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Published by the American Economic Association

Erzo F.P. Luttmer, Editor

April 7, 2020

Prof. Thomas Douenne Paris School of Economics 48 Boulevard Jourdan Paris 75014 France

AEJPol-2020-0092 "Yellow Vests, Carbon Tax Aversion, and Biased Beliefs"

Dear Prof. Douenne,

Thank you for submitting your paper "Yellow Vests, Carbon Tax Aversion, and Biased Beliefs" to the *American Economic Journal: Economic Policy* using the fast-track option from the *American Economic Review*. I read all three *AER* referee reports, the decision letter of Roland Bénabou, and the cover letters of R1 and R3 (R2 declined to share their identity and cover letter with *AEJ Policy*). I decided to invite R1 from the *AER* to evaluate the revised paper. This referee is also R1 here. In addition, I solicited the advice from two additional experts, and carefully read the revised paper myself.

The referees and I all agree that you wrote an interesting paper on an important topic. Despite the revisions over the *AER* version, we still struggled with the exposition of the paper, in particular how exactly the experiment was run and the specifics of the empirical approach. The referees offer somewhat mixed assessments on the fit of your paper for *AEJ Policy* and the degree to which they judge the results sufficiently convincing. R1 sees many merits, but ultimately advises me to reject the paper. R2 and R3 see quite a few limitations, but think some of them can be addressed and others can be accepted given the importance and policy-relevance of the topic. My own assessment is closer to R2 and R3, and I am therefore happy to invite you to submit a revised version of the paper.

I believe the referees' comments were all on point and mutually consistent. Hence, I encourage you address them all. Please include a detailed response letter in which copy & paste the referee reports and my comments below, and explain how you responded to each point.

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1. Exposition

Based on your exposition, it took me a lot of effort to understand the experiment and your empirical approach (much more than the typical paper that I give an R&R). Most referees also made comments to this effect. I don't want to publish papers that readers have trouble understanding, so the exposition should be significantly improved in the next round to proceed at *AEJ Policy*. Below I offer many specific comments on exposition, as do the referees.

However, you should try to improve the exposition beyond the specific suggestions we offer. It is hard, but try to imagine what someone unfamiliar with the experiment and paper would understand based only on the information provided in the paper up to the point in paper where the person is currently reading, and try to identify ways to make sure you only say things that make sense given the reader's understanding at that point. This point is unrelated to whether one is a native English speaker or not.

Some of the issues with the exposition appear to be related to the fact that you're not native English speakers. I'm sympathetic to that (I'm not a native English speaker myself, and I struggled for many years to improve my French). Still, I suspect it would be very helpful if you are able (and have the funds) to hire a professional English language editor to help you improve the writing.

2. Comparing effect sizes is not meaningful when treatments are not comparable.

It is not clear to me that one can meaningfully compare the size of the effect of "self-interest" to size of effect of "environmental concerns" or "distributional concerns." Surely, this must depend on scaling and definition of these variables. I would advise you to eliminate such comparisons and, if you still do them, to make clear these comparisons are not general but specific to the way the variable was defined in the specific context. R3 makes a related point in their comment 6.

3. With regards to the comments of R1,

I think you should clearly acknowledge the limitations they list as limitations of your study. I accept that in your setting soliciting beliefs and preferences in an incentivized way would have been hard or impossible, but you can still make clear that we can't be sure that people report their true beliefs and that it is possible that they misreport beliefs or preferences in order to influence policy (or for other reasons). Second, R1's point about you not being able to precisely pin down the mechanisms is valid. I suggest you include a section called something like "mechanisms" where you lay out the mechanisms offered by R1 (and possibly other mechanisms), and where you indicate that a different research design would be needed to conclusively distinguish between them. Also, I very much agree with R1's advice not to overclaim. In short, I thought R1 provided a clear vision of the paper's main contributions and



limitations, and I think you should try to incorporate this vision in the revision.

