

Supplemental Materials for “International Rewards for Gender Equality Reforms in Autocracies”

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1 Survey questionnaire

1. Below, we are going to describe a situation that could happen in the future.¹ The situation is not about a specific event in the news today. Some parts of the description may seem important to you; other parts may seem unimportant. Please read the details very carefully. After you have read about the situation, we will ask for your opinions.

After the release of an expert report about political development around the world, government officials are undertaking a review of relations with developing countries. The following two countries are under review. Both of the countries **hold elections**, but they have been found to be “**not politically free.**”² Please carefully review each country’s profile. You will then be asked to evaluate each country.

On the subsequent pages, we will ask you about **five** additional pairs of profiles because it is important for the scientific validity of our study.

	Country A	Country B
Income	Lower Middle Income Country	Least Developed Country
Environment for Opposition Parties	Legal restrictions make it difficult for opposition parties to campaign and compete in elections	Recent law makes it easier for opposition parties to campaign and compete in elections
Women’s Economic Rights	Recent law guarantees women equal rights for property, inheritance, & employment	Country does not guarantee women equal rights for property, inheritance, & employment
Parliamentary Quotas	No legal requirements for women’s representation	No legal requirements for women’s representation
Level of Corruption	Corruption is Low	Corruption is low

2. Indicate which country you think is more democratic.

Country A

Country B

3. Indicate which country you think is more effective at fighting terrorism.

Country A

Country B

4. Indicate which country you think is making more progress towards democracy.

Country A

Country B

¹The appendix contains the wording for all questions relevant to the analysis. As noted in the main text, the surveys also included questions to be used by other authors.

²The included table provides an example of the type of conjoint pair that the respondents viewed. We do not repeat all six conjoint tasks in the supplemental materials in the interest of space. As noted in the main text, the order of the outcome questions was randomized across the conjoint tasks to encourage respondents to pay attention.

5. An aid program of \$50 million per year will be awarded to one of these countries in order to support education and water supply and sanitation. The program is cash aid paid directly to the recipient country government. To which of these countries would you support awarding the aid package?

Country A

Country B

6. What is your nationality?³

American

Canadian

Swedish

British

French

Ugandan

Other

7. In which region do you currently reside?

Sub-Saharan Africa

Europe

Middle East and North Africa

North America

Latin America and the Caribbean

Asia

Oceania

8. Which of the following best describes your profession?

Academic or Student

Advocacy (specify sector)

Government (not elected politician)

Media/journalism

Policy

Law

³Note that we sent the survey to Sida employees separately, so we did not need to ask a specific question to identify which individuals were employed by Sida, although there is (as expected) a strong correlation between Swedish nationality and working for Sida.

Politician

Other

9. What is your gender?

Female

Male

Non-binary

Prefer not to say

10. What is the highest level of education you have completed?

High school/secondary school

Associate's degree

Bachelor's degree

Master's degree

Professional degree

Doctoral degree

Other

11. What is your age?

2 Additional outcome measures

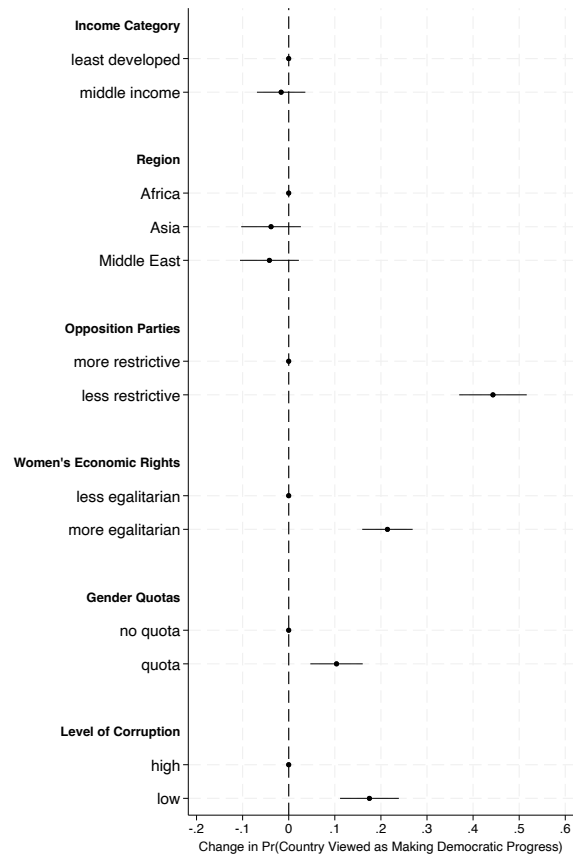


Figure A1: **Effects of country attributes on perceived democratic progress.** This figure shows the AMCEs with 95 percent confidence intervals based on regressions with standard errors clustered by respondent. Table B1, Column 1 in the “Tables for Supplemental Materials” contains a table with these results.

Our study included an additional outcome measure: perceptions that the country is effective at fighting terrorism. In our pre-analysis plan, we were ambivalent about our expectations of how our key explanatory variables—the environment for opposition parties, women’s economic rights, and women’s political rights—would affect this outcome measure. On the one hand, we thought it was possible that elite audiences would not update their beliefs about fighting terrorism in response to these variables to the same extent. The logic is that the link between liberal democratic norms and effectiveness at fighting terrorism is less immediate (though not entirely or necessarily absent). On the other hand, we thought it was possible that the positive reputational effects of political competition and gender equality could spill over to this outcome, too. What we see in Figure A2 below are results that look quite similar to our results in the main text for support for foreign aid (with the exception that middle income countries have a positive AMCEs here vs. a negative AMCEs for foreign aid), which indicates reputational spill over.

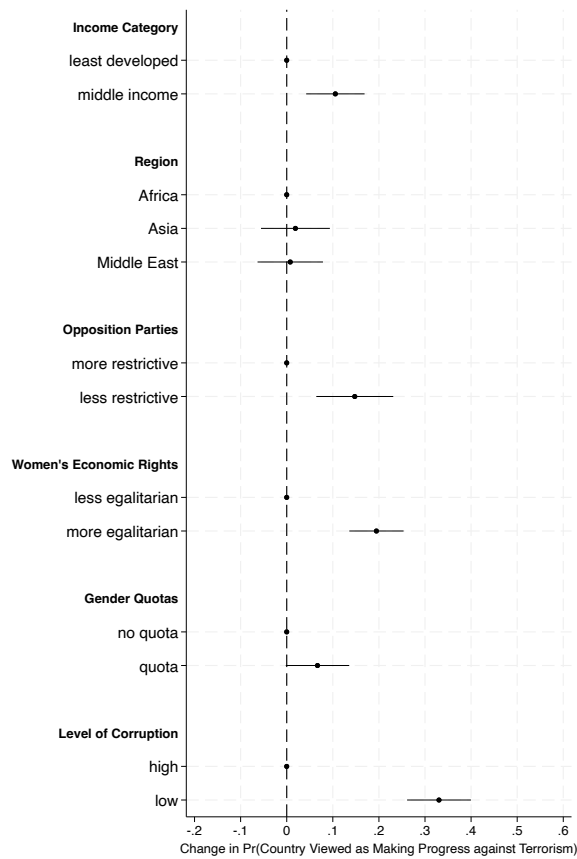


Figure A2: **Effects of country attributes on perceived progress at fighting terrorism.** This figure shows the AMCEs with 95 percent confidence intervals based on regressions with standard errors clustered by respondent. Table B1, Column 2 in the “Tables for Supplemental Materials” contains a table with these results.

