Review of: "The Uncertainty of Fairness: a Game Theory Analysis for a Debt Mutualization Scheme in the Euro Area"

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Potential competing interests: No potential competing interests to declare.

The paper deals with an interesting and empirically highly relevant issue for the treatment of which the game theoretical approaches used in the paper are in principle quite appropri- ate. Despite my positive overall assessment of the paper, the presentation chosen by the authors does not seem to be well done. My objections are as follows:

- The three general theoretical models, which are presented in Section 2 of the paper, are more or less reproduced in its original version and not in the authors' own words, and thus do not provide a good preparation for the models of debt mutual- ization that later are developed in the paper. This in particular is the case for the "in- centive driven approach" in Section 2.2. This makes understanding more difficult and, as the discussion of topologies in footnote 6 on p. 5 of the paper, even distracts from the paper's actual topic. Moreover, some more detailed comparison of the three approaches would be helpful already in Section 2.
- For the interesting ultimatum game of Section 3.1 a more explicit description of the sequential structure of the game is required, and the solution of the game should be made more explicit by backward induction. I would recommend to present the then resulting subgame-perfect equilibria and their dependence on the inequality aver- sion parameters and in a table that also should be interpreted in some detail. Moreover, it should be explained why "ultimatum game" that appears in the sec- tion's title matches its content.
- The explanation of the dynamic prisoner's dilemma in Section 3.2 is much to brief and therefore very hard to understand. E.g., one cannot see how the expectations of the players are formed, what is exactly meant by manipulation in the context of the model and how probabilities come into play.
- The exposition of the otherwise nice and inspiring gift-exchange game in Section 3.3 needs a lot more elaboration, too. E.g., I cannot see where the Union's "believed fairness function" (12) comes from, how it is exactly related to the general utility function in (10) and why it is indexed by a star. By the way, what is meant by "mu- tual-min" in the last line of p. 14? More discussion is also required concerning the empirical background of the model. So, at the bottom of p. 14 it is implicitly stated that the Union would suffer "from spread reduction due to debt convergence". Even though this is a position frequently held in the public discourse it is by far not self- evident so that more on this issue has to be said in the paper.
- At the end of the paper some comparison and joint assessment of the models dealt with in Section 3 would be desirable.

To summarize: To make the paper more reader-friendly a thorough revision is necessary, which inevitably will make the paper much longer.