

Florence Policy Briefs

INTERNALISING THE EXTERNAL COSTS OF TRANSPORT

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Personal and goods transport entail a significant societal and economic cost in the form of environmental and human health impacts, accidents, congestion, as well as infrastructure wear and tear. These costs are, however, largely unaccounted for in the price that transport users pay today. In the absence of a dedicated fiscal and policy framework, transport users thus currently do not consider external costs as part of their travel decisions. Back in 2011 the European Commission acknowledged in its White Paper the importance of implementing 'fair and efficient transport pricing'. Yet, while there is agreement over the general principles, the specific policy design is still to be determined. The French government's recent backing down on a tax proposal that would have seen fuel prices increase by just under 3% shows how difficult it is to impose any economic pain in the name of tackling climate change. This calls for careful design and implementation of fiscal policy measures in order to ensure public acceptance, equity and social inclusion.

Pricing, regulation, and rethinking of our mobility needs is required if we want transport to fully account for its external costs

By Matthias Finger and Teodora Serafimova

In its Long Term Decarbonisation Strategy '[A Clean Planet for All](#)', the European Commission paints a clear picture of the vast transformations that will have to take place across all sectors of the economy for Europe to reach net-carbon neutrality by mid-century. For transport, which accounts for a quarter of the EU's total greenhouse gas emissions and which is a major contributor to urban air- and noise-pollution, this will require a systems-based approach with significant changes across all transport modes. With this in mind, the [5th Florence Intermodal Forum](#) was suitably themed around the Internalisation of the External Costs of Transport: a topic that is poised to rank highly on the incoming Commission's list of priorities.

A key takeaway from the discussion is that in the EU, the principle 'society pays' prevails of the 'the user pays' and 'the polluter pays' principles. In fact, a new Commission study calculates the overall external costs of transport to be worth around €1 000 billion annually, the equivalent of as much as 7% of EU28 GDP, whereas users are only paying for roughly half of these directly generated transport costs. This mismatch between external and infrastructure costs, on the one hand, and taxes and charges levied, on the other, is one of the main reasons for the inefficiency of the transport system. The ultimate aim of internalisation is therefore

to get the users to pay for the true societal costs of transport. While there is long standing agreement over the importance of cost-reflective and efficient pricing in transport, translating this agreement into practice is far from being straightforward.

Breaking away from a socially unjust mobility system... in a socially just manner

As a matter of fact, already today transport and logistics account for a significant share of company costs and household expenditures. For the latter, transport is the second largest expenditure item, preceded only by housing costs. On average, every person spends €1,900 on transport per year, which represents 13% of their spending. The enactment of the 'user pays' and 'polluter pays' principles can therefore result in a disproportionate burden for the lower income segments of the population. This calls for careful design of fiscal policies to ensure social justice and public acceptance. Having said that, the current mobility system, largely dominated by private transport, is already inherently unjust, given that it does not allow those without access to cars to enjoy the same economic and social opportunities. In this respect, the challenge is to evolve in a socially just manner from unjust mobility practices to a low-carbon, multi-modal mobility system, that will be dominated by shared- and public-transport.

We agree on the principles, but how do we get there?

We have a number of options at our disposal to help us get there, namely market-based

instruments (or 'pricing' measures, such as charges, taxes and tradable permits), regulatory measures (e.g. land use planning regulations, parking fees, and vehicle access restrictions), as well as voluntary instruments. The transport sector is, however, not uniform in its contribution to societal and environmental costs, and so the answer will instead lie in a combination of all of the above measures.

Pricing mechanisms have a key role to play in rendering the environmentally and socially beneficial transport options more economically attractive for users. In addition to rewarding cleaner fuels and transport modes, pricing schemes can be used to influence transport users' behaviour, by, for example, determining the time of the day that people travel, thereby alleviating congestion, reducing pollution, as well as traffic-related accidents.

What is more, distance-based charging for infrastructure use across all modes was one of the study's recommendations that received broad support. This type of taxation can help to generate an important source of revenue for the public budget to be reinvested into clean mobility projects and infrastructure. Regulation, on the other hand, in the form of both stick and carrot elements enacted by different levels of government has an important complementary role to play. Examples include regulations about green public procurement of public service and municipal vehicles, the tightening of fuel-economy standards, as well as the introduction of low emission zones in urban centres.

