Experienced vs. Described Uncertainty with Expert vs. Inexpert Decision-makers

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Extended Abstract

We replicated Abdellaoui *et al.* (2011) experiment on experienced vs. described uncertainty with two special subject pools: "expert" and "inexpert" decision-makers.

The former are 67 analysts/researchers – 35 in the experienced-based treatment and 32 in the description-based treatment – with a strong expertise in probabilistic-related problems (Statisticians working for Eurostat, and Computer Scientists, Mathematicians and Physicians from several Spanish Universities: average age 45, at least 15 years of working experience in their own field).

The latter are 60 undergraduate students – 30 in the experienced-based treatment and 30 in the description-based treatment – with supposedly no solid background and expertise in Mathematics and Statistics (1st and 2nd year students in Humanities, Law, Philosophy, Psychology and Touristic Services, at University of Valencia: average age 20).

Participants in Abdellaoui *et al.* (2011) experiment are 61 undergraduate students in Management. Hence, their subject pool could be thought as in between the two subject pools in our experiment in terms of level of expertise in probabilistic-related problems.

Besides the subject pool, our experimental design has **three** methodological differences with respect to Abdellaoui *et al.* (2011): one session with several subjects for each treatment-sample combination, rather than individual interview sessions; the two decision settings are proposed at a between-subject (rather than at a within-subject) level; certainty equivalents elicited through a BDM mechanism (one choice per task), rather than with a bisection procedure (several iterative choices per task).

Following de Palma *et al.* (2014), we analyze experimental results through econometric tools which can shed light on the experience-description gap: Preliminary data analysis shows a less pronounced experience-description gap for "expert" subjects, with the "black swan effect" (under-sensitivity to rare events) being significantly smaller for "expert" rather than for "inexpert" subjects.

We show how an extension of Tversky & Kahneman (1992) cumulative prospect theory model – with an additional parameter measuring the decision-maker's "expertise" – can explain the main regularities in our experimental results.

References

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