*Revision Memo*

"Who feels they can understand and have an impact on political processes?

Socio-demographic correlates of political efficacy"

(ID IJPOR-2022-139.R1)
February 16, 2023

We are grateful for the opportunity to revise the manuscript, and thank the Editor and Reviewers for their careful consideration of our submission. In this revision memo we detail the work we completed to address each comment. We discuss these comments in the order they appear in the referee report. All new and revised analyses discussed in this memo are detailed in full in the revised manuscript and Appendix, and we include text from the revised manuscript in this document when relevant.

Our revised submission includes two main revisions compared to our original submission, which we highlight here:

1. Theory and empirics on representation: Regarding theory, we followed both reviewers’ guidance to strengthen the theoretical framework by introducing greater theoretical clarity on substantive versus descriptive representation, and by clarifying that our main analytical focus is on descriptive representation. Regarding empirics, we implemented Reviewer 1’s first suggested way of objectively assessing whether less privileged groups are under-represented by using the best available evidence for cross-national and longitudinal descriptive representation relevant for the socio-demographic characteristics analyzed in our study. We are pleased to note that the new findings reported in the revised manuscript on descriptive representation strengthen the argument and the findings in the originally submitted manuscript
2. Full-length article format: As anticipated by Reviewer 1, implementing the first main revision required a change in manuscript format from a research note to a full-length article. The full-length article format also allowed us to add new text to articulate formal hypotheses, and to incorporate additional text that addresses several other suggested revisions as detailed in the continuation of this document.

As a general response to several specific questions and comments from the reviewers about the data analysis, we also wish to highlight that we have prepared replication materials (data and code) for all findings reported in this revised version of the manuscript and Appendix. As we document in a footnote at the beginning of the “Data and Methods” section, we have prepared these replication files with the intention to publicly post these materials to the Harvard Dataverse.

We appreciate the opportunity to implement these revisions, and we look forward to quickly and thoroughly addressing any comments in response to this submission.

**Editor's Comments to Author:
Both reviewers find your manuscript to be dealing with an important topic and to be well-written.  However, they both point out that it needs to be more focused and provide you with extensive feedback on how to go about achieving this outcome. One of the decisions you will need to make is whether to keep your manuscript as a short-format research note or to develop it further by including a solid theoretical framework (as suggested by one of the reviewers) and submit it as a conventional article. Doing the latter will require quite a bit more work.  Either way, we invite you to revise your manuscript by addressing the extensive feedback provided by the reviewers and resubmitting it for another round of reviews.**

=> We thank the Editor for this clear guidance. As noted in our opening comments, we have opted to strengthen the theoretical framework and expand the analytical purview of the study, and to prepare the revised manuscript in a conventional article format. Consistent with the Editor’s comment, conducting this revision required more work than would have been needed if we had retained the research note format, and we document all relevant aspects of this revision in our specific responses below to the reviewers. On a technical level, we have followed all relevant guidelines for a full-length article submission of a revised manuscript, including our implementation of the APA style of referencing 7th edition with the inclusion of hyperlinked doi’s when available.

 **Reviewer: 1**

 **This research note investigates and interesting and important topic: the socio-demographic correlates of political efficacy across countries. It does so by analysing ISSP data relating to 46 countries between 1996 and 2016, which show that education and income are consistently positively related to both external and internal political efficacy, whilst being female is associated with lower levels of internal efficacy but unrelated to external efficacy. I thoroughly enjoyed reading the research note, which is clearly, accessibly, and succinctly written, and which adopts appropriate methods and helpfully addresses a gap in the literature. As such, I would very much like to see it being published in the International Journal of Public Opinion Research.**

=> Thank you for this clear summary of the paper, for the encouraging feedback, and for the appreciation of the study’s contribution to the literature.

 **However, I have one major reservation that I hope can be addressed. The note repeatedly makes the case that the issue of who feels efficacious is particularly important in the context of growing evidence that some (privileged) groups are better represented than others, both in descriptive and substantive terms. Indeed, it is argued that we would expect groups that are objectively under-represented to be the ones that feel less efficacious, and the results demonstrate that this is, indeed, the case. However, there are a host of reasons other than their political underrepresentation that such groups might feel less efficacious. For instance, they are likely to be marginalised in society more broadly, to bear the burden of more (externally imposed) difficulties in their lives, or to feel under-equipped to deal with the challenges that they face. All of these might affect how optimistic their assessments of the responsiveness of the political system and their capacity to influence it are.**

=> This reservation is an important one, and we agree with the reviewer’s reasoning.

**I think that there are (at least) three ways (two good, one bad) to address this issue, though I am open to other suggestions from the authors:**

=> Separate from our documentation below of the revisions we implemented to address this important issue, we first note our appreciation that the reviewer invested in making such constructive and clear comments regarding potential revisions to strengthen the paper.

