The role of household members in automobile choice: Does it matter who is interviewed?

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Abstract

While stated preference is used extensively to model decision making process of an individual, make probabilistic predictions about their behaviour and estimate their willingness to pay, many choices are not made by individuals alone. Groups of individuals are often required to make decisions, be it residential location, choice of vacation destination, what restaurant to eat at, or what automobile to purchase. In determining the final outcome for each of these situations the preferences of many individuals are at play; being traded against one and another until an optimal group solution is reached.

How the interaction of individual group members influence the group's decision making and preference formation processes represents an important dimension of our understanding of economic behaviour. This has resulting in recent calls within the choice modelling literature to examine the role that social interactions play in terms of preference formation. For example, both McFadden (2001a,b) and Manski (2000) have made statements to the effect that as a field of research enquiry, this area should be given high priority by choice modellers.

Research by Hensher introduced the idea of Interactive Agency Choice Experiments (IACE) (Hensher and Chow 1999; Brewer and Hensher 2000; Hensher 2003) in which a network of agents assess a common set of alternatives either sequentially or simultaneously. This existing methodology represents the general framework for this proposed research, however additional innovations designed to test for further interaction effects amongst group or network members are tested.

In this paper, we extend the IACE methodology by capturing data not only on individual preferences and their subsequent role in the formation of group preferences, we also collect comparative data on group choice. Given the data, we demonstrate not only the direct influence on choice that each individual member has via the interactive component of the experiment, we also examine choices made by groups whose members consult directly whilst in the decision making process. In the context of automobile choice we are able to demonstrate how individual preferences are modified through negotiation, and these choices are compared to those made by groups whose choices are made in a discussion oriented environment. We are also able to model how revision of own influences may occur given perceptual and attitudinal shifts on the importance of attributes for an alternative arising from discussion with other group members and how changes in cross-member influences result from discussion with other group members, occurring when the true preferences of other members are clarified.