3 Sub-group analysis by respondent gender

Leeper, Hobolt, and Tilley (2020) note that researchers can draw incorrect conclusions when comparing AMCEs among sub-groups of respondents in a conjoint experiment, especially when the attributes in the conjoint take on more than two levels, as they do for one of the attributes in our study (Region).¹ As such, they recommend that researchers instead compare the marginal means among respondents. We display the marginal means in Figure A3. The overall take-away is that we do not find consistent patterns of sub-group differences by respondent gender.

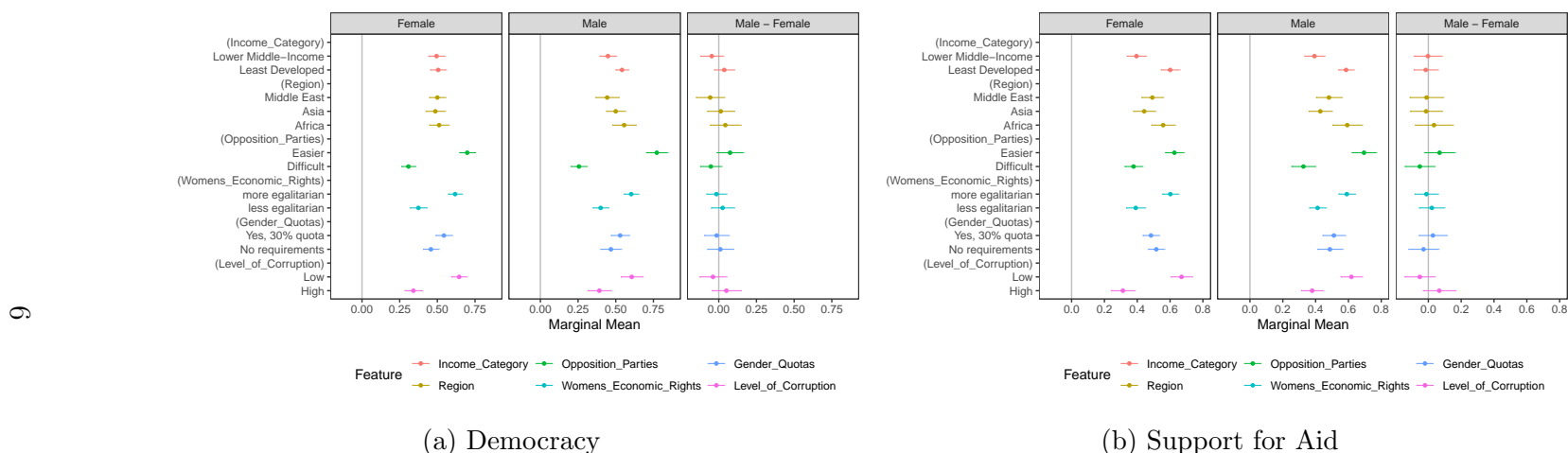


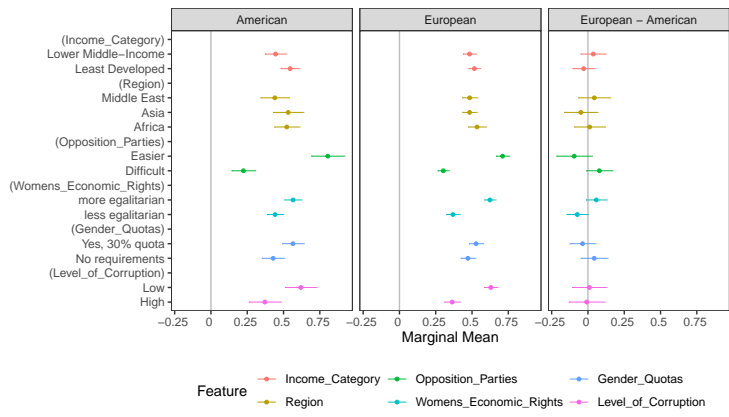
Figure A3: **Effects of country attributes on perceived democracy and support for foreign aid.** This figure shows the conditional marginal means by respondent gender and the estimated difference in conditional marginal means. Table B2 in the “Tables for Supplemental Materials” contains a table with these results.

¹Thomas J. Leeper, Sara B. Hobolt, and James Tilley, “Measuring Subgroup Preferences in Conjoint Experiments,” *Political Analysis* 28, no. 2 (2020): 207-221.

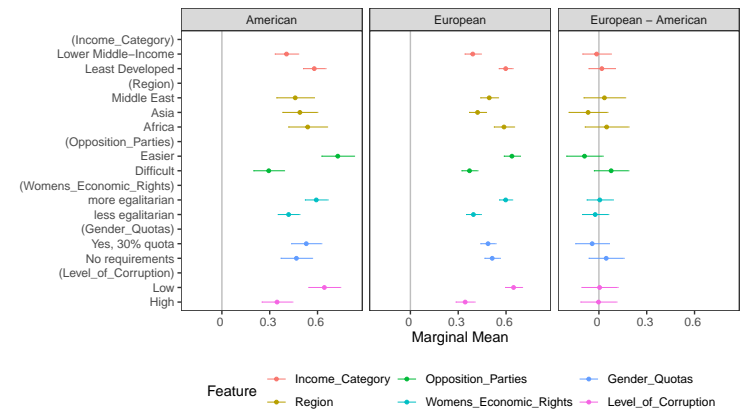
4 Sub-group analysis by respondent nationality and institution

The sub-group analysis by respondent nationality and institution uses a similar approach as the sub-group analysis by respondent gender. Again, the overall take-away is that we do not find consistent patterns of sub-group differences.

4.1 American vs. European



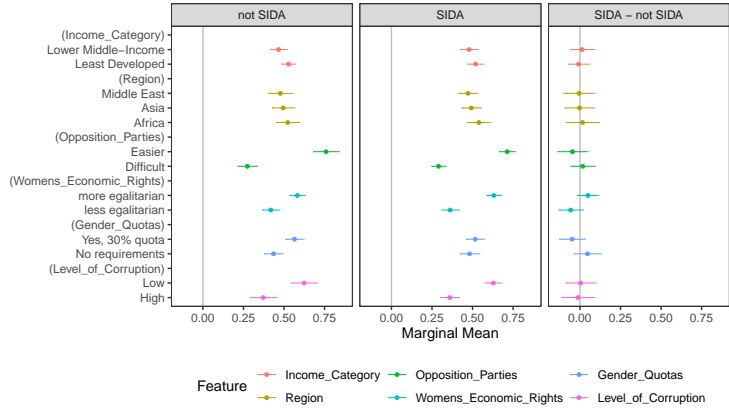
(a) Democracy



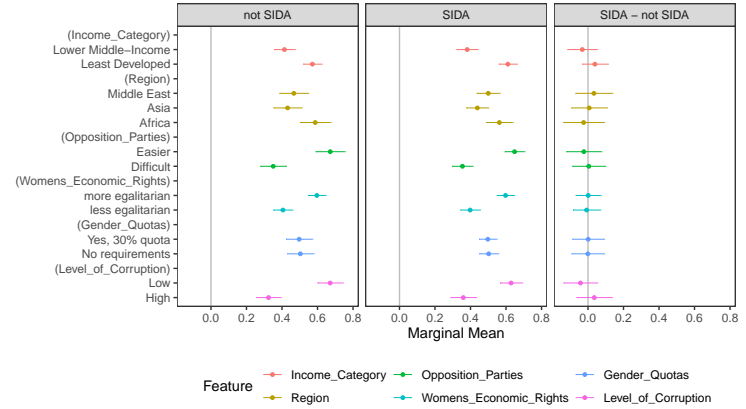
(b) Support for Aid

Figure A4: **Effects of country attributes on perceived democracy and support for foreign aid.** This figure shows the conditional marginal means by respondent nationality and the estimated difference in conditional marginal means. Table B3 in the “Tables for Supplemental Materials” contains a table with these results.

