

THE EUROPEAN COMMISSION SHOULD BE VERY CAREFUL IN DRAWING CONCLUSIONS FROM ATTEMPTS TO EVALUATING EXTERNAL COSTS OF TRANSPORT. HERE IS WHY:



Accidents

29% according to STICITE estimation

- External accident costs 40% lower compared to STICITE study
- ✓ By applying the responsibility approach, consistent with economic theory, instead of damage potential approach
 - ✓ By applying risk anticipation, as even proposed but not used by STICITE study, different values are obtained

Further uncertainties

- ? Financial valuation of life based on surveys, leads to higher estimated accidents costs compared to estimates based on insurance premiums and court decisions
- ? Need for update of evidence for underreporting (doubling of slight injuries and 25% increase of serious injuries)



Noise

7% according to STICITE estimation

Many uncertainties

- ? Partial correlation between external noise costs and traffic volumes, although marginal costs are also heavily influenced by other factors
- ? Low resolution of noise map (measuring basis) and significant variation of annoyance costs



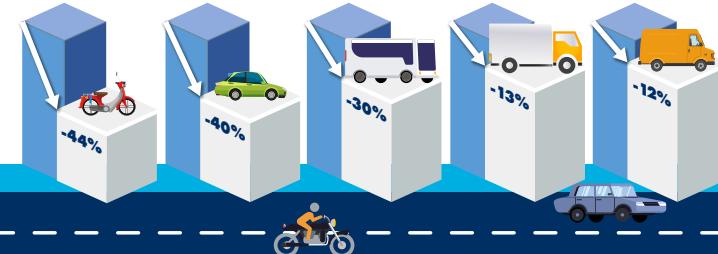
Habitat

4% according to STICITE estimation

Many uncertainties

- ? Scaling up costs of Switzerland, likely not representative of EU, missing robustness check
- ? Uncertainties already recognised in STICITE study

Total external costs following sensitivity analysis



987 bn €
according to
STICITE study

652 bn €
according to
sensitivity analysis

204 bn €
accidents & congestion
mainly borne by users
inside the transport system

448 bn €
borne outside of the
transport system

Compared to STICITE study, the expert review analysed the sensitivity of the evaluation of external costs of transport and proposed figures one third lower as one possible outcome with significant uncertainties remaining, taking into account revised definition of accidents (responsibility approach) and congestion (deadweight approach)



Congestion

27% according to STICITE estimation

- External congestion costs 83% lower compared to STICITE study
- ✓ Through the consistent use of deadweight loss, consistent with economic theory, instead of delay costs

Further uncertainties

- ? Congestion costs are mainly borne within the transport system (external costs outside of the system are close to zero)
- ? Congestion charging may have adverse outcomes on low-income users due to distributional effects
- ? The low price elasticity of transport can limit the effectiveness of pricing measures in reducing externalities
- ? Congestion charging poses significant practical and technical challenges



Pollution & Climate

33% according to STICITE estimation

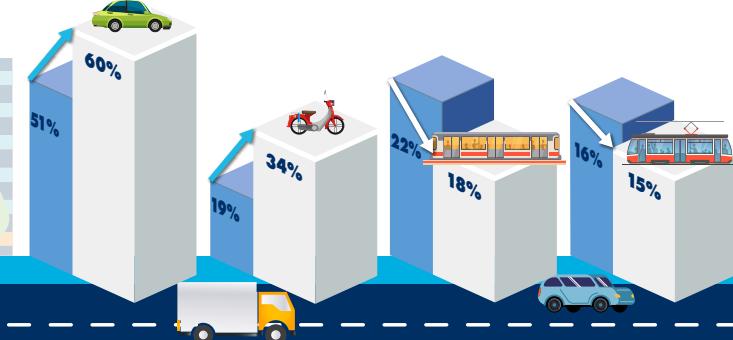
- Fuel taxes more than cover both total and marginal climate and pollution costs for passenger cars

- ✓ Even if accounting for additional embedded climate costs

Main uncertainties

- ? Impact on human health not fully available for scrutiny
- ? Wide range of possible values for cost of carbon
- ? Externalities higher considering embedded climate costs

Overall cost coverage ratios following sensitivity analysis



REDUCE THE NEGATIVE EFFECTS OF ROAD TRANSPORT, INSTEAD OF INCREASING THE FINANCIAL BURDEN FOR MOTORISTS

FIA European Bureau
policy recommendations on how to
deal with external costs of transport

1

Acknowledge the limitations

- ✓ External costs are not to be found in balance sheets and therefore have to be estimated
- ✓ Results depend on (quality of) assumptions and approximations used for estimation and are therefore automatically afflicted with uncertainty
- ✓ Estimations are therefore inappropriate for cost allocation to consumers

2

Choose effective policies

- ✓ Charging for external effects of transport under certain circumstances is not suitable to reduce them effectively
- ✓ Technology, investment and command and control measures are best suited to tackle accidents, congestion, and noise
- ✓ Further taxes may be detrimental to low-income consumers

3

Compare objectively and fairly

- ✓ Subsidies have to be accounted for as additional costs borne by society (e.g. operational subsidies for rail transport made up for 30 bn euro in 2016)
- ✓ External costs in urban public transport and congestion costs in non-road modes, leading to a distorted view should be accounted for additionally

4

Consider the impact of technology

- ✓ Main external effects of transport will significantly decrease in the next ten years
- ✓ Engine and safety technology as well as traffic management systems will significantly contribute to this development
- ✓ In 2030, the majority of passenger cars on European roads will comply with the newest emission standards. This will gradually reduce air pollution costs towards zero

5

Be open and transparent

- ✓ Policy makers have to be aware of all shortcomings when estimating external costs
- ✓ Missing background data prevents full evidence review for this prominent area of EU public policy



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EXTERNAL COSTS OF TRANSPORT

WHAT WE KNOW & WHAT WE SHOULD KNOW BETTER

Expert review of the European Commission study "Sustainable Transport Infrastructure Charging and Internalisation of Transport Externalities" (STICITE) and the "Handbook on the external costs of transport version 2019" carried out by Impact Assessment Institute, Element Energy and Cambridge Econometrics

