Online Appendix

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1 Guatemala Online Survey

The Guatemala 2022 Online Survey is a nonprobability sample. Data was collected with Offerwise who invited members of their online panel in Guatemala to participate in the survey. 2,008 complete responses were collected from 2,828 panelists who clicked into the survey. The invitation process by Offerwise used quotas for age, gender, and geographic region to approximate the adult population of the country. The median duration of the survey was 23.4 minutes. The survey had IRB approval as exempt and adhered to APSA's Principles and Guidance for Human Subject Research.

Question Wording and Treatment Effects

TABLE A1. Treatments (English Translation)

Treatment	Question(s)	Responses
Treatment 1	For statistical purposes, can you please confirm your gender?	1. Man/male 2. Woman/female 3. Don't identify as a man or woman
Treatment 2	At birth, what sex was written on your birth certificate?	1. Male 2. Female
	And regardless of what the birth certificate says, how do you currently describe your gender? [Mark all that apply]	1. Man/male 2. Woman/female 3. Transgender 4. Non-binary 5. Use a different term

TABLE A2. Treatments (Original Spanish Text)

Treatment	Question(s)	Responses
Treatment 1	Para fines estadísticos, ¿me podría por favor confirmar su género?	1. Hombre/ masculino 2. Mujer/femenino 3. No se identifica como hombre ni como mujer
Treatment 2	Al nacer, ¿cuál sexo fue anotado en su partida/acta/certificado de nacimiento?	1. Masculino 2. Femenino
	Y más allá de lo que diga partida/acta/certificado de nacimiento, ¿cómo describe su género actualmente? [Marque todo lo que corresponda]	1. Hombre/ masculino 2. Mujer/femenino 3. Transgénero 4. No binario 5. Uso un término diferente

TABLE A3. Outcome Measures (with English Translations)

Variable	Question
Survey satisfaction	En una escala de 0 a 10, donde 0 significa que a usted no le gustó nada, y 10 significa que le gustó mucho, ¿que tanto le gustó a usted responder a esta encuesta? *Translation:* On a scale of 0 to 10, where 0 means you did not like it at all and 10 means you liked it a lot, how much did you like responding to this survey?
Overall comfort	En una escala de 0 a 10, donde 0 significa muy incómodo y 10 muy cómodo, ¿qué tan cómodo se sintió en general con las preguntas que le hicimos? *Translation:* On a scale of 0 to 10, where 0 means very uncomfortable and 10 means very comfortable, how comfortable were you with the questions we asked you?
Comfort (gender Q)	Pensando en la pregunta que hicimos sobre tu género, en una escala de 0 a 10, donde 0 significa muy incómodo y 10 muy cómodo, ¿qué tan cómodo se sintió con esta pregunta? *Translation:* Thinking back to the question we asked about your gender, on a scale of 0 to 10, where 0 means very uncomfortable and 10 means very comfortable, how comfortable were you with this question?
Reported confusion	Pensando en la pregunta que hicimos sobre tu género, en una escala de 0 a 10, donde 0 significa no confundido y 10 muy confundido, ¿qué tan confundido se sintió con esta pregunta? *Translation:* Thinking back to the question we asked about your gender, on a scale from 0 to 10, where 0 means not confused and 10 means very confused, how confused were you with this question?

TABLE A4. Treatment Effects

Outcome	Mean Treatment 1	Mean Treatment 2	Difference in Means
Survey satisfaction	8.77	8.82	-0.05 $(p = 0.51)$
Overall comfort	8.40	8.49	-0.09 $(p = 0.33)$
Comfort (gender Q)	9.11	8.93	0.18 $(p = 0.03)$
Reported confusion	2.26	2.20	0.06 $(p = 0.70)$

Note: Two-tailed p-values.

