



Contents lists available at ScienceDirect

Research in Transportation Economics

journal homepage: <http://www.elsevier.com/locate/retrec>

Editorial

Editorial special issue: Public policies prompting sustainable transport in cities



This special issue focuses on public policies prompting sustainable transport in cities. Although the literature that analyses the behaviour of transport users in urban areas is abundant, it is still necessary to deepen on the analysis of the behaviour of these consumers, since the problems of unsustainability of urban mobility remain unsolved. From an Applied Economic Science point of view, this continues to be a field of maximum interest in which to advance. The 10 articles included in this special issue come to shed light on this topic.

Among these 10 papers there are 3 articles focused on a better understanding of the use and management of sharing means of transport. This is a new and growing trend of mobility that can prompt smart and sustainable passenger's transport in cities. It is therefore, a new and important issue of analysis in transport economics literature. There are 2 articles focused on the analysis of the impacts of concrete passenger transport demand strategies already applied. In that sense, measuring the impact of transport policies is crucial for a better knowledge of the failures and successes of these measures, and a necessary input for improving urban transport policies. There are 3 articles focused on the freight transport in cities, and lastly, there are 2 articles that analyse the choice of the transport mode and the conditions for modal shift in urban contexts.

The papers focused on analysing sharing means of transport are the following:

- The paper by Stefano Carresi, Fabio D'Andreagiovanni, Tommaso Ghicchetti, Antonella Nardin and Leonardo Zamberlan, presents "An optimization model and genetic-based matheuristic for parking slot rent optimization to carsharing companies". They then propose a model analysing how a local government can choose the best subset of parking slots to rent to carsharing companies. To have analytical instruments, as the one proposed by these authors, for applying optimal parking policies for carsharing is important as penetration of carsharing as this smart and sustainable means of urban transportation could be obstructed by non-up to date regulations. The authors test the validity of their model applying it to the case of Rome.
- The paper by Xiaoyang Shi, Zhengquan Li and Enjun Xia entitled "The impact of ride-hailing and shared bikes on public transit moderating effect of the legitimacy" analyses using a panel data from 273 cities in China to estimate with a difference in difference model how, on the one hand the emergence of ride-hailing impacts public transportation, and on the other how the legitimization of ride-hailing influences its relationship with public transportation. Their results provide a basis for improving the management of ride-hailing platforms. Concretely, the authors find that ride-hailing increases rail

ridership and reduces bus ridership, that the introduction of shared bikes increases rail passenger's volume and reduces bus passenger's one, finally, they find that the legitimization of ride-hailing positively moderates its influence on rail transit but negatively moderates its influence on buses.

- The paper by Alessandro Silvestri, Sébastien Foudi, Ibon Galarraga and Alberto Ansuategi entitled "The contribution of carsharing to low carbon mobility complementarity and substitution with other modes" proposes an analysis of the quality of service of carsharing in Spain, in order of understanding how consumers perceive this quality of service if compared both to car ownership and public transport. The study was conducted based on interviews made both to service users and providers. The authors find that carsharing in Spain has a low degree of complementarity for public transport as well as a low substitutivity degree for private cars.

The papers analysing concrete urban sustainable transport demand strategies are the following:

- The paper by Marco Percoco entitled "A formal test of the long-term environmental effects of road pricing in Milan" analyses the impact of the so called "Ecopass" (road pricing measure that came into force in the city of Milan in January 2008) on long term pollution. Authors estimate this impact using a novel methodology combining a regression of discontinuity model with propensity score matching. Moreover, they analyse this impact on the long-term, whereas most studies assessing the "Ecopass" impacts have done it for the short-term. The results show that there is a poor performance of the policy within 90 days to one year.
- The paper by Francesco Piras, entitled "An innovative GPS smartphone-based strategy for university mobility management: a case study at the University of Roma Tre, Italy", analyses the impact of a smartphone GPS application used by students of Roma Tre University on their mobility behaviour. The literature on transport demand highlights that the analysis of mobility in University Campus is an excellent laboratory to understand urban mobility behaviour and to test the performance of urban transport policies. Moreover, new technology applications are a new and important tool of transport policy to improve urban sustainability and prompt the development of smart cities. Then, this paper tackles with important issues for a better understanding and management of urban mobility. The study is based on a survey made with Roma Tre University students before and after the use of the application. The results show that 8.1% of students having used the application shift towards more sustainable transport modes

<https://doi.org/10.1016/j.retrec.2021.101043>

Available online 24 February 2021

0739-8859/© 2021 Elsevier Ltd. All rights reserved.

The three papers focused on the transport of goods are the following:

- The paper by Hui Wang entitled “The Relationship between Freight Transport and Economic Development: A Case Study of China” analyses the relationship between economic development and freight transport. To analyse this relationship, the authors use data from 30 Chinese provinces for the period 1997 to 2017. The results show that the contribution of sectors with high demand for transport on economic development has been reduced due to the characteristics of each region.
- For the case of Rotterdam, the paper by Nilesh Anand, Ron Van Duin and Lorant Tavasszy entitled “Carbon credits and urban freight consolidation: an experiment using agent-based simulation” analyses the role of public policies in Urban Consolidation Centres. UCCs are infrastructures located at the peripheral areas of the city where big trucks can easily access and deliver goods. UCCs are financially dependent on government support. The results show that public financing can favour the financial viability of these centres by helping to reduce the external effects of urban freight transport.
- The Paper by Mariangela Scorrano, Romeo Danielis and Marco Giansoldati entitled “Electric light commercial vehicles for a cleaner urban goods distribution. Are they cost competitive? make a comparison between electric diesel and gasoline vehicles. The authors analyse both the relative differences in price and distance for a wide range of vehicles for the year 2019. The results show that the electric vehicles are convenient in urban environments and with public policies that support their use.

The two studies that analyse the choice of mode of transport by

households are the following:

- Paper by Anna Urbanek entitled “Potential of Modal Shift from Private Cars to Public Transport: a Survey on the Commuters’ Attitudes and Willingness to Switch - a Case Study of Silesia Province, Poland” analyses preferences regarding private car and public transport as well as the level of costs that forces to substitute private car for public transport. Results show that gasoline prices and fares are not very effective in changing habits. On the contrary, psychological factors are decisive in modifying behaviour.
- Finally, paper by Nausadevan N, Ninad Gore, Rupali Zope, Shriniwas Arkatkar and Gaurang Joshi entitled “Determining mode shift elasticity based on household income and travel cost” analyses the factors that affect changes in the behaviour of travellers in India. The results show that the propensity to alter the present travel as well as mode diminishes as the household income increases. Travel cost, travel time, and comfort and convenience level are key variables in the modal shift.

Mercedes Burguillo*
Universidad de Alcalá, Spain

Desiderio Romero-Jordán
Universidad Rey Juan Carlos, Spain

* Corresponding author.
E-mail address: mercedes.burguillo@uah.es (M. Burguillo).