Macrointerest Across Countries

Memo to Editor and Reviewers

Introduction

Framing. We appreciate the reviewers' careful reading and their suggestions for better framing the piece. Following Reviewer 1's suggestion, we reorganized the introduction into three paragraphs. The first addresses the relevance of macrointerest. Reviewer 2 asked us to provide more theoretical discussion on macrointerest, and minding the editor's instruction to limit this to "a bit more," we did so here. The second paragraph reviews the challenges faced by previous research. R1 specifically suggested that we contrast our work with that of Peterson et al. (2022), and we added that to this second paragraph. (Also at R1's suggestion, we included an appendix comparing our estimates of macrointerest for the United States with those presented in that article; see Appendix E.) The third paragraph previews our specific contribution and findings. We agree that the original introduction was too brisk, and we see this as a substantial improvement.

One point that both reviewers flagged was the "good times versus bad" framing of the hypotheses regarding the circumstances that prompt higher levels of macrointerest, pointing out that this wording does not correspond very well to the paper's findings. Here in the introduction and throughout, we adopted the more accurate "good economic conditions" phrase to better reflect the higher mean levels and positive change in GDP per capita plus lower mean levels of income inequality that we found to be associated with higher macrointerest in our analysis.

Cross-National Macrointerest: The Source Data

`DCPOtools`. On the recommendation of R1, we expanded and moved our discussion of the automation of the data cleaning process to Appendix A.

Estimating Cross-National Macrointerest

Method comparison. R1 suggested that we bring our discussion of the merits of the DCPO approach relative to alternatives from a footnote to the text. We have adopted this suggestion at page 4.

Validating Cross-National Macrointerest

Validation. R2 queried of the validity of the DCPO outcome. In the research, we used the validation method that has been applied in publications of APSR and BJPS (Caughey, O'Grady, and Warshaw 2019; Woo, Goldberg, and Solt 2023). At the same method, we agree with R2 that it is difficulty to interpret the results of this method without any benchmarks. Therefore, we listed the correlations of an APSR publication using the similar validation method for readers' reference (n. XXX). Moreover, we point out to the readers that the correlations can also be affected by other factors.

Testing Theories of Macrointerest Cross-Nationally

Two-Step Approach R1 also raised the question whether the analysis "could be achieved in a single step by integrating hierarchical priors into the model." We were somewhat puzzled by this comment, but we guessed the reviewer was referring to combining the measurement and analysis steps into a single model, as in Claassen (2022). We prefer to avoid such an approach, because it assumes that the indicators of macrointerest are missing at random with regard to the independent variables, and therefore that the relationship between macrointerest and these variables is the same in the countries when and where macrointerest is poorly observed as in the country-years where macrointerest is well observed, and this assumption is difficult to justify. If the reviewer had a different "single step" approach in mind, we apologize for not figuring it out.

Uncertainty. In response to R1's suggestion to provide more details about how we incorporated uncertainty in our analysis, we made a specific discussion at page 11. We used the "Method of Composition" to account for the uncertainty in the ex post analysis based on the estimated latent variable together with others. This is a method that has been used in a series of latent variable analyses in political science. We listed several other applications and also direct readers to a more detailed technical note of how the method is incorporated in the DCPO framework.

Hypothesis testing. R2 questioned why we tested the theory on OECD countries and "why not just take ESS data, which include most of the OECD countries, and save ourselves all the harmonization effort." We added an Appendix (Appendix XXX) to address the this issue:

As stated there, there are specific theoretical and empirical reasons to examine the theoretical inferences about the source of macrointerest on OECD countries. First, most theories about political interests addressed in the letter were built upon the assumption of stable institutions for public political participation. OECD countries are valid cases to examine such theories. The both sociopolitical stability and socioecomic and geographic diversity also provide unique conditions for hypothesis testing.

Second, while EES also includes a fair amount of data of the European members of OECD, it does not include members out of Europe, which will noticeably diminished the country diversity. Note that the primary goal of DCPO is not only to broaden the scope of research beyond the well-surveyed countries but also to enable full-time-rank analysis and more sufficiently adjust country-based variances (Claassen 2020). DCPO has shown noticeable advantage to fulfill such design than single projects like EES.