2 In-Person Surveys

For AmericasBarometer 2023, the technical report (including sample design information, quality control, response rates), full questionnaires, and fieldwork dates are available here: `https://www.vanderbilt.edu/lapop/studies-country.php`. The 2024 El Salvador survey was conducted from April 25 to July 9, with 1,515 completed interviews. The survey is nationally representative of the voting age population and used a multi-stage probabilistic sampling design, stratified by major region of the country, size of municipality, and by urban and rural areas within municipalities. The 2024 Honduras survey consisted of two samples: a national sample and an oversample of six areas. The national sample was collected from April 25 to July 9, with 1,180 completed surveys. The survey uses a complex sample design, including stratification and clustering. The sample design uses a multi-stage probabilistic design, and is stratified by major region of the country, size of municipality and by urban and rural areas within municipalities. It is nationally representative of the voting age population. The oversample portion was collected from April 24 to June 20, with 2,574 completed surveys. This part of the Honduras 2024 survey consisted of an oversample of hubs (Sula Valley, North Coast, Central Corridor, Western Honduras, Eastern Hub, Sur-Choluteca) and is representative of the voting population in each hub. All surveys are approved as exempt by the Vanderbilt IRB. LAPOP Lab adheres to APSA's Principles and Guidance for Human Subjects and AAPOR's Code of Ethics. See here: `https://www.vanderbilt.edu/lapop/Ethics-Statement.php`.

For the question-order experiment (in Argentina, Brazil, and Chile for the AmericasBarometer 2023; and in the 2024 El Salvador and Honduras surveys), respondents were assigned to Treatment (receiving the gender question at the beginning of the survey) or Control (receiving the gender question at the end of the survey) using simple random assignment with equal probabilities. The survey experiment in Argentina, Brazil, and Chile was pre-registered. (See attached pre-analysis plan.) For the subsequent experiments in El Salvador and Honduras, we follow the same protocol established in the AmericasBarometer 2023 pre-analysis plan (with the exception of measuring effects on LGBTQ+ rights questions that were not asked in the El Salvador and Honduras surveys).

Table A5 presents the full text of the LGBTQ+ rights outcome variables (applicable only to Argentina, Brazil, and Chile).

TABLE A5. LGBTQ+ Rights Questions (English)

Variable	Question
Run for office	And now, changing the topic and thinking of homosexuals, how strongly do you approve or disapprove of homosexuals being permitted to run for public office?
Marriage	How strongly do you approve or disapprove of same-sex couples having the right to marry?
Equal rights (LGB)	How strongly do you approve or disapprove of people from sexual minorities, such as gay, lesbian, bisexual, etc., having the same rights as the majority of (nationality)?
Adoption (LGB)	How strongly do you approve or disapprove of sexual minority couples having the right to adopt children?
Equal rights (T)	How strongly do you approve or disapprove of people from gender minorities, such as non-binary, transgender, etc., having the same rights as the majority of (nationality)?
Adoption (T)	How strongly do you approve or disapprove of couples who are from gender minority groups having the right to adopt children?

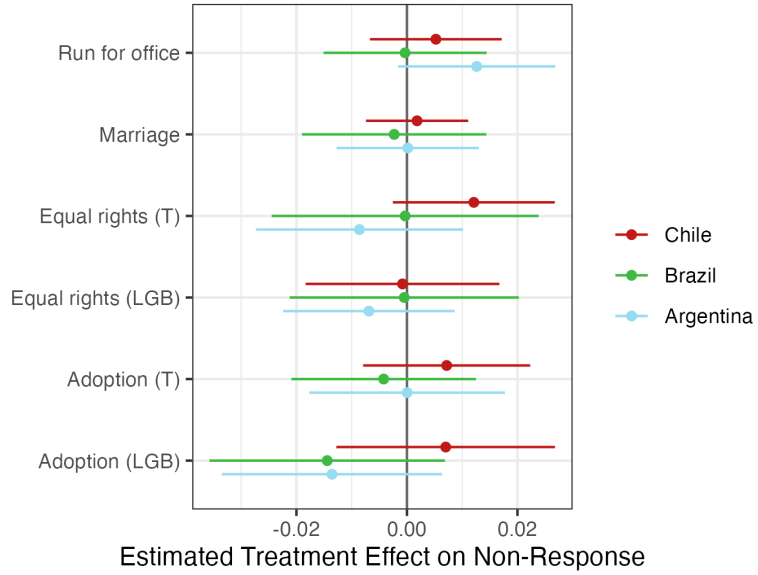
Note: All respondents who saw Equal rights (LGB) also saw Adoption (LGB) (similarly, all who saw Equal rights (T) also saw Adoption (T)). The language of the survey text varied across countries. See `https://www.vanderbilt.edu/lapop/studies-country.php` for questionnaires in other languages.

Non-Response

The remainder of this section presents additional pre-registered analyses.

Figure A1 presents the estimated effect of treatment on non-response for each LGBTQ+ rights question. We control for age, urban/rural residence, interviewer ID, and whether any other individuals were present at the time of the interview. We do not find a significant effect on any of the six LGBTQ+ rights questions in any of the three countries.