 **- First, it would be possible, at least for a subset of the countries in the data, to include objective measures of (descriptive) gaps in representation (e.g., the percentage of national elected representatives who are female versus the percentage in the population, and similarly for those with degrees), and to adopt a multilevel model approach (with the objective measures interacted with the demographic variables of concern). Whilst still not a causal analysis, this would at least directly test the proposition that it is the context of underrepresentation that is correlated with external and internal efficacy.**

**This could either be done once for the pooled data, or separate objective measures could be gathered for each relevant wave of ISSP fieldwork so that the relationships could be examined over time. I appreciate that this would also require the addition of other relevant country-level factors (e.g., electoral system, Gini, GDP per capita) and therefore considerable extra work, but I think it would be worth it. Further, it is likely to add to the length of the note, meaning that it could be a full-length article but, if that is the case, I would be happy to see (and review) a such an article on this topic.**

=> As noted in our opening comments, we have implemented this suggestion in our revised manuscript. As the reviewer indicated, this required considerable additional work, both theoretically and empirically – but now that we have completed the revision, we agree with the reviewer’s assessment that this investment was worthwhile and has strengthened the paper’s contribution. Fully implementing this suggested revision required several sections of new text, which we summarize below.

*First, theory and literature*: We added a new discussion of substantive versus descriptive representation, drawing on Pitkin (1967) as the reviewer suggested in an additional separate comment below. The new text on this topic in the theory section (subtitled “Unequal representation and political efficacy”) follows the original manuscript’s first paragraph that synthesizes recent literature on substantive representation, and reads as follows:

“This body of work has focused on objective measures of representation of citizens’ preferences, such as congruence in ideology or policy positions between citizens and their representatives, and responsiveness of policy outcomes to citizens’ preferences. From the perspective of Hanna Pitkin’s (1967) classic distinction between different types of representation, this line of work focuses on *substantive representation*, meaning the representation of the preferences and interests of distinctive social groups. These consistent findings of the substantive under-representation of lower-status demographic groups (i.e., women, and those with less education and income) highlights the lack of empirical research to date on what Pitkin (1967) described as *descriptive representation*, meaning the personal similarity between the representative and the represented. Yet systematic, cross-national and longitudinal research on descriptive representation is important for developing a clearer understanding of inequalities in representation, as research in specific contexts and time periods has suggested that the numerical underrepresentation of certain social groups in terms of their socio-demographic characteristics (e.g., gender and ethnicity) can yield policy that conflicts with these groups’ interests (Broockman 2013, Hakhverdian 2015).”

We then build on this new text on theoretical framing to substantially revise the subsequent text in this section to clarify that the current paper’s main theoretical focus is descriptive representation. This majorly revised text which serves as a bridge to a new separate section titled “Research Question and Hypotheses” reads as follows:

“Despite mounting evidence of unequal substantive representation in objective measures, little is known about whether the under-represented social groups identified in this line of research (e.g., women, and those with less education and lower income) perceive themselves as less capable of engaging in political processes. Investigating people’s subjective sense of their own capacity to effectively engage in political processes is important to assess the degree to which unequal substantive representation seems to be reflected in the subjective perceptions of the impacted populations.

There are logical reasons why these substantively under-represented groups may not report lower levels of political efficacy. In the economic policy domain, for example, the less affluent might not perceive the empirically established fact that their preferences are less well represented. Further, even if they do perceive the objective evidence of unequal representation, they might not interpret it as reflecting poorly on their own capacity to understand or influence political processes. To date, however, systematic research has not yet been conducted to assess the subjective perceptions of political efficacy of key socio-demographic groups across contexts and over time.”

*Second, data availability and contextual-level hypothesis:* In relation to the three socio-demographic characteristics that are the focus of our study’s individual-level analysis of gender, education and income, we note that comprehensive cross-national and longitudinal data for political leaders are currently available only for gender. Our new text on this topic in the “Research question and hypotheses” section after we introduce three formal hypotheses on the individual-level socio-demographic characteristics of gender, education and income reads as follows:

*“Contextual-level hypothesis:*

We complement our main focus on individual-level hypotheses with an investigation of whether contextual measures of objective representation are systematically associated with the political efficacy of distinctive social groups. As detailed in the data and methods section, our contextual analysis leverages the best comprehensive available data on objective representation measures, which allows us to investigate the impact of descriptive representation by gender. Specifically, we investigate whether the percentage of female representation has an impact on women’s levels of political efficacy in a given context. The only country-specific analysis we are aware of in the literature that has conducted a similar analysis—by Wolak (2018) in the U.S. states—found greater efficacy for external efficacy, but no effect on internal efficacy. Yet it is feasible that women’s external and internal efficacy would both be higher in contexts with greater female representation, and this is the logic we use in articulating our hypothesis on descriptive representation for gender.