4.2 Sida vs. non-Sida



(a) Democracy



(b) Support for Aid

∞ Figure A5: **Effects of country attributes on perceived democracy and support for foreign aid.** This figure shows the conditional marginal means by respondent institution and the estimated difference in conditional marginal means. Table B4 in the “Tables for Supplemental Materials” contains a table with these results.

5 Interactions between gender reform and regional variables

When researchers seek to study interactions within the context of conjoint experiments, Egami and Imai (2019) propose a method for calculating the average marginal interaction effect (AMIE).² Figure A6 presents the conditional effects estimated based on the AMIEs between the women’s economic rights reform and country region variables. As we mention in the results section of the main text, we find little evidence of a significant interaction between more egalitarian women’s rights and the country’s region.

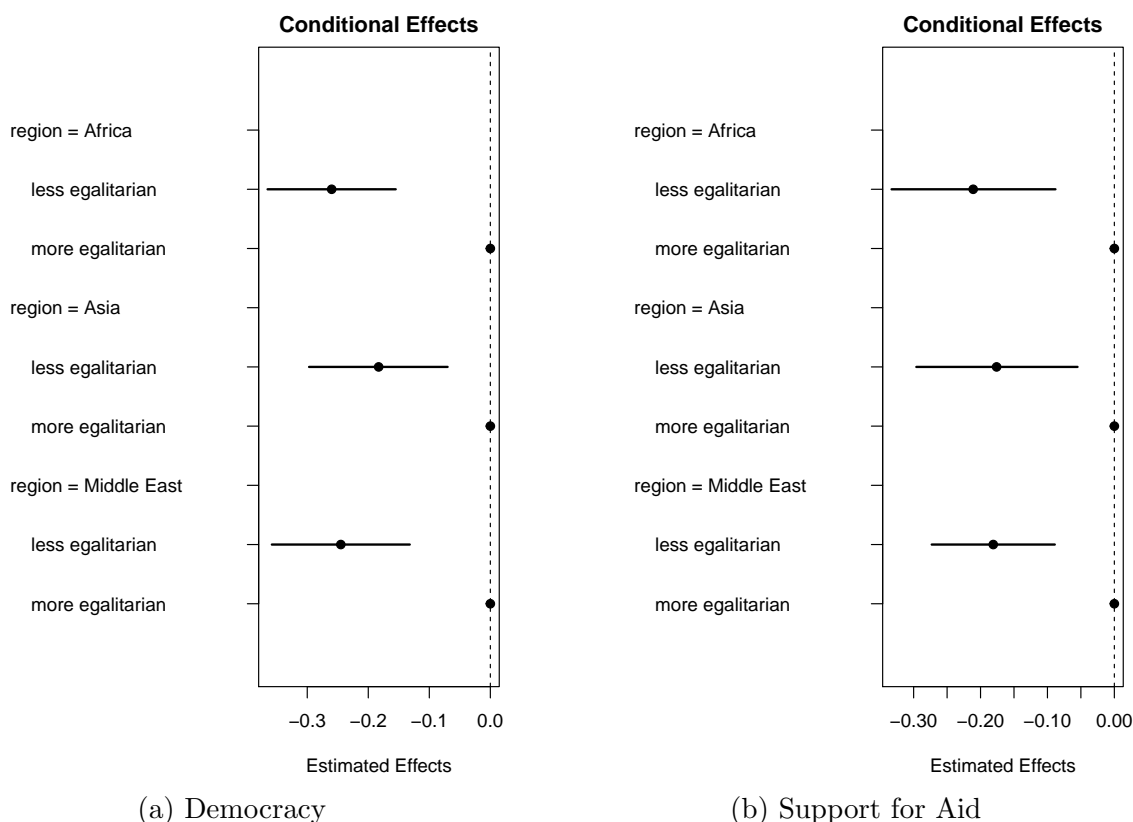


Figure A6: **Interactions between country attributes on perceived democracy and support for foreign aid.** This figure shows the conditional effects with 95 percent confidence intervals estimated based on the AMIEs. Table B5 in the “Tables for Supplemental Materials” contains a table with these results.

²Naoki Egami and Kosuke Imai, “Causal Interaction in Factorial Experiments: Application to Conjoint Analysis,” *Journal of the American Statistical Association* 114, no. 526 (2019): 529-540.

6 Analysis of question order effects

As discussed in the research design section in the main text, we randomized the order of two blocks of questions in our survey. We do not find consistent evidence of significant question order effects.