Shifting away from the current mind-set that curbing mobility is not an option

The uptake of efficient and alternative powertrains alone however will not suffice to address congestion. In parallel, therefore, demand-reducing measures will be needed in order to foster a modal- as well as behavioural shift towards shared-, public-, and soft-mobility. A more efficient organisation of the entire mobility system will in turn rely on digitalisation, data sharing and interoperable standards. A critical element, which was also partially touched upon during the Forum, was the need to break away from the [current paradigm](#), which claims that a reduction in mobility volumes is not an option. In fact, curbing mobility should not only be an option, but rather must become a necessity. Last but not least, the Commission's ongoing work on the development of a [taxonomy](#), or in other words, a unified classification system for the identification of ecologically more sustainable economic activities, will have a decisive role to play in ensuring that scarce public funds are channelled towards clean and future-proof transport solutions.

Main Takeaways

By Teodora Serafimova

Participants at the [5th Florence Intermodal Forum](#) broadly agreed that the application of the user-pays and polluter-pays principles through internalisation techniques constitutes a powerful instrument for creating demand for clean technologies, and thus an important pre-condition for incentivising more efficient transport. It was, however, noted that the effectiveness of pricing mechanisms in achieving behavioural change may vary depending on the elasticity of demand, as well as on country-specific characteristics, such as population density.

As such, internalisation alone is not a 'silver bullet' and should be complemented by a broader set of regulatory measures, such as, for example, urban land use planning regulations, parking fees, as well as vehicle access restrictions. The shift towards a sustainable and multimodal transport system will necessitate the enactment of a combination of push- and pull-factors at different levels of government ranging from the European, to the national- and even down to local levels.

The importance of a participatory approach to the design and implementation of fiscal and taxation policies was furthermore highlighted, so as to ensure public acceptance and social

justice. Dynamic- and means-based pricing models, relying on income-based discounts and/or exemptions for the lowest-income segments in particular were pointed out as promising for mitigating regressive effects.

While there is an overarching consensus regarding the need to transition to a low carbon mobility system, the question of how the needed investments will be financed remains open. In this regard, internalisation can act as a useful tool for financing infrastructure charges and as an enabler of sustainable financing. The removal of environmentally harmful subsidies, together with the enactment of internalisation techniques, will thus be key to ensuring that scarce financial resources are channelled towards future proof technologies.

In parallel, the Commission is currently conducting an evaluation of its [2011 White Paper](#), which already then acknowledged the importance of implementing 'fair and efficient transport pricing'. Participants welcomed the need to revisit outdated statements within the paper, most notably the reference to the statement that "curbing mobility is not an option". In fact, forum stakeholders were in agreement that the wider penetration of low- and zero-emission mobility technologies will need to be accompanied by demand reducing measures, as by a greater reliance on shared- and public-transport. In this respect, the potential of digitalisation was again underlined, especially when it comes to reducing transaction costs and enhancing the complementarity and even substitutability of the different transport modes. To illustrate this, studies have shown that thanks to shared, autonomous and electric mobility, coupled with the deployment of high capacity public transport, the city of Lisbon was able to reduce its vehicle fleet by as much as 97%. In other words, only 3% of existing cars would be able to perform the same trips as before.

Evidently, the soon-to-be-published Commission study on 'Sustainable Transport Infrastructure Charging and Internalisation of Transport Externalities' and the ongoing evaluation of the 2011 White Paper are complimentary and will be decisive in shaping important policy decisions and legislative processes for the incoming Commission. Most notably, it is hoped that the study's findings and policy recommendations will be instrumental for realising the European Commission's objective of net carbon neutrality across all sectors of the European economy, including transport, by 2050.

Expert Opinions

Which Cost Concept for the External Effects of Climate Change?

"External costs contradict the polluter-pays principle. Individuals who do not benefit from an activity have to bear (part of) its costs. This is not only unfair. It also leads to market distortions and inefficient market outcomes. In spite of these negative consequences, external costs are widespread, especially those resulting from environmental effects."

- Astrid Matthey, German Environment Agency

Read the full comment [here](#).

Do the Social Costs of Transport Matter?

"The recent study by CE Delft, Infrast and Ricardo on "Sustainable Transport Infrastructure Charging and Internalisation of Transport Externalities" is the latest publication of a long series of reports on the external costs of transport. The first international comparison of this kind was commissioned by the International Union of Railways (UIC) in 1995 and was updated in 2000, 2004 and 2011."

- Claus Doll, Fraunhofer Institute for Systems and Innovation Research ISI

Read the full comment [here](#).

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