FIGURE A1. Non-Response on LGBTQ+ Rights Questions

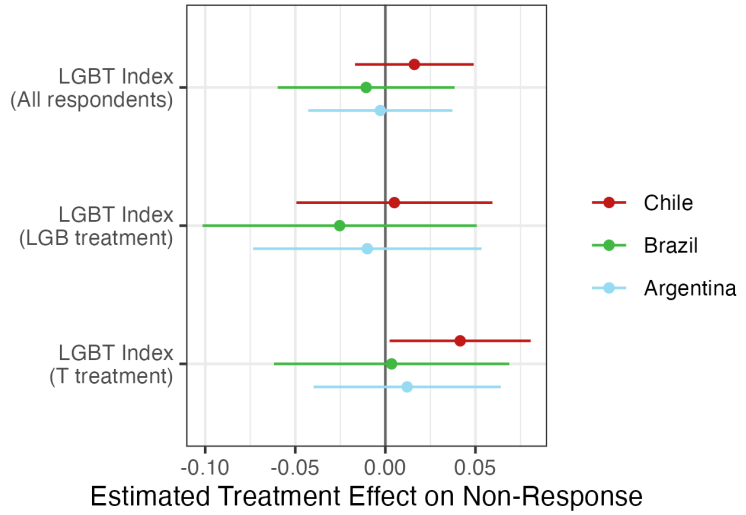


Note: Treatment effects are estimated from linear regressions, controlling for age, urban/rural residence, interviewer ID, and whether any other individuals were present at the time of interview. The estimated effects are presented with 95% confidence intervals.

We also combined data on non-response across the LGBTQ+ rights questions, creating an index from zero to four that counts the number of questions for which a respondent refused to answer or answered with "don't know." Again, we control for age, urban/rural residence, interviewer ID, and whether any other individuals were present at the time of the interview. We also control for whether respondents received the sexual minorities (LGB) or gender minorities (T) version of the adoption and equal rights questions. The first row of Figure A2 shows the estimated treatment effect on this index for the entire sample. We find no statistically significant effects. The second and third rows divide the samples according to which equal rights and adoption questions respondents saw: the sexual minorities version ("LGB treatment") or the gender minorities version ("T treatment"). Within the LGB treatment groups, we again find no effects. In the T treatment groups, we identify an effect

in Chile, but not in Argentina or Brazil. It is worth noting that the effect we identify in this subgroup is substantively very small: treatment increased non-response by about 0.04 points on a four-point scale.

FIGURE A2. Non-Response on LGBTQ+ Rights Index



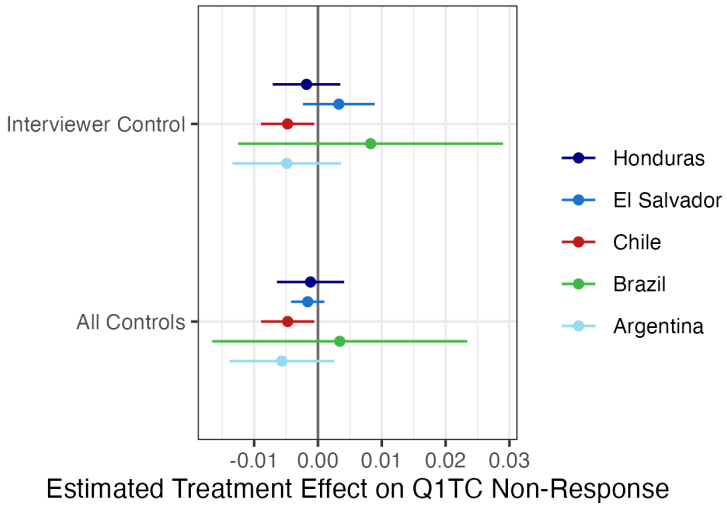
Note: The index is a count of the total number of questions for which a respondent refused to answer or answered "don't know." The maximum value is four (the total number of questions respondents were asked). Treatment effects are estimated from linear regressions, controlling for age, urban/rural residence, interviewer ID, and whether any other individuals were present at the time of interview. The estimated effects are presented with 95% confidence intervals. The (LGB treatment) and (T treatment) estimates were calculated on subsets of respondents who received the sexual minorities or gender minorities questions, respectively. The pooled (all respondents) version controls for LGB/T treatment status.