*H4. A higher degree of female representation in parliament increases women’s levels of efficacy.”*

In addition to the discussion of our analytical focus in the revised manuscript on descriptive representation in relation to gender, we also note that major new data construction efforts are currently under way to gather additional socio-demographic data on political leaders, which have the potential to enable the investigation of descriptive representation in relation to additional socio-demographic parameters in the near future. Our new text on this topic reads as follows:

“Although gender is the only sociodemographic characteristic among those we investigate in the current study for which comprehensive data are currently available to allow an analysis of objective (under-)representation of descriptive measures, there are two new major data construction efforts that are currently gathering systematic socio-demographic data on political leaders. Specifically, Gerring et al.’s (2019) “Global Leadership Project (GLP)” has gathered data on a variety of types of political leaders, with a first round of data gathering complete between 2010-2013, and a second round focused on 2017-2018. While currently available data from this project do not have a large enough sample size to allow for valid estimation with our dataset, it will be important to assess whether this project’s future data releases can be used to obtain valid results. A separate data gathering effort, the “Global Legislators Database (GLD),” focuses on the socio-demographic characteristics of legislators (Carnes et al. 2022; Carnes & Lupu, in press). Although the dataset produced by this project is not yet publicly available, analyses produced based on data derived from legislators who served during one legislative session in 2016 and 2017 (Carnes et al. 2022) show the potential to leverage these data to break new ground in future research on descriptive representation.”

*Third, the new descriptive representation analysis and findings*: Our revised manuscript includes new text on the data, methods, and findings regarding descriptive representation of gender, summarized as follows:

Data: For data on the gender of representatives, we use data on the percentage of female MPs for the relevant country-years in the lower (or unicameral) chamber of the legislature, as compiled by the Varieties of Democracy (V-Dem) project. We also include relevant country-level factors merged in country-year format, including: the electoral system (from V-Dem); Gini (from the Standardized World Income Inequality Database); and GDP (from the World Bank). The revised Appendix includes more detailed information on this additional data, including documentation of data sources, original variable names, and descriptive statistics for all data used in the analyses (see Appendix H). Our new text in the manuscript documenting these variables reads as follows

“To test our hypothesis on the impact of descriptive representation for gender on political efficacy, we use data on the percentage of female MPs for the relevant country-years in the lower (or unicameral) chamber of the legislature, as compiled by the Varieties of Democracy (V-Dem) project (Coppedge et al. 2021). This type of multilevel analysis requires the inclusion of relevant country-level factors in the model as control variables. For this purpose, the multilevel regression analyses include country-level control variables that take into account the contextual electoral system, the level of economic inequality in the country, and measures of country-level economic activity.

We merged these country-level control variables from various sources in country-year format with the ISSP individual-level data. Specifically, for *electoral system* we use a categorical measure from the V-Dem project of whether the electoral system for the lower or unicameral chamber of the legislature is majoritarian, proportional, or mixed (Coppedge et al. 2021). In addition to this categorical measure of the electoral system in the main models reported in the article, we also conducted a robustness test that replaced this variable with an electoral system measure of district magnitude, also measured by V-Dem, and the findings are substantively similar (see replication materials for the documentation of this robustness test). For contextual measures of *economic inequality* we use the Gini index of inequality in equivalized household income using the Standardized World Income Inequality Database (Solt 2020). For country-level measures of *economic activity* we use Gross Domestic Product (GDP) as measured by the World Bank in current U.S. dollars (The World Bank 2021). Additional detail on these country-level data sources is documented in the Appendix H (“Descriptive statistics and data sources”).”

Methods:As suggested by the reviewer, we use a multilevel model approach for this analysis, with the objective measure of descriptive representation interacted with the demographic variable of concern. Specifically, we conducted a multilevel analysis with a cross-level interaction for descriptive representation by gender in which we interact the objective measure of the percentage of female MP’s with the demographic variable of the percentage of women in the population. The new text in the “Data and methods” section that describes our specification of the multilevel analyses reads as follows:

“To properly take into account the nested structure of the data in our analyses, we estimate multilevel linear regressions in which individuals (Level 1) are nested within studies conducted in specific country-years (Level 2), which are nested within countries (Level 3). We use this modeling approach because observations are not independent within each study, and studies are not independent from other studies conducted in the same country. In this multilevel data structure, the independent variables are not at the same level of analysis: while some independent variables represent individual-level measures (e.g., gender, education), other variables correspond to contextual-level measures documented by country-year (e.g., percent of female MPs, GDP).”