4. Figure 2.1

This figure needs a note that explains any abbreviations, but to the extent possible, change the figure so that as few as possible abbreviations are needed. TVA is VAT in English.

Perhaps, the figure can be further improved by having a title above each block or set of ovals. E.g., above the first ovals, the title could be "Priming on Climate Change and/or Particulate Matter."

Words in the rectangles could be more informative, making clear whether the questions measure beliefs or support for the policy.

Shouldn't the figure also have an oval (which is common to all) that indicates that you describe the hypothetical Tax & Dividend policy to the respondents, before there is a rectangle for asking them about initial perceptions of this policy?

The text says "The priming that 'scientists agree that a carbon tax would be effective in reducing pollution' is randomly displayed or not before asking whether the reform would be effective in reducing pollution and fighting climate change," but I don't see ovals for this priming before the rectangle with "Tax and Dividend Initial," which I thought had the initial perceptions of this policy. Please adjust the text and/or figure so that the two are consistent.

Please also make sure words in the figure are as informative as possible. E.g., "feedback" begs the question "feedback on what." Perhaps the title above these ovals should be "information intervention on Tax & Dividend Policy" and the ovals should be "progressivity" and "self-interest."

The text mentions "... four alternative reforms. Each respondent is given just one of them, which differs from the main reform only in the way revenues are recycled," but I don't see ovals in the figure for the randomization of which of the four reforms is shown to them. I didn't understand the ovals for the intervention "no adult targete," "one adult targeted," "two adults targeted," until I had read Section 5. The text in Section 2 describes variation in the income cutoff of targeted dividends, but not how you randomize the number of adults targeted.

You know your experiment better than I do, and I am sure you can improve on my suggestions above. In short, you don't need to follow the letter of my suggestions, but please do follow the spirit of my suggestions: (i) the figure should be much clearer and as close as self-explanatory for a reader not familiar with the experiment, and (ii) the text in the paper should be consistent with the figure.

- 5. In the section "tax and dividend" (starting on page 10), please also have subheadings for the informational interventions. This way you can distinguish information interventions from perceptions/support questions. The subheadings should correspond to the headings shown in Figure 2.1.
- 6. I like your attention to response quality. You write "We excluded the 4% of respondents who spent less than 7 minutes on the full survey." How did you determine the 7-minute cutoff? What happens the main results if you include all respondents? Or if you exclude the 10% quickest respondents? What happens if you exclude the 10+273+12 respondents you flagged on the top of page 13? Please address such robustness in the online appendix and mention it briefly in a footnote in the main text.
- 7. p. 13. I understand from the context that "PNR" refers to "Don't know or no response" but what does the abbreviation "PNR" stand for?
- 8. p. 19. "Interestingly, while the standard left/right political leaning has no significant effect,..." Given that you discuss this null result in the main text, it would make sense to show it in Table 3.1.
- 9. p. 20/21. Please make clear that the regression of E on the perception of the elasticity just shows a partial correlation and should not be interpreted as establishing a causal relationship (after all, the perception of the elasticity is endogenous, right?).
- 10. p. 23. "The previous section has shown that people's low acceptance of our Tax & Dividend coincides with biased beliefs about the properties of the scheme." Wouldn't "correlates" be more accurate than "coincides"?
- 11. p. 24 "The similarity of alignments for different prediction accuracy rules out the possibility that some respondents do not update because their private information would be truly more accurate than our prediction." This statement is too strong. How about replacing "some" by "a large fraction of".
- 12. p.25, Table 4.1. Please make clear that GAMMA-Hat is not random, but a deterministic function of the respondent's survey answers. Hence, the table is purely descriptive and cannot be interpreted as causal effects of the feedback.

