

Title: Temporal Stability of Preferences and Willingness to Pay for Natural Areas in Choice Experiments: A Test-Retest

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Abstract: The application of choice experiments (CEs) in the environmental valuation literature has increased exponentially over the last two decades. The inclusion of site characteristics give CEs a distinct advantage over the use of other stated preference methods for benefits transfer purposes. However, the temporal stability of CEs has hardly been tested in the literature. The main objective of this paper is to test the temporal stability of stated preferences and willingness to pay (WTP) values from a CE in a test-retest. The same group of participants was asked the same choice tasks in an internet-based CE conducted twice with a one year interval without interviewer interference. We examine choice consistency at individual choice task level and transferability of the underlying utility function and associated WTP values aggregated across choice tasks and individuals at choice model level. The results show that choices are consistent in 57 percent of the choice occasions. Comparison of the choice models over time shows that the estimated preference and scale parameters are significantly different, suggesting that choice behaviour changed between the two surveys. Differences between marginal WTP estimates for individual attributes are lowest for the spatial attributes included in the CE (15%) and highest for the biodiversity indicator species richness (92%). Transfer errors based on mean WTP for different composite policy scenarios cancel out and are lower, varying between 18 and 34 percent for the scenarios examined in this study. Hence, although we detect significant differences in choice behaviour and underlying preference structure over a one year period, estimated mean WTP values for different policy scenarios remain reliable.