Findings: The findings for this new analysis of descriptive representation by gender are reported in the revised manuscript in Table 2 and in Figure 3, both copied below. In line with our expectations, and similar to Wolak’s findings in the U.S. states, the findings in Table 2 show that greater descriptive representation by gender is associated with higher external efficacy, but has no significant relation to internal efficacy. Further, Figure 3 clarifies that even though there is no main finding of a gender gap in external efficacy reported in our study’s individual-level findings (Table 1 in the manuscript), this finding is conditional on female representation in parliament in respondents’ national contexts. That is, while women are less likely to feel that they have a say in policy decisions when their political context is dominated by men, our findings show that women are just as likely as men to believe that they have a say in contexts that have a higher proportion of female representation in parliament. In short, this new evidence in our revised manuscript indicates that women feel that their voice matters more in contexts with a high level of female representation among elected leaders.

 Regarding longitudinal dynamics for the analysis of descriptive representation by gender, the reviewer notes that this analysis could either be done once for the pooled data, or separate objective measures could be gathered for each relevant wave of ISSP fieldwork to examine relationships over time. We specified our analysis in accordance with the first option of conducting the analysis once for the pooled data, as our analysis of separate ISSP module country-years did not consistently converge. Specifically, consistent with our description of our multilevel modeling approach documented above, we take year into account in the analysis in several ways. First, we use V-Dem’s data on country-year objective measures of the percentage of female MPs V-Dem. Second, we specify the multilevel analysis to acknowledge that individuals are nested in specific ISSP country-year studies (Level 2 of the three levels of the multilevel analysis). And third, we control for specific year of data gathering. In the replication materials, we also include a robustness test of this issue in a three-way interaction for gender by share of female MPs by year, and the interaction test is not statistically significant for either external or internal efficacy. Yet, as three-way interactions are often underpowered, these findings do not definitively support an interpretation of stability over time, and we report on this in a footnote in the manuscript.

We copy here the new text in the manuscript that documents the multilevel analysis of descriptive representation for gender:

“XX”

In our discussion of the interpretation and implications of these new multilevel findings on descriptive representation for gender, we integrate the reviewer’s clarification that while this is not a causal analysis, we have directly tested the proposition that the context of underrepresentation may be consequential for individuals’ subjective perceptions of their own political efficacy. This new text reads as follows:

 “XXX”

Finally, we conclude the findings section by referring the reader to the concluding discussion on the importance of future research on additional socio-demographic characteristics as the data gathering efforts on political leaders continue to advance in the coming years. We copy here this new text in the concluding discussion:

“XXX”

**Table 2.**Cross-level interactions: Descriptive representation by gender

|  |  |  |
| --- | --- | --- |
|  | DV: External Efficacy | DV: Internal Efficacy |
|  | (1) | (2) | (3) | (4) |
|  |  |  |  |  |
| Female gender | -0.082\*\*\* | -0.084\*\*\* | -0.309\*\*\* | -0.311\*\*\* |
|  | (0.019) | (0.019) | (0.023) | (0.023) |
|  |  |  |  |  |
| % Female MPs | -0.011\* | -0.010 | 0.002 | 0.004 |
|  | (0.005) | (0.005) | (0.003) | (0.003) |
|  |  |  |  |  |
| Female gender x  | 0.003\*\*\* | 0.003\*\*\* | 0.001 | 0.001 |
|  % Female MPs | (0.001) | (0.001) | (0.001) | (0.001) |
|  |  |  |  |  |
| Age | -0.001\*\*\* | -0.001\*\*\* | 0.009\*\*\* | 0.009\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
|  |  |  |  |  |
| Education | 0.046\*\*\* | 0.047\*\*\* | 0.051\*\*\* | 0.050\*\*\* |
|  | (0.001) | (0.001) | (0.001) | (0.001) |
|  |  |  |  |  |
| Income | 0.088\*\*\* | 0.090\*\*\* | 0.071\*\*\* | 0.071\*\*\* |
|  | (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| Year | 0.009\* | 0.004 | -0.001 | -0.002 |
|  | (0.004) | (0.005) | (0.002) | (0.002) |
|  |  |  |  |  |
| Electoral  |  | 0.164 |  | -0.035 |
|  system |  | (0.110) |  | (0.057) |
|  |  |  |  |  |
| Gini |  | 0.007 |  | 0.005 |
|  |  | (0.009) |  | (0.004) |
|  |  |  |  |  |
| GDP |  | 0.105\*\* |  | 0.022 |
|  |  | (0.039) |  | (0.020) |
|  |  |  |  |  |
| Constant | -16.025 | -9.357 | 4.370 | 5.286 |
|  | (8.949) | (9.322) | (4.635) | (4.590) |
| *N* | 157,140 | 150,879 | 154,168 | 147,944 |

*Note.* Significance levels: \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

**Figure 3.**Descriptive representation of women and external efficacy



*Note.* Average marginal effects of the interaction term in Table 2, Model 2: The interactive effect on external efficacy of individual-level female gender by contextual-level percent of female MPs, controlling for country-level factors.