Third, at the end of the Appendix, we presented the numeric results for Figure 5 as R2 required and welcomed future researchers to extend the hypotheses testing in this article on other country cases. They, however, need to be aware that non-OECD countries vary in many dimensions. An examination based on them requires more efforts to prevent confounding effects from this variance on the results. This has been beyond the scope of this research.

In terms of the results of the hypothesis testing, we adopted R2's suggestion and rewrite the description of the findings from the perspective of posterior probabilities. The credible

intervals are kept in the visualization for both Bayesian and frequentist readers to understand the results.

Conclusions

Participation. R2 provides an intriguing insight for the theoretical implication of the theory test section of our research that the findings suggest the distinctiveness of macrointerest with other types of participation/engagements. Although there is little room for a more sufficient discussion due to the word limit, we pointed out this insight to the readers and direct them to relative literature for further comparison.

Appendices

Survey Items Used to Estimate Macrointerest

Full survey references R2 asked for additional information in Appendix A on the source data, requesting "references to all survey datasets used in the analysis." We now provide citations to all of the surveys in Table A2. As the reviewer anticipated, this did indeed "take many pages," but we agree that it is a valuable addition.

Legibility of Figure A1 R2 also pointed out that Figure A1 was hard to read and suggested splitting it. We split that figure into several panels by region to allow it to be split across pages and so expanded for better legibility.

Included projects R2 queried if "single-country and single-wave projects should be included." All of the survey items we employ include at least five country-years of data (a point we now make explicit at page 2). This means that single-wave projects include at least five countries, as exemplified in these data by the survey "Values and Political Change in Post-Communist Europe, 1993-1994." Even such small cross-national surveys contain at least some information regarding the differences across countries. The cost is that country-specific item bias cannot be estimated and so is set to zero, potentially resulting in additional measurement error (see Solt 2020b, 6). It also means that single-country projects incorporate at least five years (in fact, the minimum in this dataset is seven, in both the Canadian National Election Studies and the Korea Barometer). This provides considerable information about

changes over time within those countries, and country-specific item bias is of course not an issue for data drawn from only a single country.

The DCPO Model

Source data sample representation. We thank R2 for pointing out the matter of sample representation. We have added a paragraph here discussing the issue here. The short of it is that unlike the model employed by Caughey, O'Grady, and Warshaw (2019), the DCPO model does not incorporate a poststratification component to correct for this problem, and the result is greater measurement uncertainty in the estimates where data is relatively rich and potential bias in the estimates where data is more sparse.

Scaling of estimates. R1 suggested that we consider employing the cumulative distribution function (CDF) of the normal distribution—that is, the probit transformation—as an alternative to the logistic transformation, for scaling responses on the unit interval within the DCPO framework or at least discuss the relative merits of the two in the appendix. We appreciate the suggestion of the probit transformation. The preference for the logistic function in the DCPO model is grounded in its inherent flexibility and enhanced tolerance for deviations from standard normal assumptions. Pertinently, within the macrointerest context, we see little reason to presume that the the source data are devoid of extreme values or adhere to a symmetric distribution. The logistic transformation exhibits greater leniency under such conditions compared to the normal CDF. On the other hand, we concur with R1 that the interpretation of the probit transformation is more intuitive. We have added a discussion of these points to Appendix B, our summary of the DCPO model. And as the DCPO model is published as open source software on CRAN (Solt 2020a), future researchers have the option of modifying the transformation method if they see fit.

Macrointerest Scores Over Time

R2 pointed out that the "appendix should show the trajectories for all countries." We have added those plots here.

Reference

Caughey, Devin, Tom O'Grady, and Christopher Warshaw. 2019. "Policy Ideology in European Mass Publics, 1981–2016." *American Political Science Review*, 1–20.

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Peterson, David A. M., Joanne M. Miller, Kyle L. Saunders, and Scott D. McClurg. 2022. "Macrointerest." *British Journal of Political Science* 52 (1): 200–220.

Solt, Frederick. 2020a. "DCPO: Dynamic Comparative Public Opinion." Available at the Comprehensive R Archive Network (CRAN). `https://CRAN.R-project.org/package=DCPO`.

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