

Sustainable mobility and eco-innovation in transportation economics

Research Keywords:	Sustainable mobility, Innovation diffusion, Green transportation
Reference ERCs (*):	SH 3_8, SH 3_2, SH 1_9
Reference SDGs (**):	GOAL 9: Industry, Innovation and Infrastructure, GOAL 12: Responsible Consumption and Production, GOAL 13: Climate Action
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Research topic

Decarbonization processes and the development of eco-innovations are of utmost importance in modern industries. According to the Sustainable Development Goals of the UN 2030 Agenda, as passenger and freight transports are among the main sources of pollution and energy consumption, more research is required to understand different ways to reduce transport negative externalities, also by influencing the individuals behaviour in their own daily mobility choices and by introducing innovative services and processes. In the transition towards a sustainable and smart mobility, the market penetration of eco-innovations is a key factor to allow for networks externalities among users and to favour the innovation diffusion in the whole community. Within the cluster 5 action of Horizon Europe Programme, innovation efforts in transportation could contribute to achieving a climate-neutral, safe, seamless and smart mobility concept for people and goods. The aim of the research is twofold. First, by using both Revealed and Stated Preferences methods, the behaviour of passenger travellers and firms for freight transport and logistics will be analysed to identify the users drivers of innovation adoption, i.e., attributes influencing the consumers decision to use it (e.g., relative advantage, compatibility, complexity, trialability, and observability). Second, by using multicriteria methodologies (e.g., Agent-Based Models), the research will assess the effectiveness of business strategies and public policies (e.g., price-based or preference-based) that could be designed and implemented to influence the transport users innovation adoption, resulting in behavioural changes and a lower-impact carbon footprint.

Research team and environment

The selected candidate will join the research team on Empirical and Applied Economics Transport, regulation and sustainable development of the Economics Department of University of Insubria in Varese. The Department of Economics, which also offers a PhD program in Methods and Models for Economic Decisions, has several active collaborations with national and international universities, in particular on transport and innovation economics, with University of Hohenheim, University of Jena, University of Bordeaux, University of West England Bristol, Universit della Svizzera Italiana, Venice International University, Politecnico di Milano, Universit di Milano Bicocca, Universit di Padova, Universit di Torino, etc. At the University of Insubria, the PhD candidate will find an open multidisciplinary environment, offering the opportunity to collaborate with researchers of other Departments, such as the Climate Change Research Center, the team of Sustainable Development University Network and the Bio-economy research team. The PhD student will be able to use the library and all the laboratory and software facilities of the Department of Economics.

Suggested skills

The PhD student should have good skills in data analysis and modelling. A background in economic studies and a good knowledge of Stata software and/or other statistical/econometric software are particularly appreciated. Good quantitative skills and transport and innovation economics knowledge are valuable assets. Fluency in English, both written and spoken, is required. Ability and willingness to work in collaborative, multi-disciplinary environment and experience of both quantitative and qualitative research works are also very appreciated skills.