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Abstract Template

Paper title: A Binary Logit Model to Integrate Economic, Environmental and Social Factors for Formulating and Prioritising Transport Policies

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Abstract (300 words maximum):

Transport is recognised as one of the important parts of human life. One of the core issues of this study is to develop a model that assesses individuals' responses to transport policies using revealed and stated preference data. The dependent variable of this model is the choice of a residential location in regional Western Australia under different transport situations with regard to various prices of fuel, property, etc., pollution situations and other factors. The model will be used to determine the weights of economic, environmental and social factors in formulating transport policies.

A universal choice set, which contains various decision scenarios with respect to those economic, environmental and social factors, will be developed for a binary logit model to estimate the reactions of individuals, in which marginal effects are the marginal changes in the expected probability of choices. Another important part of the logit model, the property of independence from irrelevant alternatives (IIA), is also analysed. In this study, eight attributes are classified as three subsets: economic, environmental and social subsets. The IIA test is applied here to check the correlation between alternatives in different subsets. The attributes of alternative choice items are combined to create profiles and the respondents are asked whether they would choose a residential location under a particular transport policy. A mail-out survey titled "Region Policy Response Survey 2006" is used to get people's responses to the transport policies in nine regions of Western Australia! Meanwhile, this model also analyses individuals' socio-demographic factors such as income, etc.