

Discrete choice modelling with latent variables: some new findings

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Abstract

The formulation of hybrid discrete choice models, including both tangible alternative attributes and latent variables associated with attitudes and perceptions has been a major topic of discussion in recent years. To estimate models with both kinds of variables, two methods have been developed: the sequential approach, where the latent variables are built before their integration with the traditional explanatory variables in the choice model, and the simultaneous approach, where both process are undertaken together. The latter method has seen very few applications due to the complexity associated to its estimation.

In this paper we compare the results obtained using both approaches for an urban modal choice context with several modes; we found striking differences that had not been found in earlier studies.

Biography

Professor Juan de Dios Ortúzar is currently visiting the Centre for Transport Studies. He is Head of the Department of Transport Engineering and Logistics at the Catholic University of Chile in Santiago, where he has been a full-time academic since 1972.

His research interests include discrete choice modelling techniques and their application to determine willingness-to-pay for reducing transport externalities such as accidents, noise and atmospheric pollution.