

## **The role of respondents' comfort for variance in stated choice surveys: evidence from a SCUBA diving case**

### **ABSTRACT**

Preference elicitation among outdoor recreational users is subject to measurement errors that depend, in part, on survey planning. This study uses data from a choice experiment survey on recreational SCUBA diving to investigate whether self-reported information on respondents' comfort when they complete surveys correlates with the error variance in stated choice models of their responses. Comfort-related variables are included in the scale functions of the scaled multinomial logit models. The hypothesis was that higher comfort reduces error variance in answers, as revealed by a higher scale parameter and vice versa. Information on, e.g., sleep and time since eating (higher comfort) correlated with scale heterogeneity, and produced lower error variance when controlled for in the model. That respondents' comfort may influence choice behavior suggests that knowledge of the respondents' activity patterns could be used to plan the timing of interviews to decrease error variance in choices and, hence, generate better information.

**Keyword:** Choice heterogeneity; Interview timing; Survey implementation; Scale parameter models