Empirical analyses of a choice model that captures ordering among attribute values - DTU Orbit (09/11/2017)

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In most choice models, the evaluation of attributes depends on differences of attribute values. Some research, mainly in marketing and psychology, suggests that the differences do not give the full picture of how decision makers evaluate choice alternatives, e.g. some decision makers may penalise an alternative additionally because it has the highest price. In this paper, we specify a discrete choice model that takes into account the ordering of attribute values across alternative. This model is used to investigate the effect of attribute value ordering in three case studies related to alternative-fuel vehicles, mode choice, and route choice. In our application to choices among alternative-fuel vehicles, we see that especially the price coefficient is sensitive to changes in ordering. The ordering effect is also found in the applications to mode and route choice data where both travel time and cost sensitivities are affected by the ordering. Overall, the ordering effects have implications for both parameter estimates and the evaluation of willingness-to-pay measures.

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