

Submission form to the XVII Conference of SIET, Milano 29 June -1 July

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Title of the presentation

Socio-economic determinants of the potential demand for Carsharing
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Abstract

Carsharing (CS) is rapidly developing all over the world. So far it has developed mostly in large urban areas and within the young population. In some Italian cities CS started more than ten years ago, but the number of cars and CS users remains modest. It is still unknown whether CS might develop also in medium to small towns and among other age groups, such as the elderly.

This paper aims at analyzing the socio-economic determinants of the potential demand for CS in Friuli Venezia Giulia, an Italian region characterized by a network of small to medium sized towns where CS is not currently offered. To this aim a sample of 1,276 individuals living in Friuli Venezia Giulia has been interviewed. Data on their typical weekly mobility pattern for home-work\study commuting and for other-than work\studying purposes (that is number of trips by transport mode and by purpose and average distance travelled), and on their socio-economic characteristics (gender, age, occupation, income, availability of a driving license, number of family members with a driving license, number of cars in the family, knowledge of CS, likely use of CS, and importance attributed to the concept of sustainable mobility) have been collected.

On the basis of the data collected the relationship between the stated likely use of CS and the socio-economic characteristics of the sample has been estimated. The factors significantly affecting the stated likely use of CS are the age of the individual, the city size, the activity performed by the individual (student, employed, unemployed, retired), the number of trips and distance travelled for work\study commuting and for other-than work\studying purposes, the sensitivity to environmental sustainability issues. Although the statistical significance of the models estimated is low, all the parameters are statistically significant and have the expected sign.

The probability that a person would be a CS user has also been estimated on the basis of his/her generalized cost of two alternative scenarios: using the private car and giving up the private car and using CS. The potential demand for CS has been quantified to be about 14.4% of the respondents. The area showing the largest demand is the city of Trieste. The young to middle aged population has a higher propensity to use CS than the older population.

Finally the relationship between the probability of being a CS user based on the individual generalized cost of the mobility pattern and the stated likely use and the level of knowledge of CS has been analyzed.

Schuster, T., Byrne, J., Corbett, J., Schreuder, Y. (2005) Assessing the potential extent of carsharing: a new method and its implication. *Transportation Research Record*, 1927, 174-181

Duncan, M. (2011) The cost saving potential of carsharing in a US context, *Transportation*, 38, 363-382

Cervero, R., Golub, A., Nee, B. (2007) City Carshare: longer-term travel demand and car ownership impacts. *Transportation Research Record*, 1992, 70-80

Le Vine, S., Zolfaghari, A. Polak, J. (2014) Carsharing: Evolution, Challenges and Opportunities, Centre for Transport Studies, Imperial College London, 22th ACEA Report

Keyword 1:	carsharing,
Keyword 2:	transport choice modeling,
Keyword 3:	demand estimation

Suggested Session (max 3)

(To which of the following sessions do you think your contribution fits better?)

- Energy and transport
- Measuring, valuing, and reducing transport externalities
- Economic valuation of public investments in the transport sector;
- Intelligent transport systems for a better transport
- Connecting Europe: infrastructure and standard armonization
- Social inclusiveness;
- Transport and territorial development;
- Smart cities, intelligent and sustainable mobility
- Supply chain and freight distribution;
- Transport policies and the regulation of network industries

Session type

(Do you want to present in a Session with an open discussion or with a pre-defined discussant?)

- Open discussion
- Pre-defined discussant (paper submission is needed within May, 30th)

Language

(Will your presentation be in English or in Italian?)

- English
- Italian