 3.V	**Quantification of impacts**																				

B 4	SOCIAL IMPACTS	AFFECTED SEGMENTS																Geographical level		Source	
		Passengers					Transport operators														
		Road	Rail	Air	Public transport	Slow modes	Road	Rail	IWW	Air	Maritime	Public transport	Employees in transport	Residents	Economy	Public bodies	Society	1st level	2nd level	Source of assessment	Spatial level of source
B 4.1	Health (incl. well-being)													↗			↗	I	N	S	I
B 4.2	Safety	↗				↗								↗				I	N	S	I
B 4.3	Crime, terrorism and security																				
B 4.4	Accessibility of transport systems	↘																I	N	S	I
B 4.5	Social inclusion, equality & opportunities																				
B 4.6	Standards and rights (related to job quality)																				
B 4.7	Employment and labour markets																				
B 4.8	Cultural heritage / culture																				
B 4.I	**Overall impacts on social groups**																				
B 4.II	**Implementation phase**																				
B 4.III	**Operation phase**																				
B 4.IV	**Summary / comments concerning the main traffic impacts**	Due to decreased vehicle mileage, safety and health level increases for inhabitants and the society [1,2,5]																			
B 4.V	**Quantification of impacts**																				

B 5	ENVIRONMENTAL IMPACTS	AFFECTED SEGMENTS																Geographical level		Source	
		Passengers					Transport operators														
		Road	Rail	Air	Public transport	Slow modes	Road	Rail	IWW	Air	Maritime	Public transport	Employees in transport	Residents	Economy	Public bodies	Society	1st level	2nd level	Source of assessment	Spatial level of source
B 5.1	Air pollutants													↘			↘	I	N	S	I
B 5.2	Noise emissions													↘			↘	I	N	S	I
B 5.3	Visual quality of the landscape																				
B 5.4	Land use																				
B 5.5	Climate																↘	I	N	S	I
B 5.6	Renewable or non-renewable resources																↗	I	N	S	I
B 5.I	**Overall impacts on social groups**																				
B 5.II	**Implementation phase**																				
B 5.III	**Operation phase**																				
B 5.IV	**Summary / comments concerning the main traffic impacts**	Vehicle taxes decelerate motorization, which connote lower emission of air pollutant and greenhouse gases. If tax rates depend on the vehicles' environmental performance, this effect can be more powerful due to more efficient or alternative energy consumpting engines in cars. [1,5]																			
B 5.V	**Quantification of impacts**																				

C REFERENCES

C 1	**Other TPMs of this subcategory**	Company car taxation revision, CO2 based annual vehicle circulation tax (CO2 taxation)
C 2	**References**	**International** [1] Goldman, T., Wachs, M. (2003): A Quiet Revolution in Transportation Finance: The Rise of Local Option Transportation Taxes. University of California Transportation Center [2] Shimizu, T., Tuan V. A. (2005): Modeling of Household Motorcycle Ownership Behaviour in Hanoi City, in: Journal of the Eastern Asia Society for Transportation Studies, Vol. 6, pp. 1751 - 1765, 2005 [3] Arianto A. Patunru, Kiyoyuki Minato, Masahiko Hori, Keiko Hirota (Eds.) (2009): Sustainable Automobile Society in East Asia. ERIA Research Project Report 2008-7, Appendix 2-1: Database Results [4] European Automobile Manufacturers' Association (ACEA) (2012): Overview of CO2 based motor vehicle taxes in the EU [5] European Comission: COUNCIL DIRECTIVE on passenger car related taxes, SEC(2005) 809, 2005 **National** **Regional / Local**