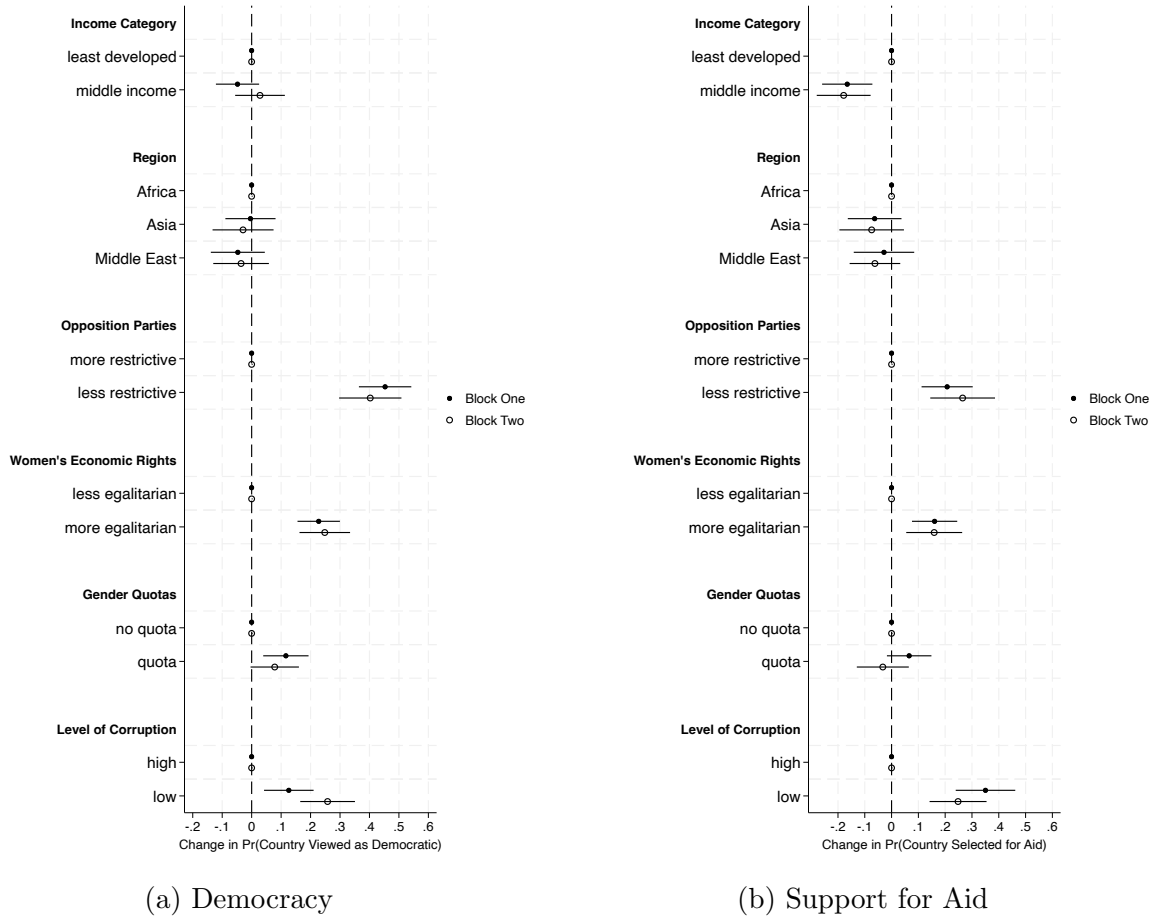
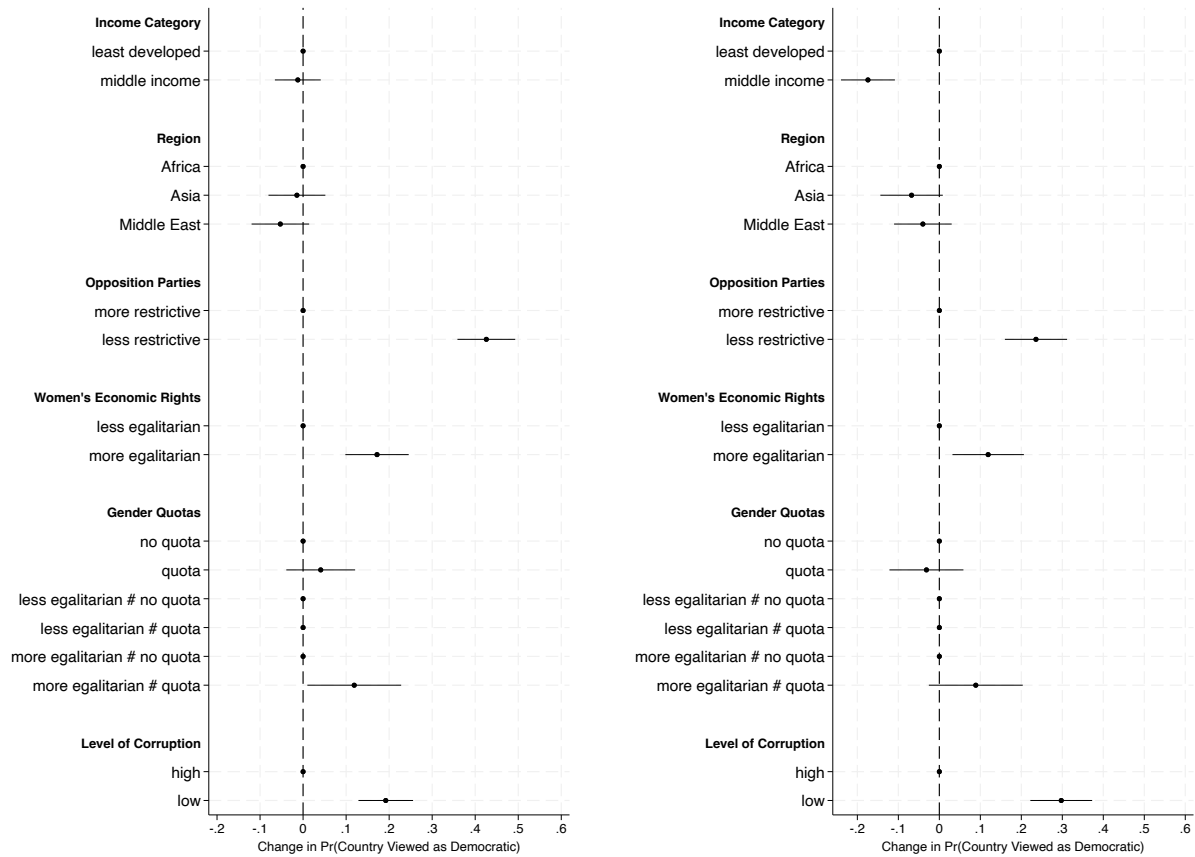


Figure A7: **Effects of question order on perceived democracy.** This figure shows the AMCEs with 95 percent confidence intervals based on regressions with standard errors clustered by respondent. Table B6 in the “Tables for Supplemental Materials” contains a table with these results.

7 Interactions between the two women’s rights treatments

As discussed in the main text’s results section, we found a positive interaction between our women’s economic rights and quotas treatments. Quotas are associated with more democracy and support for aid in an environment in which recent egalitarian economic reforms have been pushed through.



(a) Democracy

(b) Support for Aid

Figure A8: **Interactions between the two women’s rights treatments on perceived democracy and support for aid.** This figure shows the AMCEs with 95 percent confidence intervals. Calculating conditional effects based on the AMIEs is not necessary since both treatments include only two levels. Table B7 in the “Tables for Supplemental Materials” contains a table with these results.

8 Citizen Survey Results

As discussed in the main text, our follow-up survey found that the findings in the elite sample replicate on American citizens (§8.1). We also slightly adjusted the treatment wording for half the respondents and found that the results are similar regardless of treatment language (§8.2). Our exploration further revealed that among U.S. citizens, a positive response to our gender quota treatment is concentrated among those espousing egalitarian conceptions of democracy and progressive gender attitudes, as well as those identifying as Democrats (§8.3-8.5). We also found that citizen respondents did not view the women’s rights treatments as contributing to regime instability (§8.6).

