

## **Estimating Risk Attitudes in Conventional and Artefactual Lab Experiments: The Importance of the Underlying Assumptions**

### **Response to Reviewer**

We would like to thank you for your thoughtful and detailed critique. Here is a list of responses to your comments.

**Comment:** The authors state that the risk elicitation task was conducted after an auction task. Therefore results from the auction task could potentially influence decisions made in the risk elicitation task (e.g. assuming that subjects care for a minimum fixed amount of money they want to take home from the experiment)

**Response:** The reviewer is correct. This is the exact reason why we included a dummy variable in our models (variable *ExpCharacter* in tables 3 and 5). Therefore, we are able to control for the influence of this specific characteristic in the experimental design.

**Comment:** By using different start-up fees for the two parts of their sample, results in the risk elicitation tasks could be influenced (e.g. again assuming that subjects care for a minimum fixed amount of money they want to take home from the experiment). The results presented in the paper support this point. The consumer group that was endowed with a greater initial amount also displays less risk aversion in the HL- task.

**Response:** Different fees were used with the aim to approximate the level of the standard compensation fee for these subjects' pools, given their income and the opportunity costs they faced for participation. Endowing both pools with the same compensation would have resulted in students receiving a higher, relative to their income, initial amount compared to consumers. This could have had an unintentional effect on risk taking behavior. However, to control for the potential effects of this variation in the show-up fees between the two subject pools, the variable (*TotFee* in Tables 3 and 5) is included in the econometric analysis.

**Comment:** Does the analysis rely only on observations that answer the HL- task in a consistent way (no multiple switching)?

**Response:** There was no multiple switching in our data.

**Comment:** Before presenting regression results it would be helpful for the reader to get some descriptive statistics. Especially a more thorough analysis of raw choice behaviour would be interesting (E.g. are the differences of proportions presented in Figure 1 statistically significant? Is there a significant difference in mean switchpoints?) Also a within subjects comparison of the three different treatments (HL, HLx100, HLframed) would be interesting.

**Response:** We have now added an analysis comparing the number of choices from Option A (which corresponds to the switch-point) in the beginning of section 4, which now reads:

“A t-test of the number of times option A was chosen across each risk aversion task, shows that the differences are statistically significant at the 10% level for the x1 and the x10 HL tasks (p-value=0.062 and 0.078, respectively) but not for the framed task (p-value=0.236). This implies that the gap between the lines in figures 1a and 1b is statistically significant but not for figure 1c. An ANOVA test of whether the three HL tasks (x1, x10, framed) elicit different switch-points (i.e., different number of times the A choice was selected) fails to reject the null (p-value=0.206).”

**Comment:** Regression Tables 3 and 5: Using both age, education, initial endowment, ExpCharacter and the consumer dummy as controls in the estimation, potentially introduces high levels of colinearity into the models as those variables are most likely highly correlated (given information in Table 2). As robustness checks the results section should contain tables with less control variables (e.g. only a consumer dummy).

**Response:** The reviewer is correct. The age variable and the consumer dummy are highly correlated. We revised our estimations and only used the age variable in the estimations, since this variable practically differentiates the two subjects pools. We opted to use the age variable and not the consumer dummy, because a continuous variable is more informative than a dummy. In addition, we estimated models with and without demographics. Tables 3 and 5 show that results are fairly robust to including/excluding demographics.

**Comment:** The authors make the claim that using a CRRA function and EUT leads to results that indicate that general population subjects are more risk averse than student subjects. This claim is not necessary supported by **Table 3**. The effect of the consumer dummy might easily be outweighed by the age effect that goes into the other direction. A

comparison of predicted values for  $r$  might be of more value to support the author's claim (Unless Table 4 contains these values and has a misleading heading). A different strategy might be to estimate two models (one only for the student sample and one only for the generation sample) separately.

**Response:** As mentioned above we revised our estimates based on your previous comment. We find that consumers appear on average less risk averse than students (which also confirms the graphs) but that correct characterization of risk preferences critically depends upon the underlying assumptions. Table 4 (page 10) and Figure 2 (page 11) report predicted values. We rephrased the heading for the table and the figure.

**Comment:** The authors make the claim that using a "correct" specification differences in observed risk attitudes between conventional and artefactual samples are eliminated. Even though according to their analysis this might be a valid claim, clearly raw choices made by the student sample are different from those made by the general population sample.

**Response:** see our previous response.

**Comment:** As noted in the paper, there is some related literature (e.g. Harrison et al. 2007; Andersen et al. 2010). Comparing results of raw choice behavior and estimations could serve as another robustness check.

**Response:** In the revised version of the paper we also compare raw choice behavior with our estimation results and find that they are consistent. See page 5-6 in the results section. The two papers mentioned by the reviewer are already cited in the text.