

*10th ITF Transport Statistics Meeting*

# Comprehensive study on the internalisation of external costs in transport

Iuliana Lupu

Unit A.3 – Economic analysis and Better Regulation, DG MOVE

# Political relevance (I)

- Polluter pays principle is a key principle underlying EU environment legislation and policies (Art 191(2) TFEU)
- ‚Polluter pays‘ and ‚user pays principles‘ even more important with the European Green Deal;
  - 2020 Sustainable and Smart Mobility Strategy:
    - recalls the need to put in place the right incentives for transport users to make more sustainable choices,
    - the ‘polluter pays’ and ‘user pays’ principles need to be implemented in all transport modes,
    - announces measures to deliver fair and efficient pricing across all transport modes.

# Political relevance (II)

Since publication of 2019 study, several new policy developments, e.g.:

- **Fitness check on polluter-pays principle (ongoing)**
- **CountEmissions EU** proposal for the accounting of GHG emissions of transport services.
- Revision of the **Combined Transport Directive** to reduce or prevent certain negative externalities compared to road-only transport.
- **Taxonomy Regulation**, including “Do No Significant Harm” principle and inclusion of the latter in EIB environmental and social standards.
- Revised **Eurovignette Directive** setting out reference values of external-cost charge.

# Comprehensive study on the internalisation of external costs in transport

- Handbook on external costs of transport: 2008, 2014 and 2019;
- General objective: assess to which extent the "user pays" and "polluter pays" principles are implemented in the EU countries and in other advanced economies.
- Specific objectives:
  - Provide estimations of total, average and marginal infrastructure and external costs for all relevant modes/vehicle categories and countries
  - Provide a detailed and transparent overview of the transport-related taxes and charges, including their structure and revenues, for all relevant modes/vehicle categories and countries.
  - Assess the application for the different transport modes in the relevant countries of both the user-pays and polluter-pays principles

# Methodology

- **Scope**

- EU27 MS, EEA/EFTA countries, candidate countries and western Balkans countries (to the extent possible), selected OECD countries (US, Canada, UK, Japan, New Zealand, Australia)
- All modes of transport, both passenger and freight + multimodal and intermodal;
- Base year: 2022; PPS for monetary figures.

- **Data collection and preparation**

1) **Transport performance data:** transport activity (pkm, tkm, vkm), fleet data, emissions of pollutants and greenhouse gases, energy consumption, transport infrastructure

- Territoriality principle
- Main sources: Eurostat, Study on New Mobility Patterns (Task C), EU Transport in figures, CO2 monitoring database from European Environment Agency, European Alternative Fuels Observatory (EAFO), UIC database, JRC Integrated Database of the European Energy System, Eurocontrol, EMSA, UNCTAD ship calls database

## 2) Infrastructure costs

- total costs, average and marginal infrastructure costs.
- infrastructure expenditure data: investment expenditures on new infrastructure or expansion of existing infrastructure, investment expenditures associated with the renewal of (parts of) the infrastructure, maintenance expenditures, operational expenditures, variable infrastructure costs/expenditures, fixed infrastructure costs/expenditures;
- estimation of infrastructure costs: for road, rail and IWT estimations using the Perpetual Inventory Method; for aviation and maritime: extrapolations from (air)port level to national level.
- Sources: OECD database, national sources, Eurostat

## 3) External costs

- improve the Handbook on External Costs of Transport; total, average and marginal external cost figures for all relevant vehicle categories and all countries;
- Categories: Air pollution, accidents, climate change, noise, congestions, well-to-tank emissions, up- and downstream emissions of vehicles and infrastructure, water pollution by inland and sea shipping, water and soil pollution by road and rail, habitat damage.
- Estimation of external costs output values based mainly on updated 2019 methodologies

## 4) Taxes and charges

- gather data on transport-related charges and taxes (including their revenues) in order to calculate total and average revenues by country, transport mode, and charge/tax type, while understanding the distribution of tax/charge revenues among vehicle categories.
  - main data sources: Taxes in Europe database (EC), excise duty and VAT tables (EC), Eurostat, ACEA Tax Guide, OECD Tax database, Worldbank, Insurance Europe, RMMS (EC), Airport charges database...
  - allocation of taxes and charges to specific vehicle categories
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- **Assessment of internalisation of external costs in transport**
  - assess the current state-of-play of internalisation, including the application of the user-pays and polluter-pay principle, in the various countries and for the various transport modes;
  - to establish the approach to be used; development of internalisation indicators;

# Important novelties compared to 2019 study

- Extension of **geographical scope** (Western Balkans and other candidate countries, among others).
- Beyond single transport modes, also **multimodal and intermodal transport** to be covered.
- More **comprehensive coverage of aviation and maritime**. 2019: only samples of (air-)ports. Fresh look at how to measure climate costs of aviation and maritime will be needed.
- **Base year: 2022** + analysis of possible COVID bias if more recent data available.
- Transport performance data to be reported based on **territoriality principle**.
- Develop **updated methodology for calculating infrastructure costs**.
- Assess the feasibility to quantify the part of **infrastructure costs related to the reduction of externalities** (e.g. noise barriers, alternative fuel infrastructure, etc.).
- Methodology for calculating external costs should take into account **2019 Study** and **areas for improvement** already identified in that study + **recent developments** e.g. on air pollution **valuation methods, EEA noise maps, etc.**
- **Electric vehicles** need attention: noise and air pollution, well-to-tank emissions.



# Thank you!



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