

# **Dissertation Abstract**

## **Hypothetical Bias in Contingent Valuation**

Hypothetical bias has proved to be a major drawback for stated preference survey techniques such as the contingent valuation method (CVM). To identify the underlying cause and nature of hypothetical bias researchers have studied both induced value as well as homegrown goods. In the first essay an induced value format is used to examine the effect of respondent uncertainty on hypothetical bias. As no hypothetical bias is observed in spite of the induced uncertainty, we question the existence of hypothetical bias in induced value goods. This assertion is tested in the second essay where induced value goods are compared to homegrown goods. We find that hypothetical bias is non-existent in induced value goods but emerges when homegrown goods are introduced. In the third essay we assess the potential of a relatively new prediction based format for reducing hypothetical bias. When prediction estimates are compared to values received from the traditional CVM, we observe predicted values to be significantly lower. In addition we also find that people are able to correctly predict hypothetical bias in others.

### **Essay 1: Uncertain Induced Values and Hypothetical Bias**

Uncertain responses in stated preference valuation are often thought to be associated with hypothetical bias. However, the relationship between respondent uncertainty and hypothetical bias is not well understood. The induced value experiments conducted in this study suggest that there is no relationship between certainty of induced values and either respondent's stated level of certainty or hypothetical bias.

### **Essay 2: Induced and Homegrown Values A Comparison to Test for Hypothetical Bias in Contingent Valuation**

Past studies of stated preference survey techniques such as the contingent valuation method have confirmed the presence of hypothetical bias for both public goods and private goods. Despite abundant research, there is no consensus regarding the underlying causes of hypothetical bias. Separate studies involving homegrown value and induced value experiments have been used to identify and isolate potential sources of hypothetical bias. While hypothetical bias has been observed consistently with homegrown goods, results are not so clear with induced value goods. The lack of hypothetical bias in the induced value experiments conducted by Taylor, et al. 2001 leads them to conclude that hypothetical bias may not be related to value elicitation; rather it may be a value formation problem. Using a within-subject design, this paper tests the value formation hypothesis by comparing the bias in induced and homegrown value settings. Subjects were first asked to indicate their 'willingness to pay' in an induced value setting. Consistent with Taylor, we find no evidence of hypothetical bias for three commodity types (public good, private good, and publicly provided private good). However, when these same subjects were then asked to value a specific good with no pre-assigned induced value (using the same elicitation mechanism), hypothetical values are roughly double actual payments in all three cases. These preliminary results support the hypothesis that the process of forming values in a homegrown setting may be a key contributor to hypothetical bias.

### **Essay 3: A Comparison between the Traditional Contingent Valuation Methodology and Prediction Mechanism**

The traditional contingent valuation methodology (CVM) asks individuals to provide their personal opinions or values for some commodity. This stated preference format has resulted in the continual appearance of hypothetical bias. Literature in psychology suggests that such bias is prominent when individuals are asked to provide their own values, but significantly diminishes when asked to predict others' values. In this study we test to see if hypothetical bias disappears when traditional 'willingness to pay' questions are replaced by prediction based questions. According to the results, we observe hypothetical bias in both the traditional CVM and the prediction mechanism. Although prediction estimates were significantly lower than self-estimates, it was observed that individuals are able to correctly predict the magnitude of hypothetical bias in the traditional CVM.