***[Reviewer 1 comments, continued]***

**- Second, more time could be spent addressing the alternative possible reasons for the correlations, beyond the context of underrepresentation, for instance relating to the things that I mentioned above (i.e., wider marginalisation, more difficulties, fewer resources). Again, there are length implications here but if so, and as above, I would be happy to see (and review) a full-length article on the topic. Indeed, I think that accounting for some of the multiple reasons that these relationships might exist would strengthen the article even if the additional empirical analysis suggested above is also undertaken.**

**=>** We agree that addressing the alternate possible reasons for the correlations beyond the context of descriptive underrepresentation is a worthwhile topic for future research. However, we have already extended the manuscript to a full-length article by expanding the paper in accordance with the reviewer’s first suggestion. In addition, we include new text that addresses both reviewers’ additional comments below.

We are intrigued by this suggestion, however, and conducted some preliminary analyses using data from the European Institute for Gender Equality to inform our concluding discussion regarding potential future research on this topic. This text in the Discussion section reads as follows:

“XX”

**- Third, the least expedient option would be to remove or downplay the idea that the groups in question might feel less efficacious because of the representative context. This would be problematic because I think that proposition is interesting, important, and plausible.**

=> We appreciate the clear identification of this option and agree that it is too problematic to pursue.

**The above point also raises the issue of what kind of representation is the focus. I note that there is no reference to Pitkin’s (1967) distinction between descriptive and substantive representation, which I feel is an oversight. It seems that the note is more concerned with descriptive representation, and the first of the above suggestions (regarding the inclusion of country-level indicators of the representation gaps) would enable this to be investigated empirically. Of course, all three of the cleavages of interest (gender, education, and income) also have implications in terms of substantive representation, which might be more difficult to investigate empirically but still need to be recognised. Certainly, if the note continues to emphasise the importance of the context of underrepresentation, then I think it needs a more fully developed position on whether gaps in descriptive or substantive representation are likely to be more important for efficacy assessments.**

=> As noted above in our documentation of new text that implemented the reviewer’s first suggested major revision, we agree with the importance of including new text discussing descriptive versus substantive representation, and we referenced Pitkin’s (1967) work on this distinction. Informed by the reviewer’s comments, the revised text documented above indeed continues to emphasize the importance of the context of under-representation, and clarifies that our analytic focus in the current study on descriptive representation.

We have also added text in the “Data and methods” section to clarify that the dataset does not consistently include measures that would allow an empirical assessment of substantive representation (such as left-right ideology). This new text reads as follows:

“In addition to our main focus on the individual-level analysis of the association between subjective measures of political efficacy and key socio-demographic characteristics (gender, age, and education), we complement this approach with an assessment of whether individuals’ levels of political efficacy are also are also systematically related to objective measures of representation at the contextual level. While the ISSP data are an optimal data source for consistent and high-quality measures of political efficacy across contexts and over time, the relevant available data for assessing the relationship between political efficacy and objective measures of representation are fairly limited. A comprehensive analysis of the correlation between the efficacy measures and *substantive* representation is not possible, as the ISSP lacks consistent measures of individual-level ideology or policy preferences. Assessment of the correlation between efficacy measures and *descriptive* representation is feasible for one of our key socio-demographic measures, namely gender, as detailed below in our documentation of the contextual-level analyses.”

In addition, we return to this topic in the concluding discussion to note the importance of future research on the connection between political efficacy and both substantive and descriptive representation using alternate data sources. This new text in the discussion section reads as follows:

“XX”

**Beyond the above two points, there are also two minor issues that I believe needs to be addressed:
- Whilst I appreciate that all demographic characteristics cannot be considered, it would be good to do a little work to explain the focus on gender, education, and income in particular. Further, some justification for not considering ethnicity (see Sobolewska, McKee and Campbell (2018), ‘Explaining motivation to represent: how does descriptive representation lead to substantive representation of racial and ethnic minorities?’ West European Politics, Vol. 41, No. 6) and disability (see work by Reher, some of whose work on gender is cited in the note).**

=> We thank the reviewer for this suggestion, and have added majorly revised and new text on these topics. The new text emphasizes the importance of focusing on gender, education and income given the major prominence of recent research on these particular socio-demographic characteristics Regarding the additional socio-demographic characteristics of ethnicity and of disability, we agree with the reviewer about the importance of representation research on these socio-demographic characteristics, and we note this in the revised manuscript with reference to the sources noted by the reviewer. Further, we note that we are not able to include analyses of these characteristics in our study since the ISSP data do not consistently include relevant measures on these topics. This new paragraph is included in the Data and Methods section in the third paragraph, which we copy here in full:

