

Abstract

The climate change is the challenge that our society has to face in the next years. All human activities are involved to reduce their Green House Gas emissions, included the transport field. In the European Union agriculture, industries, residential and services obtained, in the last twenty years, a greater reduction of their emissions than that recorded in transport sector. Nowadays transport is cause of a quarter of the produced Green House Gases. Among the transport modes, road transport is responsible of 70% of all emissions. Transport still depends too much from fossil sources: the 94% of its energy is produced with oil.

The current mobility is not sustainable and its change immediately required, but European Commission and national governments are undertaken into huge projects (like TEN-T Network), which require large investments and long time before to see effects and results. For this reason, at the same time, other actions are committed by European Union and States to improve mobility together with the current infrastructures. One of these measures is the promotion of integrated mobility: all modes of transport (road, railway, cycle path, etc.) are seen as one single network and people travel using them, changing several modes of transport. The aim is the optimisation of the current transport services and the reduction of emissions, thanks the increase of soft modes and public transport use. The integrated mobility has a main drawback: it requires a change of travellers' habits about the modal choice. A deep analysis of the travel behaviour is necessary for understanding how to promote this change.

The research is carried out in the above context and the main objectives of the work are: the analysis of the attitudes influences on the travel behaviour and the research of the most important constraints to implement a more sustainable mobility. The adopted methodology is composed by two steps: the collection of data and their subsequent analysis. The information is provided by a survey, Computer-assisted web interviewing (CAWI), and it is called "Come Ci Muoviamo". The design of the web-questionnaire includes an original contribution: the General Ecological Behaviour (GEB) questionnaire is modified on the base of previous applications to save respondents' time for new items, without excluding the previous information. The study area of the survey is the Piedmont region and survey administration collected more than 4.500 answers. The data analysis starts with an Exploratory Factor Analysis (EFA) that allows to discover the major latent constructs on the attitudinal variables collected in the survey. Then, a Cluster Analysis (CA) is carried out on the factor scores computed by EFA. The obtained clusters are the base of the new market segmentation based on travellers' attitudes. The description of the new profiles is completed with the social-demographic information of respondents. The final aim of this new market segmentation is the definition of some guidelines and options to policy makers and transport operators to be more efficient to foster a modal shift towards more sustainable modes of transport.

The attitudinal latent constructs and the new travellers' profiles are compared with the first market segmentation carried out seven years ago in a restricted part of the study area. Notwithstanding the different sample and area, there are several common outcomes, which corroborate the methodological approach. Indeed, five profiles are found and four of them are comparable with previous ones for their attitudes and travel behaviour. With this new market segmentation, it is possible to explain the modal choice of the respondents. At the end of the

analyses some suggestions to policy makers and transport operators are provided, tailored for each profiles.