8.1 Exact Replication

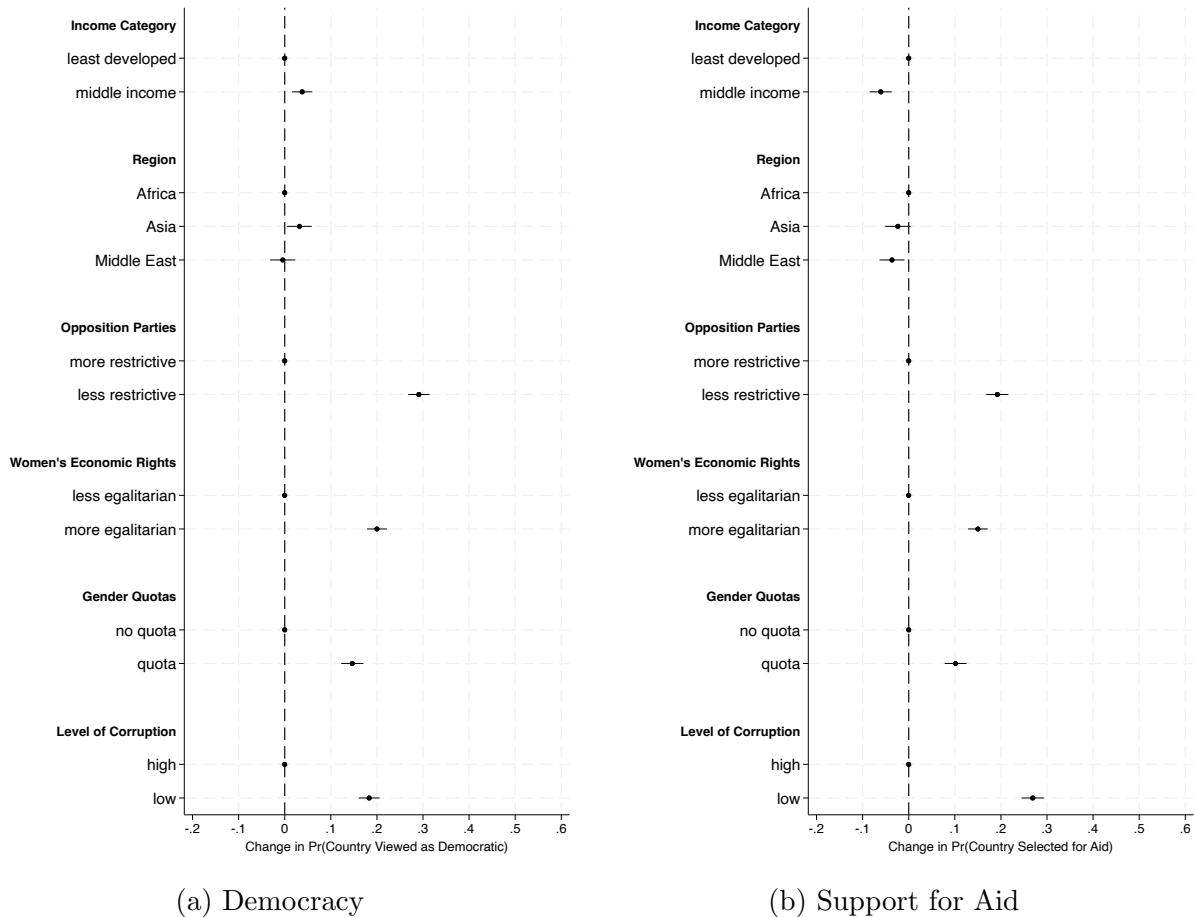
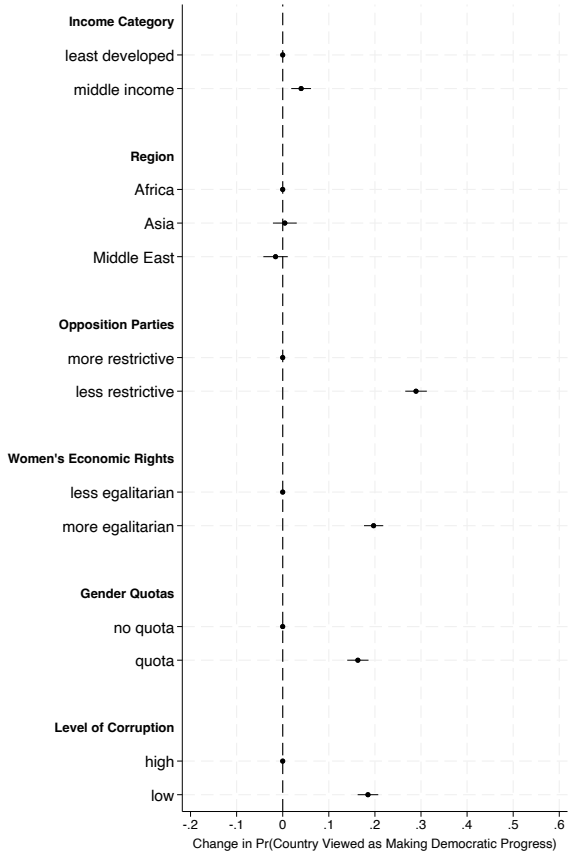
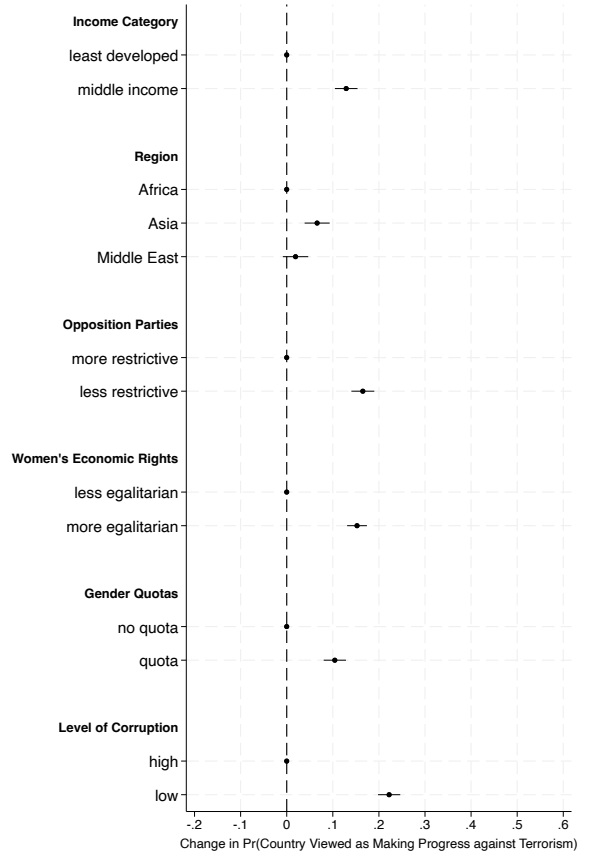


Figure A9: **Exact replication: perceived democracy and support for aid outcomes.** This figure shows the AMCEs with 95 percent confidence intervals based on regressions with standard errors clustered by respondent. Table B8, Columns 1 and 2 in the “Tables for Supplemental Materials” contains a table with these results.



(a) Democratic Progress



(b) Fighting Terrorism

Figure A10: **Exact replication: democratic progress and fighting terrorism outcomes.** This figure shows the AMCEs with 95 percent confidence intervals based on regressions with standard errors clustered by respondent. Table B8, Columns 3 and 4 in the “Tables for Supplemental Materials” contains a table with these results