“As noted, our main focus in the current study is on the association between political efficacy and the three key individual-level socio-demographic correlates that have received the most attention in research on substantive representation, namely gender (Reher 2018), education (Elsässer et al. 2021; Rosset & Stecker 2019; Schakel & Van der Pas 2021), and income (Elkjær & Klitgaard, forthcoming; Lupu & Warner 2022a, 2022b; Traber et al. 2022). We conduct a comprehensive individual-level analyses of these three most prominent socio-demographic measures in the literature, as consistent measures are available in the ISSP data for these characteristics across countries and over time. Additional socio-demographic characteristics are also of worthy of theoretical and empirical attention on this topic, such as race and ethnicity (Sobolewska et al. 2018; Wolak 2018) and disability (Reher 2020, 2022). Empirical analysis of these characteristics is not possible using ISSP data, however, as the survey does not include consistent questions on these topics.”

We return to this topic of the importance of future research on additional socio-demographic aspects of descriptive representation. This new text in the Discussion section reads as follows:

“XX”

 **- I read Appendix D with interest, but it would also be good to include the question wordings for education and income in the appendices, and to explain more clearly within the note what a one-unit shift in income means.**

=> We implemented these suggested revisions. Specifically, we revised the current Appendix D that had focused only on the income variable to include question wordings for both education and income (in the revised submission this section is titled “D. Education and Income Variable Supplementary Information”).

Further, we added text to the manuscript to clarify the meaning of a one-unit shift in income (which was noted only in the Appendix in our original submission). This new text reads as follows:

“For income, we follow recent research (cf. Armingeon & Weisstanner 2022; Donnelly & Pop-Elches 2018) to create a cross-nationally comparable standardized variable (mean=0; S.D.=1). To provide an example of the substantive impact of a one-unit shift in income using this measure, the mean income in the U.S. for Module 5 is $58,546.66, and one standard deviation is $38,753.63. See Appendix D for additional information on the values corresponding to income quantities of interest in selected countries.”

**Overall, despite the above suggestions, I think that this is a strong submission, and I would be keen to see a revised version of the work published in the International Journal of Public Opinion Research. As such, I hope that the constructive intent of my suggestions is clear, and I look forward to reading (and reviewing) a revised version of the research in future.**

=> We appreciate this supportive closing statement of this remarkably constructive review. We look forward to swiftly responding to any follow-up comments or questions about our revisions.

**Reviewer: 2**

**The paper ”Who feels they can have an impact on political processes?” is an empirically-oriented contribution that aims at investigating whether “subjective measures of political efficacy follow the pattern of socio-demographic inequality evident in objective measures of representation” (page 5). The paper discusses gender, income and education as relevant socio-demographic characteristics and draws on ISSP data from across the world and five rounds of survey (1996-2016) to test the relationships between socio-economic factors and political efficacy. Based on regression estimates, the authors conclude that “individuals with less education and income report lower external and internal efficacy than their higher status counterparts. For gender, the findings show no gender gap for external efficacy, while women consistently report lower internal efficacy than men” (page 12).**

**The paper is clear in its focus, well-written and tackles a new research question.**

=> We thank the reviewer for this clear summary of our paper’s contributions, and appreciation of its strengths.

**I hope my comments and question will help the authors to further develop the paper. My larger comments relate to the relevance of the research and the theoretical argument.

• More generally, the authors make a good case for that objective measures show inequality of representation but why exactly we need to know more about the subjective side is still more implicit at the moment. Does it make the real-world situation better if citizens don’t feel less represented, even though they are (women, for example, as per the authors’ results)?**

=> We appreciate this observation about the need to more explicitly address why the subjective side of representation is important. In the revised version of our paper, that is now a full-length article, we have added new text that addresses this comment. Specifically, we strengthen the theoretical framework of the paper by drawing on Pitkin’s (1967) discussion of substantive versus descriptive representation (a search in this document for “Pitkin” will locate our response to Reviewer 1’s suggestion to do so). We also include majorly revised text that clarifies the importance of contributing empirical evidence to the question of whether unequal substantive representation are reflected in the subjective perceptions of distinctive socio-demographic groups. This text appears in two paragraphs at the end of the theory section, and prior to the new section detailing the research question and hypotheses, and reads as follows:

“Despite mounting evidence of unequal substantive representation in objective measures, little is known about whether the under-represented social groups identified in this line of research (e.g., women, and those with less education and lower income) perceive themselves as less capable of engaging in political processes. Investigating people’s subjective sense of their own capacity to effectively engage in political processes is important to assess the degree to which unequal substantive representation seems to be reflected in the subjective perceptions of the impacted populations.

