## Commuting and travel behaviour for home-to-work travel in Italy

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The Research Project focuses on the role of Italian commuting and aims to analyse the variables that may influence bike-to-work for home-to-work travel. The literature review conducted highlights gap numbers, such as the lack of studies in Italy on commuting and bike-to-work.

Bike-to-work is widely analysed outside Italy, with quite different variables as reported by scientific studies, and is a driver for the ecological transition of sustainable mobility. And especially in the key to sustainability but also health improvement that the project focuses, so as to associate social, economic and health components in the use of means and understand the impacts that commuting has on individuals. The challenge in Italy is not just a matter of infrastructure, because projects to build bike lanes are ongoing, but understanding the factors of travel behaviour that influence modal shift choices (car to bike).

The underlying premise is to know the aspects and aim for proposals in terms of measures and actions for public and private stakeholders, to serve as a support to identify vulnerabilities and fragilities of Italian mobility and transportation system. To date, few Italian cities have developed a work mobility plan and few companies have started this green path. In fact, the research work starts from the study analysis of the Olona Valley¹, which is based in the province of Varese in Lombardy, where precisely because of the two actions on home-work commuting, the research project aims at the international context by analysing the ISTAT statistical dataset.

The used dataset proposed by ISTAT collects data on commuting, health perception of travel and transportation systems. Thus, it is possible to identify the most significantly impacting factors in the choice of bicycle or private car use for commuting to work, as well as to understand how much influence the level of stress (for very long travel times), user preferences.

The methodology of the research project involves an economic analysis supported by discrete choice models to identify the variables that most influence commuting to propose concrete measures toward car reduction and incentive toward bicycle use, combined with Local Public Transport. The ISTAT<sup>2</sup> dataset also makes it possible to compare different modal shares of commuting.

The added value of the ERSA Summer School2023 is to identify potential and connection to the case study area and understand how to explode travel behaviour analysis and merge it with economic analysis in line with the potential of smart and green cities, reinforcing data analysis with innovative techniques in econometrics.

During the summer school, the goal is to present the first results analysed the 2021 longitudinal panels on Italian commuting and begin to build a framework of sustainability measures with a territorial economic and transportation approach.

<sup>&</sup>lt;sup>1</sup> Olona Valley is a large industrial area close to the Olona River in the province of Varese, located in northern Italy Lombardy. the Moveon (Light mobility in Valle Olona) project, is supported by Fondazione Cariplo which promotes the sustainable use of bicycles. The research project is pertinent to Action 4 of the project.

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