8.2 Adjustment to Quota Treatment Language

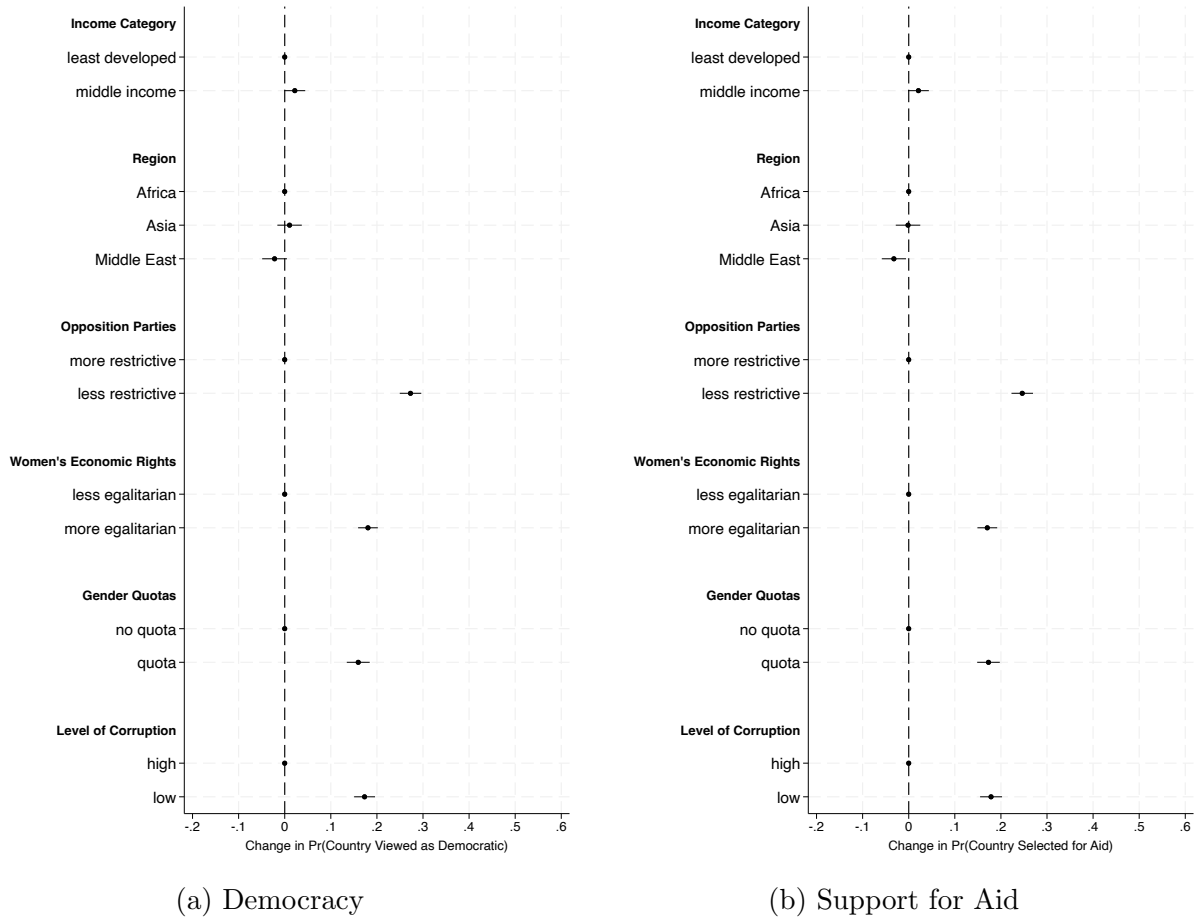
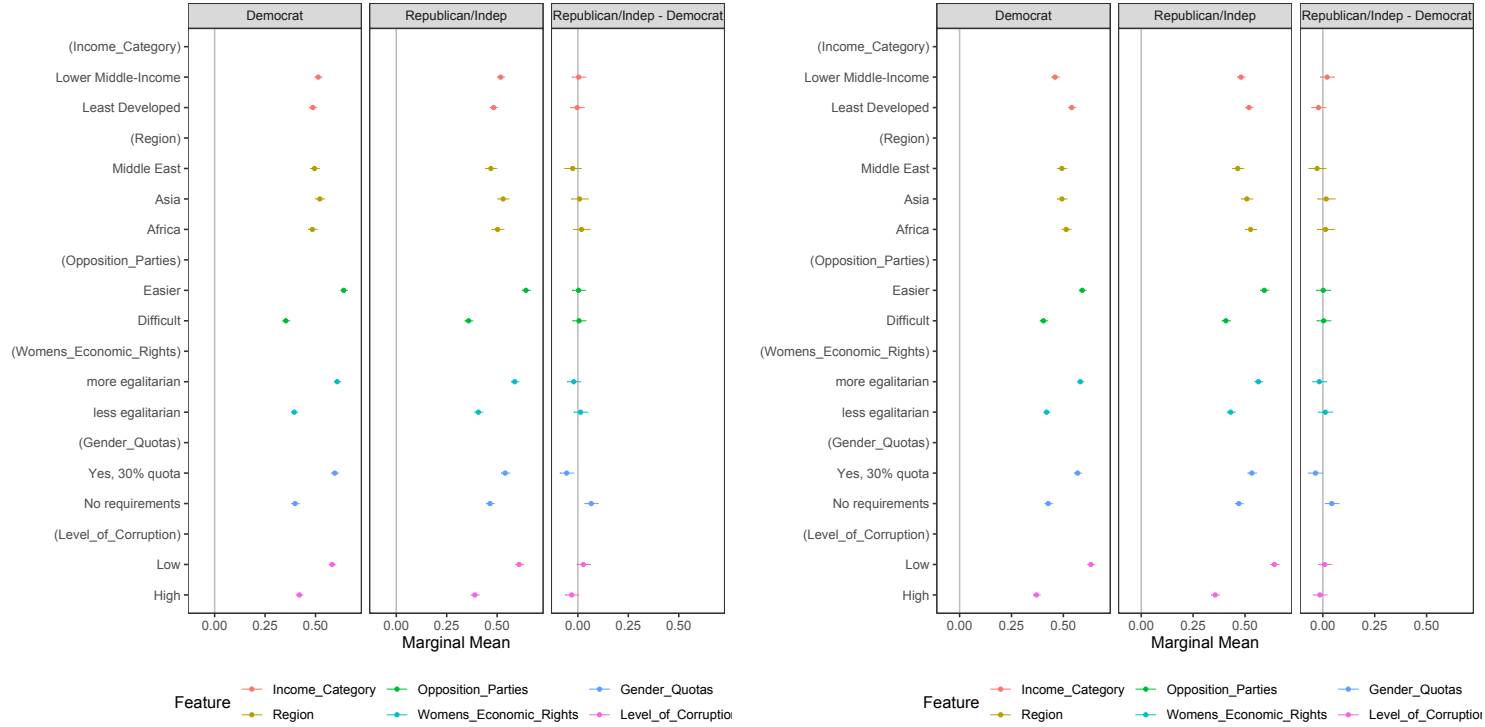


Figure A11: **Replication with treatment wording change: perceived democracy and support for aid outcomes.** This figure shows the AMCEs with 95 percent confidence intervals based on regressions with standard errors clustered by respondent. Table B9 in the “Tables for Supplemental Materials” contains a table with these results.

8.3 Sub-Group Analysis by Party ID

15

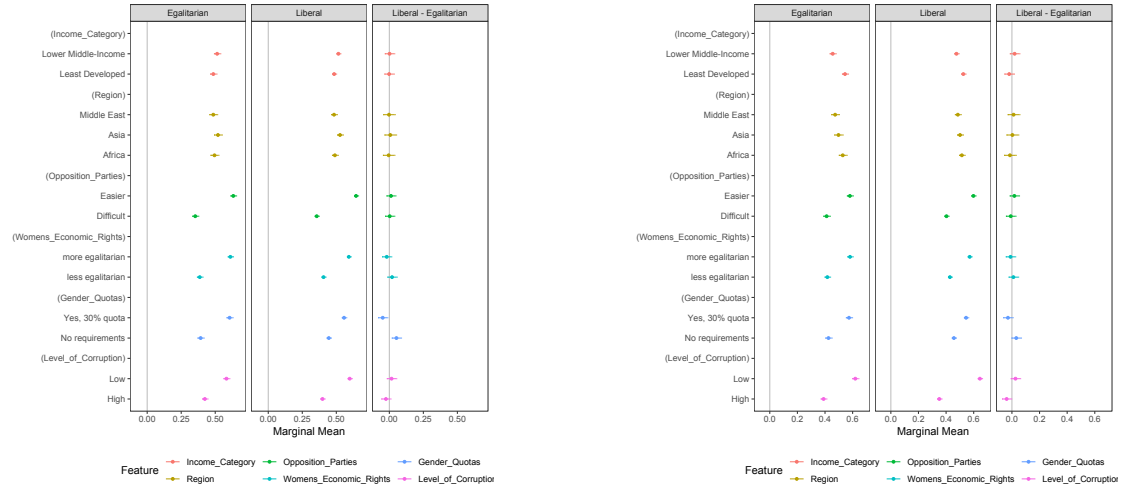


(a) Democracy

(b) Support for Aid

Figure A12: **Effects of country attributes on perceived democracy and support for foreign aid.** This figure shows the conditional marginal means by respondent partisanship and the estimated difference in conditional marginal means. Table B11 in the “Tables for Supplemental Materials” contains a table with these results.

