



## **Introduction to the Special Issue on Pricing, Financing, Regulating Transport Infrastructures and Services**

**André de Palma<sup>1</sup>, Edoardo Marcucci<sup>2</sup>, Esko Niskanen<sup>3\*</sup>, Erik Verhoef<sup>4</sup>**

<sup>1</sup> *University of Cergy-Pontoise and Ecole Nationale de Ponts et Chaussées, France*

<sup>2</sup> *University of Rome Tre – Italy*

<sup>3</sup> *Department of Spatial Economics, Vrije Universiteit Amsterdam, The Netherlands*

<sup>4</sup> *STARResearch, Finland*

---

This special issue of *European Transport*, edited by André de Palma, Edoardo Marcucci, Esko Niskanen and Erik Verhoef, introduces a selection of the papers presented at the Second International Kuhmo Conference and Nectar Cluster 2 meeting on “Pricing, Financing, Regulating Transport Infrastructures and Services”, which was held 12-13 July 2007 in Urbino, Italy. This meeting is growing into a tradition: the Third Meetings in Amsterdam have also been held in the meantime, and the Fourth Meetings in Copenhagen are in full preparation at the moment of writing this text. The meetings aim to bring together transport economists as well as transport scientists from other disciplinary backgrounds to discuss recent advances in transport science and policy. No surprise, then, that the conference is usually broad in terms of the range of topics covered, and the second edition, on which this special issue is based, was no exception.

This special issue contains six papers. The rest of this introduction briefly introduces these six papers.

*Van den Berg, Kroes and Verhoef*, in their paper “Choice of season cards in public transport: a study of a Stated Preference experiment”, start with the observation that, in the Netherlands, a large share of commuters and business travellers receive travel cost compensation from their employer. The authors focus on investigating a Stated Preference (SP) experiment on the choice of type of season card, conducted among current Dutch Railways season cardholders. The cardholders were asked to choose from the following three alternatives: (1) an unrestricted season card, (2) a cheaper season card with peak travel and travel frequency restrictions, and (3) not buying a season card. The authors use multinomial logit (MNL), nested logit and mixed logit models to analyse their choices. They found that MNL underestimates the price sensitivities (as measured by the price elasticities) of the respondents and overestimates their Willingness-to-Pay (WTP) for reductions in the restrictions. The mixed logit estimation

---

\* Corresponding author: [eniskanen@staresearch.fi](mailto:eniskanen@staresearch.fi)

shows that there are (unobserved) differences in the marginal utilities of the price of the card (response heterogeneity), and the utility of owning a season card (preference heterogeneity). The authors found that travel cost compensation has a large impact on the price sensitivities and choices of the respondents.

*Catalano, Lo Casto and Migliore*, in their paper “Car sharing demand estimation and urban transport demand modelling using stated preference techniques”, use the stated preference technique (SP) to analyse travel mode choice behaviour for commuting urban trips in Palermo, Italy. The authors calibrate a demand model to forecast the modal split of the urban transport demand, allowing for the use of innovative transport systems like car sharing and car pooling. In order to estimate the demand model parameters, the authors carried out a specific survey, which focussed on the morning rush hour and involved mainly employees, self-employed workers and students whose final destination is located within the historical centre of the city. The questionnaire focused on a choice between four alternatives: private car, car pooling, car sharing and public transport. A random utility model was developed by using data from the SP experiment. The authors found out that the multinomial logit proved to be the best model for their purposes. They applied the model to analyse the potential demand for car sharing and car pooling in Palermo. The analysis highlighted that the car club market share could increase up to the 10 % level, while car pooling could slightly rise.

*Boucq and Papon*, in their paper “Assessment of the real estate benefits due to accessibility gains brought by a transport project: the impacts of a light rail infrastructure improvement in the Hauts-de-Seine department”, estimate the real estate benefits due to accessibility gains brought by a light rail infrastructure (the T2 tramway, in the Hauts-de-Seine). The authors set out to test the hypothesis that the accessibility improvements resulting from the transport project will influence the residential location choices of households, and eventually the land rents at equilibrium will include the valuation of accessibility gains made by the households. The authors note that, apart from accessibility, housing choice also depends on other characteristics: internal characteristics and external (environmental) characteristics. To take into account all these determinants, the authors estimate a hedonic price function of residential properties. The estimation also aims to take into account anticipation and learning effects. The hedonic price function obtained allows to measure implicit or “hedonic” prices of dwellings with a given group of characteristics, and isolates the pure effect of each characteristic on the price of a dwelling. The authors conclude that the T2 tramway accessibility improvements are capitalized into the housing prices. To measure this capitalization effect, the authors calculate the prices of dwellings with and without these accessibility gains. For the whole department, the authors estimate a capitalization of around 3%.

*Musolino*, in his paper “Modelling long-term impacts of the transport supply system on land use and travel demand in urban areas”, focuses on a two-way relationship between land use and transport in urban areas: land use affects transport, conditioning travel demand, and, conversely, transport affects land use, conditioning spatial distribution of activities and land market. The author surveys alternative modelling approaches that have been presented in literature. These are generally grouped into three main categories: spatial micro-economic, spatial interaction and spatial accounting

models. The author focuses on so-called Land Use Transport Interaction (LUTI) models. He presents a spatial accounting LUTI model, which relies on Multi-Regional-Input-Output (MRIO) framework. The model has two main interacting components: an activity model and a transport model, which allow to endogenously estimate activities generation and location, land prices, travel demand and transport accessibility. The author applies the specified model to the town of Reggio Calabria (Italy), and estimates long-term impacts of the transport supply on land use and passenger travel demand patterns.

*Leck, Bekhor and Gat*, in their paper “Welfare economic impacts of transportation improvements in a peripheral region”, study whether transportation improvements can trigger welfare economic impacts in a peripheral region. The authors address this issue through the development of a general equilibrium labor market model with a transportation component. The model is implemented to a set of 101 core and peripheral towns and cities in Israel. The authors carry out numeric simulations to test the research hypotheses regarding positive relationship between improved accessibility and enhanced economic welfare. The authors measure economic welfare in terms of efficiency and equity impacts. The authors conclude that transportation improvements in the form of auto travel time reductions may lead to substantial welfare benefits in the peripheral region considered in terms of increased output, productivity and wages.

*Ieromonachou and Warren*, in their paper “Policy Packages as potential routes to urban road pricing in the UK”, focus on urban road pricing. The authors note that road pricing often gets delayed or abandoned due to low acceptability. They conclude that this may be due to the fact that complex interactions and drivers of change that affect road transport management and require cooperation within implementation networks, have too often been overlooked. The authors present a review of the UK urban road pricing situation. They define implementation network as a group of people (referred to as partners and actors) who co-ordinate the introduction of policy tools. The drivers of change include any internal or external factors that may influence the time, place, or ‘shape’ of the policy measures being introduced. The authors state that demand management measures usually address a limited set of objectives and are often implemented alone i.e. are not necessarily combined with other policy measures. They analyse three existing UK road pricing examples - London, Edinburgh and Durham. To show the importance of combining policy tools, the authors contrast the emerging issues against six key implementation factors.