There are logical reasons why these substantively under-represented groups may not report lower levels of political efficacy. In the economic policy domain, for example, the less affluent might not perceive the empirically established fact that their preferences are less well represented. Further, even if they do perceive the objective evidence of unequal representation, they might not interpret it as reflecting poorly on their own capacity to understand or influence political processes. To date, however, systematic research has not yet been conducted to assess the subjective perceptions of political efficacy of key socio-demographic groups across contexts and over time.”

**The authors already write that efficacy depressed political participation but what does this imply then for the state of representation? Could it be that there is a causal chain like this: socio-economic variables -> efficacy -> turnout -> unequal representation? And that unequal representation then again impacts on efficacy, turning it into a more vicious cycle?**

=> We agree with the reviewer’s discussion of the potential causal chain from socio-economic variables 🡪 efficacy 🡪 turnout 🡪 unequal representation. Our originally submitted manuscript already included some text describing this reasoning, and in the revised manuscript we expanded upon and clarified this potential mechanism in relation to both substantive and descriptive representation. The revised text on this topic reads as follows:

 “XX”

We also clarify in the revised manuscript that fully testing this causal chain is beyond the scope of the current paper, especially as the relevant data are not available in the ISSP dataset to enable an empirical analysis of substantive representation (as noted in our response to Reviewer 1, e.g., there are no consistent measures of e.g., left-right ideology or other policy-related attitudes). We return to discuss the importance of future research on this topic of the causal chain in the Discussion section, with the following new text:

“XX”

**• I know that this is a research note but I still missed a theoretical argument and hypotheses. Implicit in the authors’ aim and research question is the argument that perceptions of influence should follow real-world influence. While this sounds straightforward and plausible, there are also a couple of counterarguments related to how we perceive the political context and how we form political opinions (see for example Zaller). I think a more comprehensive discussion of how we form political opinions and why or how objective patterns of representation should be mirrored in subjective would be really good.**

=> We have implemented revisions to address these comments. Specifically, the text we noted above that distinguishes between substantive and descriptive representation informs the theoretical argument of the revised manuscript. The revised manuscript’s focus on descriptive representation anchors the discussion of how individuals’ perceptions of their own capacity to influence political processes may be impacted by real-world objective representation on the key socio-demographic characteristic of gender for which relevant data are available for analysis.

We also relate to Zaller in a brief discussion of counter-arguments regarding how people perceive political context and form political opinions. This new text referencing Zaller reads as follows:

“XX”

**It may be a matter of taste, but I’d also prefer adding empirically testable hypotheses.**=> As noted in our opening comments and in response to Reviewer 1, we have added the articulation of empirically testable hypotheses in this full-length article revision. Specifically, the revised manuscript includes a new section titled “Research question and hypotheses” that includes two sections that detail hypotheses.

First, the “Individual-level hypotheses” section includes a major revision of the text in the originally submitted manuscript on the expectation associations between political efficacy and the three socio-demographic characteristics of education, gender, and income that was formerly framed as “expectations” and not hypotheses. Our revised text on this topic at the end of the review of this literature reads as follows:

“Taken together, this review of the literature focused on individual-level expectations informs three hypotheses about the association between political efficacy and key sociodemographic characteristics:

*H1. Women have lower levels of political efficacy than men, particularly for internal efficacy.*

*H2. Education is positively associated with political efficacy.*

*H3. Income is positively associated with political efficacy.”*

Second, the “Contextual-level hypothesis” articulates our hypothesis regarding descriptive representation for gender. Search for the text “*Contextual-level hypothesis:”* in this document leads to our response to Review 1 that includes new copied text from the revised manuscript.

**• If the authors need to cut something, then I’d consider the exploratory part on the longitudinal pattern. If the authors feel, however, strongly about it, then I think also here a more thorough discussion of why we should expect such an association would be desirable.**

=> We appreciate the reviewer’s attention to the potential need to cut text in light of the expected space constraints. We see the importance of the contribution to the literature to retain the findings on the longitudinal pattern, as these results draws attention to the stability of meaningful gaps, and thereby serve as a useful motivation for researchers to continue to gather the requisite data on political leaders to assess descriptive representation on other measures (e.g., education). We therefore follow the reviewer’s suggestion to add a more thorough discussion of the expectations and the findings of the longitudinal pattern.

Our revised text on this topic following our articulation of the individual-level hypotheses reads as follows:

“This review of individual-level evidence from different contexts and time periods indicates that levels of political efficacy may have shifted over time for certain socio-demographic groups, and particularly for women. Thus, systematic longitudinal investigation of these associations is necessary. Research on longitudinal trends in political efficacy in the literature has focused primarily on the United States based on the American National Election Studies (ANES) time trend series from 1952 to the present. This research has indicated long-term decline in political efficacy in the U.S.—particularly external efficacy—that has often been interpreted as a secular trend that is potentially generalizable to other contexts (Abramson & Aldrich 1982; Chamberlain 2012). However, for the observation period for which systematic cross-national data are available in the current study (1996-2016), ANES (2021) data suggest relative stability in levels of both external and internal efficacy. Due to the lack of robust cross-national literature on this topic, our analysis of longitudinal trends is primarily exploratory, with the intention of establishing baseline findings to inform future research.”