8.4 Sub-Group Analysis by Conception of Democracy

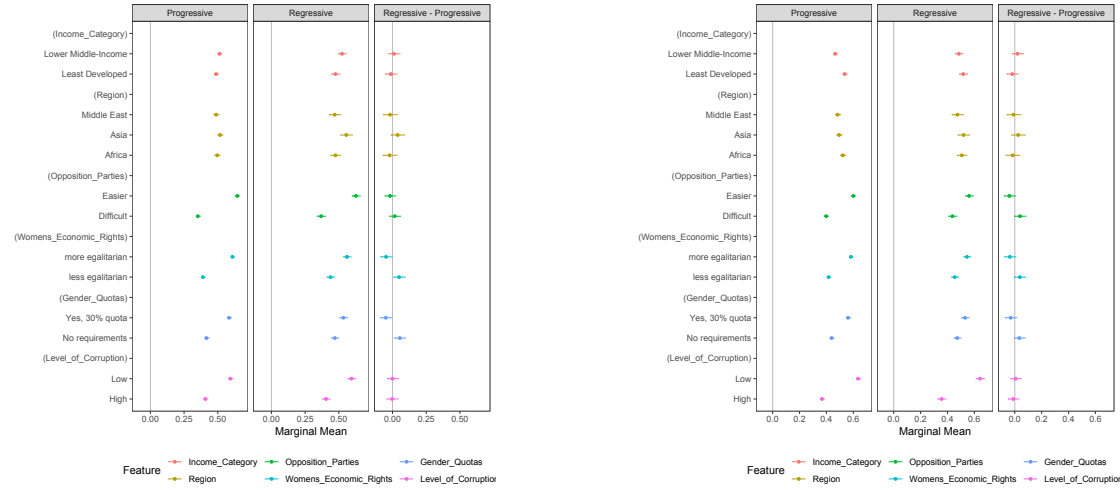


(a) Democracy

(b) Support for Aid

Figure A13: **Effects of country attributes on perceived democracy and support for foreign aid.** This figure shows the conditional marginal means by respondent conception of democracy (egalitarian or liberal) and the estimated difference in conditional marginal means. Table B12 in the “Tables for Supplemental Materials” contains a table with these results.

8.5 Sub-Group Analysis by Gender Attitudes



(a) Democracy

(b) Support for Aid

Figure A14: **Effects of country attributes on perceived democracy and support for foreign aid.** This figure shows the conditional marginal means by respondent gender attitudes (progressive or regressive) and the estimated difference in conditional marginal means. Table B13 in the “Tables for Supplemental Materials” contains a table with these results.

8.6 Alternative DV: Future Regime Stability

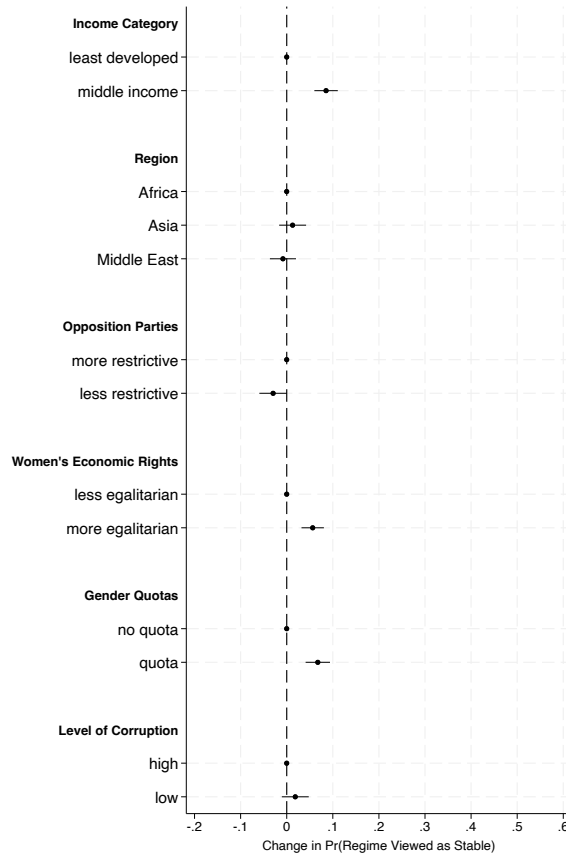


Figure A15: **Effects of country attributes on perceived future regime stability.** This figure shows the AMCEs with 95 percent confidence intervals based on regressions with standard errors clustered by respondent. Table B14 in the “Tables for Supplemental Materials” contains a table with these results.

9 Human subjects research

We analyze quantitative data from an elite survey and citizen survey and qualitative data from elite interviews. This section describes how we attempted to conform with the APSA Council’s Principles and Guidance for Human Subjects Research.³

9.1 Quantitative data

General principles: The general principles guiding our elite and citizen surveys were to respect the autonomy and well-being of the respondents and other people affected by the research, as detailed below.

Power: For the elite survey, we recruited international development professionals via e-mail to participate in our survey. For the citizen survey, survey participants were recruited by the survey firm Prolific from a panel of participants that have previously expressed an interest in completing surveys for compensation. For both surveys, after receiving the e-mail invitation, the person had the ability to opt in to the online survey. Participation was voluntary. No covert or deceptive research practices were used.

Consent: All participants were presented with information about our study in the invitation e-mail and survey landing page, and they gave their informed consent in order to participate. Participants were made aware that they could opt-out at any point of the survey and still receive the same compensation.

Deception: We used no deception. We accurately described the nature of the research in the survey consent forms and invitations.

Harm and Trauma: Our survey topic—perceptions of countries’ democracy and support for giving foreign aid—did not entail any harm or trauma to participants. They are topics we would expect the professionals participating in our survey to openly discuss and debate as part of their jobs, and they are also commonly debated among citizens and in the media in the United States. Although we do not anticipate any risks to the survey participants, the anonymous, online survey mode should have further ensured that there were no issues.

Confidentiality: We did not record identifying information (respondent name, social security number, etc.).

³We base the organization of this discussion on Sarah Sunn Bush and Amanda Clayton, “Facing Change: Gender and Climate Change Attitudes Worldwide,” *American Political Science Review* 117, no. 2 (2023): 591-608.

Impact: The surveys conducted for this study did not compromise the integrity of political processes in any way.

Laws, Regulations, and Prospective Review: This research was deemed exempt by the Human Subjects Internal Review Board of Yale University (Protocol ID 2000026515). Further, the researchers attest to the ethics of the research beyond institutional approvals.

Compensation: We compensated elite survey participants at a rate of \$20 USD/Euro via the form of an Amazon gift card or a gift card to a movie theatre. We chose to give participants gift cards for participation to encourage participation and compensate them for the time that they spent participating in our study. We chose the amount for this compensation after reviewing the compensation practices for other expert surveys and consulting with colleagues about what amounts would be sufficient to encourage participation but without being so large that people would feel pressured to do so.⁴ For the citizen survey, Prolific compensates individuals for participating in their online survey panel at a standard rate that they have set. See also our discussion above on Power for a discussion of the voluntary nature of participation in the research.

Shared Responsibility: The researchers have sought to adhere to the principle of shared responsibility as described in the APSA Council’s guidelines.

9.2 Qualitative data

General principles: The general principles guiding our semi-structured elite interviews were to respect the autonomy and well-being of the respondents and other people affected by the research, as detailed below.

Power: We recruited professionals working in the fields of development and democracy promotion via e-mail to participate in an interview to discuss our research on the themes of democracy and women’s rights. Participation was voluntary. No covert or deceptive research practices were used. All interviews were conducted over Zoom.

Consent: Prior to commencing the interview, subjects were informed about the themes and scope of our research project, as well as the nature of questions that would guide our interview. They were informed that the purpose of our interview was to help us interpret findings from a prior survey of development professionals. Subjects gave their informed consent in order to participate. Participants were made aware that they could opt-out at any point of the interview, and that they could specify any particular statements (as well as the entire

⁴See Alauna Safarpour, Sarah Sunn Bush, and Jennifer Hadden, “Participation Incentives in a Survey of International Non-profit Professionals,” *Research & Politics* 9, no. 3 (2022): 1-6.

interview) as being “off the record.”