13. Specification of Equations (2) and (3)

Given that T depends on income in a rather complicated way (both stochastically and with discontinuities as described in Section 2), it is important that you allow for non-linear effects of income around the points where how T depends on income changes (namely at 20% and 70%, if I understand it correctly). Hence, I would like see a specification that allows for the slope in I to change at 20% and 70%. I would also like to see a robustness check where you also allow for slope changes at 30%, 40%, 50%, and 60%. Finally, on what scale is income measured? If you're not already doing so,



please measure income in percentiles. Relationships of outcomes with income in percentiles are typically closer to linear than relationships of outcomes with income in levels or logs.

- 14. It took me a while before realizing that the superscript j on income in equations (2) and (3) is not a superscript but an exponent. You can prevent such confusion by saying that you control for a quadratic in own income and spousal income.
- 15. p. 32. You write that income the sholds c_i are "introduced as fixed effects to control for threshold-specific preferences." I fail to see the economic or statistical reasoning behind this control. Are you arguing that true preferences directly depend on a randomly assigned threshold?
- 16. p. 32. You write "controlling for the target, it should affect acceptance only through self-interest." This is unclear to me. For what target are you controlling in which regression?
- 17. p. 33. You write "Given the wide set of control variables used, and in particular our powerful control A^I, one can be rather confident that the OLS estimate is unbiased, and that the difference is due to the specificity of compliers in the LATE." Frankly, I would not consider the OLS as unbiased given that perceptions have an endogenous component and given that there can be measurement error in A^I. Please make a much more cautious statement on possible bias in the OLS estimate.
- 18. Please make Table 5.1 much more self-explanatory by more clearly labeling variables in the table itself and expanding the note to the table. Make clear that (if I understand it correctly) "targeted acceptance" is "acceptance of targeted tax & dividend policy" and that "feedback acceptance" is "acceptance of a non-targeted tax & dividend policy". Have a line in the table that explains the source of the RDD: income discontinuity in eligibility for dividend and randomized income cutoffs for columns 1 & 2, and discontinuity in feedback on personal gain when the continuous personal gain switches from negative to positive. In the note, remind the reader what the first stage is.
- 19. p. 36. Please report the first-stage F-Statistic in Table 5.2 itself. Please also make clear in the table (or the note) what the dependent variable is. Acceptance of the targeted T&D policy or of the broad-based T&D policy? Please also remind readers what the difference is between acceptance and approval. I would like all tables to be comprehensible to readers even if they have not read the entire paper in great detail (or don't remember all the details). The table should also specify what the instrument is (namely the randomized information interventions on ...)

20. p. 36. Limit Section 5.3 to a single paragraph

You write "Controlling for many respondents' characteristics and other acceptance motives,

one can be confident that the effect of progressivity is properly isolated." I'm not at all confident about this. Rather than taking up space in the main text with estimates that are not causally identified, I would like you to limit this section to one single paragraph. This paragraph can explain that you don't have a first stage and that you therefore cannot estimate the causal effects of progressivity. If you wish, you can refer the reader to non-causal estimates (i.e., what you currently have the in rest of the section) in an online appendix, as long as you remain clear in the appendix that these estimates are not causally identified. E.g., also in the appendix, you should not make strong statements like "These results show that progressivity is a motive for acceptance almost as determinant as self-interest and effectiveness." based on estimates that are not causally identified.

21. P. 37. **Drop section 5.4.**

This section is entirely based on estimates that are not causally identified. I don't think you can make credible statements about the complementarity of the motives. Please remove this section and references to complementarity in the main manuscript.

22. p. 41. You write "We can relate this conservatism to a strong distrust of the government..." I get what you mean but this could be misread as you having shown evidence on this channel in the paper. I'd suggest to rewrite it as "this conservatism could be related to a strong distrust of the government..."

I am looking forward to reading the revised version of your paper and your detailed response letters to each of the three referees and to me. Please submit the revision within a year at the latest.

Sincerely,

Erzo F.P. Luttmer

Editor, American Economic Journal: Economic Policy

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You will be unable to make your revisions on the originally submitted version of the manuscript. Instead, revise your manuscript using a word processing program and save it as a PDF on your computer.

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