

A referee report on the dissertation submission by Vítězslav Babický titled “Essays on Fairness, Inequality, and Uncertainty” considered for award of a doctoral degree at CERGE-EI

I have been asked to write a referee report on this dissertation submission. It is my pleasure to do so.

Overall, I think the submission warrants award of a doctoral degree. The second of the three chapters has already been published in a peer-review journal. My comments below should therefore be understood as suggestions for further improvement of the yet unpublished chapter 3 before its submission to a journal.

The body of the dissertation consists of 3 chapters, each constituting (or aspiring to constitute) an independent research paper. A unifying theme of all three chapters is the study of social preferences. The first chapter, published as a CERGE-EI working paper, is a theoretical model of giving in a dictator game complemented with some observations based on pilot experiments. This paper lacks a systematic experimental data collection effort, though. This weakness is remedied in the second chapter, which is predominantly an experimental paper based on the theoretical results from the first chapter. This paper, which is joint work with Andreas Ortmann and Silvester Van Koten, has already been published in *Games*, a peer-reviewed journal. The third chapter investigates whether positive voluntary contributions in the linear public goods game routinely observed in experiments are driven predominantly by reciprocity to contributions of the others or by aversion to inequality in the final payoffs. This paper is joint work with Vilém Semerák.

Comments on chapter I:

The paper investigates giving in the dictator game when the pie size is *ex ante* unknown. *Ex ante*, the dictator chooses the share of the pie, whatever its size is *ex post*, to be given to the recipient. Theoretical analysis focuses on how the choice of the share responds to risk preferences of the dictator over own material payoff when the dictator is sufficiently averse to proportional inequality. The principal finding is contained in Proposition 1. Whether an increase in the risk leads to a higher or lower giving share depends on whether the coefficient of relative risk aversion exceeds unity or falls short of it.

The author then refers to some empirical observations based on pilot experiments. As such, the paper is best seen as a theoretical underpinning of a systematic data analysis presented in the following chapter.

Comments on chapter II:

This chapter carries out a systematic experimental investigation based on the theoretical analysis presented in the previous chapter (the theoretical analysis is reproduced in the paper again). This chapter is joint work with Andreas

Ortmann and Silvester Van Koten. Because it has already been published in *Games*, so I do not further comment on this chapter.

Comments on chapter III:

This chapter, which is a joint work with Vilém Semerák, analyzes to what extent voluntary contributions in the public goods game are driven by reciprocity as opposed to inequality aversion. To differentiate the two motives, the authors introduce heterogeneous endowments. The idea of identification is based on whether the players want to equalize their contributions to those of the others (which the authors associate with reciprocity), or whether the players want to equalize their final payoffs to those of the others (which the authors associate with inequality aversion). The authors blend these two social preference elements together with payoff concern into a three-piece additively separable utility function. The authors also distinguish between inequality aversion of an absolute type and one of a proportional type.

In the experimental design, endowment inequality is based on responses to a general knowledge quiz and is mostly derived from rank of one's response score in the group of subjects participating in the session. The authors collect both unconditional and conditional contribution decisions using the strategy method. The latter data allow the authors to identify a conditional contribution schedule for each subject with the idea that the shape of this schedule distinguishes whether the subject, if contributing a positive amount, is driven mostly by reciprocity (zero intercept, positive slope) or inequality aversion (intercept positively related to endowment, positive slope).

Overall, the authors find empirical support for both reciprocity and inequality aversion.

I like the general idea behind the paper: try to identify what sort of social preference motivation drives positive contributions in the public goods game. However, to get a better grip on the question, I would suggest the authors run a few additional sessions in the future in which they try to simplify the design of the experiment. In particular, apart from the issues self-reported by the authors on pages 70 and 71, I would focus on the following details:

(1) Make endowment inequality completely exogenous. In order to create entitlements to the endowments, simply tell subjects they will be rewarded for their performance in the quiz, without providing further details.

(2) As pointed out by the authors, a conditional contribution response is likely to mix together reciprocity and inequality aversion. Wouldn't it be better to separate the two by facing subjects with computer-generated contributions of the others as one of the treatments? In this treatment, inequality aversion should play the role, but not reciprocity.

(3) In order to gain more power, I would focus either on the absolute contribution case (this would be my choice) or on the relative contribution case, but not both.

(4) Why complicate the design by fixing the level of the public good and introducing a forced complementary tax collection? If there is a possibility to collect taxes, why do we need to consider voluntary contributions? More importantly, though, subjects have an indirect way of forcing a degree of equality in contributions by contributing little. This element of strategizing is usually absent from laboratory implementations of the linear public goods game. Then, on top, why complicating the design further by efficiency/inefficiency of the tax collection process? I would completely omit these elements from the design.

(5) I appreciate the authors' effort to check for the consistency of the unconditional contribution and the conditional contribution based on the stated belief about the average contribution of the others. However, apart from the noise that the authors worry about, "inconsistencies" could also be driven by hedging behavior (since belief elicitation is incentivized by money). For example, maybe I contribute a lot because I expect the others to contribute a lot, but to hedge my payoff, I report that I expect the others to contribute little. So I would de-stress the consistency checking discussion in the presentation of the results, or, alternatively, design belief incentivization in a way to avoid the hedging problem.

A small comment: there are several missing references in the text, for example on pages 63, 66 and 87.

Conclusion:

As I have mentioned at the beginning, the submission warrants award of a doctoral degree, in my opinion. I hope that my comments can improve the quality of the third chapter before its submission to a journal.