**• At the moment, I am not convinced that using “internal efficacy” is such a good choice of instruments. Since the authors’ main research question is about who feels they can have an impact, then a survey item asking about how well the individual understands politics is not a good match. While it also measures how the individual relates to the political world, it is not about influence but about her/his comprehension of politics.**

=> This comment drew our attention to the need for our revised manuscript to include an expanded discussion of classic literature on indicators of external and internal efficacy, and the evolution of the literature in relation to optimal instruments to measure these concepts. The revised manuscript includes new text that synthesizes theoretical and empirical literature on political efficacy which shows that the internal efficacy instrument in the ISSP is a standard and classic instrument in research on these topics. This new text clarifies that individuals’ perceptions of their own levels of political understanding is a solid approximation of their personal capacity to engage in politics. In this discussion, we also reference additional indicators of internal efficacy used in the literature, Further, we clarify from an empirical perspective that in addition to the conceptual usefulness of the ISSP measure, an important advantage of using this indicator is the uniquely comprehensive availability of data on this measure. We copy this new text here:

 “XX”

An additional and complementary revision that we made to address this comment was to revise the title and framing of the paper to more directly reflect this literature on both internal and external efficacy. Specifically, we revised the beginning of the title from “Who feels they can have an impact on political processes?” to include the new underlined text that relates to internal efficacy: “Who feels they can understand and have an impact on political processes?”.

**• The analyses and results might be easier to comprehend, if the authors put all independent variables on the same scale, e.g., 0-1.**

=> We agree that it can ease comprehension to include an analysis that puts individual-level independent variables on the same scale. Yet we also see value in including findings that report on the substantive association of the increase/decrease in one unit of the independent variable with the dependent variable (see e.g., King 1986 on potential drawbacks of relying on only standardized scales). In our revised submission, we therefore added a section to the Appendix (“Appendix G. Tabular findings with standardized independent variables”) that recodes the non-dichotomous independent variables as standardized variables (i.e., z-scores).

**Relatedly, when reporting the effect sizes in the results section, I assume they were all on the 5-point scale?**

=> Yes, the reported effect sizes in the results section are all on the 5-point scale, and we add this clarification in the revised manuscript.

**• If the authors include age as a control variable because of previous research (page 8), I’d consider adding a reference to that prior research.**

=> Done. Relevant references are Karp and Banducci (2008), Verba, Schlozman and Brady (1995), and Wolak (2018).

**• The authors report results from an analysis of all three factors together (page 10), which I could not detect in the appendix or the main text. How did the authors compute these results?**

=> We thank the reviewer for noting this oversight. In the revised manuscript we added a footnote that explains the computation of these results and also refers the reader to the replication file. As noted in the opening comments of this memo, we have prepared the full code documenting all analyses reported in the manuscript and Appendix to post publicly to the Harvard Dataverse upon publication of the manuscript.

The new footnote reads as follows:

“We computed these predicted levels of efficacy using the ‘margins’ command in Stata. Specifically, following the fully specified regression analyses reported in Table 1 (Models 4 and 8) we predict levels of external and internal efficacy by setting the socio-demographic characteristics to high-status values for each independent variable, and then to low-status values. See the replication file in the Harvard Dataverse for further detail <doi to be added upon publication>.”

**• Two small points:
o How are the separate models avoiding post-treatment bias?**

=> We include revised and new text on this issue in the Data and Methods section which reads as follows:

“For the individual-level regression analyses, we estimate linear regressions with fixed effects or country and module, with standard errors clustered by country and module. We first run separate bivariate models for each efficacy-socio-demographic measure combination of gender, education, and income to avoid post-treatment bias.”

We then add a footnote to state more clearly how analyzing these separate models avoids post-treatment bias. This footnote reads as follows:

“XXX”

**o The text on page 10 reporting on all three factors combined says that “predicted probabilities” were computed. But how is this possible if the scales were treated as interval-ratio as per the OLS regression?**

=> Thank you for catching this error. We have corrected this language to read “predicted levels.”

**o If the authors need to further cut something, I’d also consider shortening the discussion of inequality in objective representation because this is not the focus of this paper.**

=> We appreciate this observation and suggestion. Even with the increased space of the full-length article, we followed this suggestion to streamline the objective representation discussion, in favor of greater focus on descriptive representation in theory and findings. For example, XXX

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