The stated preferences approach in the web based surveys: the discrete versus the continuous attribute-based stated choice method

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Abstract

The objective of the paper is to investigate the effect on data reliability of the design of Stated Preferences (SP) experiments. At this aim a survey has been planned and administered via web to a sample of 2,840 respondents to compare the discrete attribute-based stated choice (SC) method with a new SP technique, the continuous attribute-based SC method. This technique allows the respondents to define their best transport pattern, choosing the desired values of different transport attributes, through sliders moving on a continuous scale, and observing the effect of their choices on the travel cost. In this way, the respondents face only one game reporting a full factorial design, avoiding the fatigue effect and being stimulated by an appealing layout. Comparing each respondent's choice in the two methods, we saw that 14% of respondents have been wrong, presumably due to hurry and carelessness and, on average, the 16% of respondents has chosen the scenario in the game cards that was not the most similar to that selected through the sliders' movements, but that was put at the first place on each game and had the real or apparent maximum utility. The internal consistency of the respondents tends to strongly decrease changing context of choice (game cards versus sliders). The data analysis has showed that the new tested method is simpler, cheaper, induces fewer mistakes and less fatigue on respondents and, in addition, it helps in understanding each person's willingness to pay.

Keywords: Survey methods, stated preference, web surveys, continuous attribute-based stated choice

Travellers' profiles definition using statistical multivariate analysis of attitudinal variables

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Abstract

The reduction of car use is considered an important priority by policymakers who try to find new strategies for addressing the travel demand towards more sustainable modes. The aim of this research is to characterise people's behaviour using Exploratory Factor Analysis for defining latent constructs on which derive the travellers profiles. Data coming from an attitudinal travel survey administered to a representative sample of the population of Alessandria (Italy) are used to this effect. Six factors have been defined on which the k-means Cluster Analysis has been applied finding four travellers' profiles. The resulting clusters are quite informative and policy relevant, highlighting the importance of attitudinal items. The results show that the travel pleasure addicts manifest the highest attitude to change mode while time addicts and timeservers show the highest car dependence and low intention to use alternative modes. Even if the green consciences feel the importance of the environment and are willing to pay to preserve it, they do not seem available to change habits and abandon the car, marrying the concept "who pollutes pays".

The research confirms that we can expect a strong attitude-behaviour correlation if the measures of attitude and behaviour involve exactly the same action, target, context, and time elements. In fact, while the general attitudes reveals wider margins in modal diversion, the specific attitudes towards the mode used in commuting trip are quite coherent with the behaviour, that is the use of car for the majority of respondents.

Keywords: travel behaviour, market segmentation, multivariate statistical analysis, attitudes