Deception: We used no deception. We accurately described the nature of the research in our email and verbal communication with subjects.

Harm and Trauma: Our topic—perceptions of countries’ democracy, women’s rights, and support for giving foreign aid—did not entail any harm or trauma to participants. They are topics we would expect the professionals participating in our study to openly discuss and debate as part of their jobs. We do not anticipate any risks to the participants.

Confidentiality: Prior to commencing the interview, we asked each subject to specify whether they wanted the interview to be off the record, on the record, or “not for attribution.”

Impact: The interviews conducted for this study did not compromise the integrity of political processes in any way.

Laws, Regulations, and Prospective Review: This research was deemed exempt by the Human Subjects Institutional Review Board of Yale University (Protocol ID 2000026515). Further, the researchers attest to the ethics of the research beyond institutional approvals.

Compensation: No compensation was offered.

Shared Responsibility: The researchers have sought to adhere to the principle of shared responsibility as described in the APSA Council’s guidelines.

10 Interview guide and methods

10.1 Interview guide

We used semi-structured interviews. This format implies that a set of predetermined questions and topics were dealt with, yet there was still flexibility to digress from the questionnaire in appropriate situations (e.g., with follow-up questions). Below is the guide we followed when conducting the interviews.

- Basic introduction: We are working on a research project which has surveyed professionals currently working in the field of international development. We are now eager to have a more in-depth discussion in order to help us interpret some of our findings. I will talk with you about some of the key questions we are interested in, and will ask for your candid reaction.
- One of our survey questions discussed two hypothetical countries. The script: “After the release of an expert report about political development around the world, government officials are undertaking a review of relations with developing countries. The following two countries are under review. Both of the countries hold elections, but they have been found to be ‘not politically free.’” What kind of countries does this description make you think of?
 - Possible follow-up questions: Are there any specific countries that come to mind after hearing this description? When you hear ‘not politically free’ what does this mean to you?
- We will now tell you about three specific types of reforms that countries can undertake. For each one, we are interested in understanding how much you associate this reform with democracy: (1) a recent law makes it easier for opposition parties to campaign and compete in elections; (2) a recent law guarantees for women equal rights to property, inheritance and employment; and (3) there is a parliamentary quota which reserves 30% of seats for women. For each reform: Do you associate this reform with democracy, and why/why not?
 - Possible follow-up question: We’ve found that a lot of people working in this field tend to think women’s economic rights are a stronger sign of democracy than quotas. Do you agree with that perspective, and why/why not?
 - Possible follow-up question: Our research suggests that non-democratic countries often try to improve gender equality as a way of appearing more progressive while not changing other aspects of their rule, such as how elections are conducted. Is that something you’ve found in your work?
- Possibly, a more general discussion about what democracy means. . . There is considerable argument concerning the meaning of democracy. What does democracy personally

mean to you? Thinking about the countries that you work with, the countries that receive foreign aid, what are the attributes or qualities of democracy that are important? (If interviewees need prompting, could list participation, equality, elections, political competition).

- Possible follow-up question: (to probe whether the economic vs. political gender equality finding has a temporal dimension:) Has your perspective changed over time about what attributes are important for democracy?
- Discussion related to aid allocation decisions: We are trying to understand the link between performance evaluation (related to democracy and/or gender) and how much aid a country actually receives. Can you describe how decisions about aid allocations are made in your organization, and whether performance on democracy/women’s rights influences these decisions? If you/your organization/your colleagues evaluated a country as more democratic, meaning that it experienced some democratic improvements, what would change? And/or: We know from reading the formal institutional documents what organization X’s policies are towards democracy, but could you describe how things could change in a more day-to-day way?

10.2 Interview methods appendix

We organize this appendix based on the approach laid out in Bleich and Pekkanen (2013).⁵

Sample Frame: As discussed in the main text, we sought to interview professionals working in international development and democracy promotion. To the extent possible, we sought to include interviewees with substantial experience in working in their field. We sought a diversity of interviewees in terms of institutional affiliations: non-governmental organizations, government agencies, and international organizations. We also sought to ensure interviewees from the countries with the most survey respondents in our elite survey. Table A1 contains further information, including the current or most recent position of the interviewee.

Response Rate and Type: We sought and completed eight interviews. We identified potential interviewees using mainly desk research and in a few cases snowball sampling. They were contacted via e-mail, and follow-up requests sent when feasible or necessary. In total, nine individuals were contacted and only one did not respond to the email requesting an interview.

Saturation: We believe saturation has been reached across our interviewees given the uniformity of interviewees’ association of electoral competition reforms with democracy, and

⁵See Erik Bleich and Robert Pekkanen, “How to Report Interview Data,” in *Interview Research in Political Science*, ed. Layna Mosley (Ithaca, NY: Cornell University Press, 2013), 84-105.

the close to uniformity of interviewees’ association of women’s economic rights reforms with democracy (7/8 interviewees), as discussed in the main text. These findings are also similar to what the survey revealed. An advantage of spreading the interviews over a relatively long time period (approximately eight months) was that we could do a preliminary analysis of the first half of the interviews (which we conducted in 2021) and then analyze whether the narratives substantially changed as we added more interviews (in 2022). Our conclusion is that they did not: when we conducted the last interviews we could make qualified guesses (based on previous interviews) of what the interviewee was going to respond. With a few exceptions, our qualified guesses turned out to be correct. This is an additional indication of having reached saturation.

Format of Interviews: We conducted semi-structured interviews as described above. The authors of the manuscript conducted the interviews individually, with each author conducting several interviews. The interviews were conducted over Zoom, in English, and ranged in length from fifteen to forty-five minutes.

Recording Method: With the interviewees’ permission, all interviews were recorded using Zoom and subsequently transcribed. In addition, all interviews involved contemporaneous notes taken by the interviewer.

No.	Interviewee	Date	Source
1	Senior Executive, Democracy International	9/20/21	Sample Frame
2	Senior Consultant on Election Management, IFES	3/4/22	Sample Frame
3	Former international NGO staffer	10/5/21	Sample Frame
4	Former U.S. State Department advisor	11/8/21	Referred by 3
5	Former U.S. State Department advisor	11/16/21	Referred by 3
6	International organization staffer on issues related to democracy	4/8/22	Sample Frame
7	International organization staffer on issues related to democracy	3/25/22	Sample Frame
8	Swedish development professional	5/11/22	Sample Frame

Table A1: **Interview Methods Table**

11 Tables associated with figures in main text

	DV = Democracy	DV = Support for Aid
<i>Income Category</i>		
Middle income	-0.01 (0.027)	-0.17*** (0.033)
<i>Region</i>		
Asia	-0.02 (0.033)	-0.07 (0.038)
Middle East	-0.05 (0.033)	-0.04 (0.036)
<i>Opposition Parties</i>		
Less restrictive	0.43*** (0.034)	0.24*** (0.038)
<i>Women's Economic Rights</i>		
More egalitarian	0.23** (0.027)	0.16*** (0.032)
<i>Gender Quotas</i>		
Quota	0.10** (0.028)	0.01 (0.032)
<i>Level of Corruption</i>		
Low	0.19*** (0.032)	0.30*** (0.038)
<i>N</i>	936	954
Adjusted R-squared	0.292	0.210

Table A2: **Table associated with Figures 1 and 2 in Main Text.** Estimates of ACMEs and standard errors are based on regressions in which standard errors are clustered by respondent. *** = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$.