

Choosing for yourself versus choosing for your family: identifying differences in preferences using choice experiments

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Extended abstract

Until recent years most environmental valuation studies have asked people to evaluate their willingness to pay for specific initiatives based on either their individual preferences or their preferences as a representative of their entire household. The issue of whether people in fact do respond as households when asked in this manner have recently received attention (Environmental and Resource Economics special issue, 2009). Some studies have focused on the budget constraint – whose money do people consider. Another aspect is whose utility enter in the utility function. This latter is what we address in this paper.

In applied economics the unitary model has been widely applied as a way of simplifying how to deal with households. In the unitary model the household is believed to act as a single individual maximizing one utility function subject to one budget constraint. However, a number of studies show that the household often does not act this way.

Other strands of literature focusing on the decision-making process in the household have also shown that the household as an entity in relation to decision-making is complex. Several studies show that when couples are asked to choose jointly they are likely to make more ‘extreme’ choices as opposed to the choices they make as individuals. Jointly negotiated choices are often not averages of the individual choices of the couple as what otherwise could be expected, and when people choose as couples they become more risk-averse than when they choose as individuals.

In this paper we set up a model where we assume that when making a choice as supporting an environmental programme, individual N seeks to maximize his/her utility:

$$\max_j U_N \left(y_N - t_j, \sum_1^{N-1} \gamma_n y_n, x_N, \Delta z_j, \Theta_N \right) + \sum_{n=1}^{N-1} \omega_n U \left(y_n, -t_j, x_n, \Delta z_j, \Theta_n \right)$$

The first term is respondent N 's utility, and the second term is the sum of all the other members in the household's utility. ω is the weight which respondent N ascribes to the utility of each member of the household, and γ is the weight he ascribes to his own utility. t_j is payment for the environmental good j , x is utility of consuming other goods, y is income, Δz_j is the environmental change, and θ is socio-demographic characteristics of the individual. In this paper we keep the payment vehicle constant as a household payment but ask people to consider only their own (the first term) or the entire household's utility (both the first and the second term). Thereby we aim at

identifying the size of the second term. This is compared with a situation where we don't ask them to take any of these hats on (i.e. the typical way of asking question).

These questions are asked in a choice experiment of valuation of forest externalities in Denmark. 1,643 respondents (representative for the Danish population) are split into the following groups:

Group 1 are not asked to take on any hats in 6 choice sets. This is meant as a reference group

Group 2 are first asked 6 choice sets where they only consider their own preferences and then 6 choice sets where they are asked to consider preferences of themselves as well as of other household members.

Group 3 are asked the same as group 2, but in reversed order.

Group 2 and 3 were asked various questions regarding distribution of utility within the household (e.g. whose utility to consider when buying goods for a family budget, e.g. grocery, a new car, clothes, etc) before the choice sets. Group 1 got the same questions but after the choice sets so as not to affect the choice. These questions were used to construct an "individuality index".

The analysis of data is twofold: First WTP's for different attributes are compared across the three groups and across individual vs household questions. Though some differences are found they are not as pronounced as expected a priori.

Next we use the individuality index to explain differences. We find that it is able to explain some of the heterogeneity (eventhough there may be an endogeneity problem with this approach). The analysis shows that people who often consider the preferences of all the members in the family when making consumption choices have higher WTP for the provision of use and non-use environmental goods from forest areas.

We also analysed the heterogeneity in the individual's difference between individual and household preferences.