Young consumers’ willingness to pay for sustainable urban freight distribution: a stated preference exercise

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Extended abstract

Objectives and motivation

The aim of this paper is to estimate young consumers’ willingness to pay (WTP) for green freight transport goods. In this context, we conducted a questionnaire-based web survey among a group of university students, the generations of the future, who have a long view with respect to environmental issues. Recent solid results have shown the potential benefits deriving from the implementation of appropriate policies aimed at resolving the lock-in situation for retailers and transport providers. They are characterized by suboptimal situation both for urban freight distribution and off-peak deliveries. Among the different and relevant benefit-types envisioned by the adoption of such a delivery strategy, there is the reduction of polluting emissions. Indeed freight transport is a large contributor to CO2 emissions and it is necessary to mitigate its environmental impact in order to reduce CO2 emissions and become low-carbon society. Road freight activity in OECD countries has been growing at a rate quite content, i.e., 3% annually in the period 2010-2012, mainly for reasons related to the global crisis, while in emerging economies such as China and India it has increased between 11% and 17% from 2010 to 2012 (International Transport Forum, 2015). Clearly, the freight transport system is fundamental to the economic vitality (Muñuzuri et al., 2005). It is also recognized that freight transport is responsible for several social and environmental impacts. Green freight transport policies are expected to play a role in mitigating CO2 emissions and it is a key issue to the impact that society has on the environment. Indeed, consumers’ involvements include, among others, the intention to purchase goods that comes from sustainable freight transport. Nonetheless, a number of socio-economic barriers still need to be overcome before sustainable freight transport can occur. In this context this paper uses stated preference methods (SPM), deploying contingent valuation method (CVM) assessing whether the young consumers WTP for green urban distribution (GUD) is sufficiently large for compensating retailers increase in costs. It is possible to envisage a financially self-sustaining business model for off-peak deliveries (OPD) or, alternatively, to indicate there is need of support from public policies.

General description

Most of the global and national policies have set targets to reduce CO2 emissions and become low-carbon society. It has become increasingly clear that climate change mitigation policies must rely for a good portion on sustainable consumption. On the demand-side, households have an important role to play in addressing the environmental problems by changing their consumption behaviors in a sustainable way. Freight transport is responsible for several externalities which can be traced to three sustainability issues: environmental sustainability, economic sustainability, and social sustainability (Quak, 2008). Consumers play a key role in sustainable freight transport through the purchase of green freight transport goods which spur the development of sustainable transport. Our analysis fits in the recent strand of literature investigating consumers intentions towards green freight transportation (see among others Schniederjans and Starkey, 2014) and taking into account Italian university students WTP, exploring their knowledge, perceptions and attitudes related to green freight transport. The data collection has been conducted in the city of Perugia, in the Center-North of Italy. Data collection has been achieved through a questionnaire-based web survey in the University of Perugia. The questionnaire has been dispatched to 350 students. The age of the students ranges from 19 to 25 years. All the students participated to the survey voluntarily. The original questionnaire used for this study has both open-ended and close ended items to measure their WTP for green freight transport. The stated preferences methods have been applied, which is commonly used in the environmental fields (Bateman et al., 2002). We implement the contingent valuation in that respondents are directly asked for their WTP for an hypothetical change of a specific good (Roche et al., 2010), as it is in our case. We have used an open ended elicitation format exercising alternative binary choice scenarios. In detail we have performed in-depth interview with key actors, with a quality invariant t-shirt that can be bought at an additional cost in the case it has been delivered using an OPD. Socio-economic and attitudinal variables are used to segment the sample and explain the different WTP. Given that public recognition has been proved to be a relevant instrument to increase retailers’ availability to adopt OPD, the paper investigates whether this is also the case for end-consumers. In particular, among others, attributes
tested in explaining the increase in WTP for OPDs are the perceived product value and the image associated with the product due to GUD.

Results and conclusions

Green freight transport represents an important opportunity for pursuing a sustainable development both in transportation system and for the society. The present study has attempted to evaluate university students WTP for purchasing goods from green freight transport. The results revealed that students are quite critical toward freight transport. Some inconsistencies appeared in the students’ perception of the use of alternative freight transport. Although the study has been conducted in only a city in Italy, its findings could be relevant for policy makers. It helps to find out young generations’ perceptions of freight transport and the relating issues on sustainability.

References

- International Transport Forum, 2015. ITF Transport Outlook, OECD.

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