

Internal and external costs of transport in Portugal

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Urban dispersion (sprawl) is a reality, however unplanned it may be. Its supporters advocate contact with nature, space and intimacy; however, alleged disadvantages include land consumption, public infrastructure and mobility costs, and housing prices.

The Research Project "Costs and Benefits of Urban Dispersion on a local scale" seeks to contribute to the debate with an objective approach based on the quantification of costs, externalities and benefits of different urban settlement patterns, thus "bringing urban form back to planning".

This paper presents one of the Project's tasks, the one concerning mobility costs, both internal and external. Quantified internal costs include investment, inspection, insurance, energy and maintenance; external ones include accident and environmental costs, calculated for road and rail transport.

Different methods are combined depending on available data sources in order to achieve figures for each of the cost components per vehicle-km, ton-km and passenger-km for 2005, at 2009 prices.

Results show that internal costs are larger than external ones for the majority of motorized transport, except two-wheelers, and for rail. External costs are larger than internal ones for soft modes, mainly due to high accident costs. Cost components, both internal and external, related to fuel consumption are the most relevant in heavy modes' cost structures. Investment costs are the most important category for the majority of the remaining modes.

Results also stress that current occupancy rates, load factors and vehicle mileages hinder the economic efficiency of collective and two-wheeled modes of transportation and may contribute to the pervasiveness of cars in Portugal.

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