In contexts where researchers have concerns about the gender question increasing attrition or non-response (or any other deleterious effects on data quality), one option is to place the gender question at the end of the survey instead of the beginning. But to the extent that gender is a key variable that researchers are likely to use in many of their analyses, this must be weighed against the possibility placing the question at the end of the survey will increase the amount of missing data on gender, due to early termination (for reasons unrelated to the gender question, such as running out of time) or respondent fatigue (respondents are more likely to refuse questions at the end of a long survey).[1] Figure A3 presents the results from tests of whether respondents are more likely to answer the gender self-identification question (Q1TC) when placed at the beginning or end of the survey. The only significant

[1] Jeong, Dahyeon, Shilpa Aggarwal, Jonathan Robinson, Naresh Kumar, Alan Spearot, and David Sungho Park. 2023. "Exhaustive or exhausting? Evidence on respondent fatigue in long surveys." *Journal of Development Economics* 161: 102992.

effect emerges in Chile, where respondents were slightly less likely to respond to the gender question at the end of the survey (with an approximate effect size of −0.5 percentage points.

FIGURE A3. Q1TC Non-Response

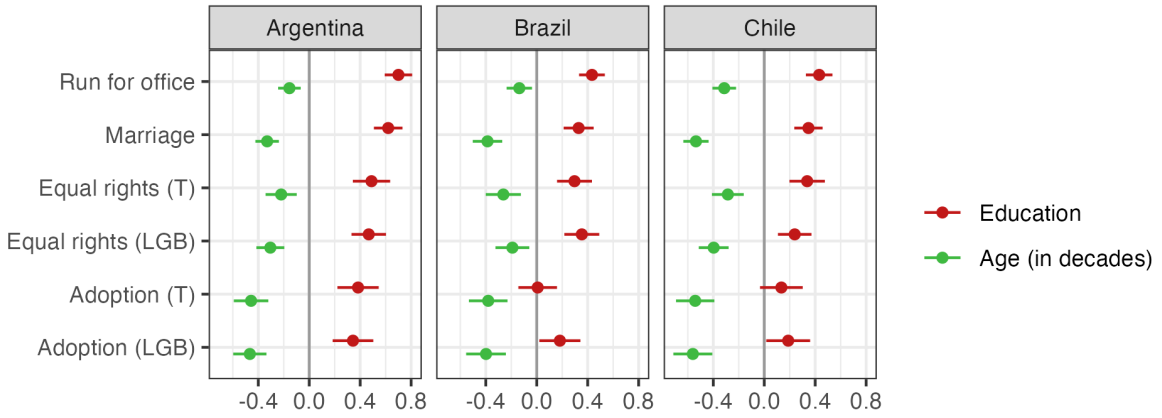


Note: The "Interviewer Control" models only control for interviewer effects. The "All Controls" models control for age, urban/rural residence, interviewer ID, and whether any other individuals were present at the time of interview (except in Honduras, where data on the presence of others was not collected).

Interaction Analysis

We conducted pre-registered analyses probing for interaction effects with age and education — two demographic variables that are often correlated with attitudes towards LGBTQ+ rights. Figure A4 illustrates the relationships between age and education, and each outcome variable in the three countries. Both variables are reliably correlated with our outcome variables (with age being a significant predictor in all cases, education in most).

FIGURE A4. Age and Education as Predictors of Support for LGBTQ+ Rights



Note: Coefficient estimates (with 95% confidence intervals) from linear regressions. We regress each outcome variable (labeled on the y-axis) on both age and education in the same model. Education is a seven-point scale. To generate more comparable estimates, age is re-scaled to measure in decades (i.e., we divide each respondent's age by ten).

Age Interaction

We find some evidence of heterogeneous treatment effects among the outcome measures. This is most pronounced in Argentina. In this case, we observe a similar pattern across most outcomes: the treatment caused younger people to express more support for LGBTQ+ rights and older people to express more opposition.

Figure A5 illustrates the treatment effects interacted with age for each outcome in Argentina. For each outcome variable, we plot two lines. The red line shows the linear relationship between age and the outcome variable within the control group; the blue line shows the same for the treatment group. For any given age, we can estimate the treatment effect by looking at the vertical distance between those two lines.

Interestingly, the interaction with age is found *not* among the questions about gender minorities, but among the four measures focused on sexual minorities. Take the top left panel (LGB Adoption) as an example. Younger people are more likely to express strong support

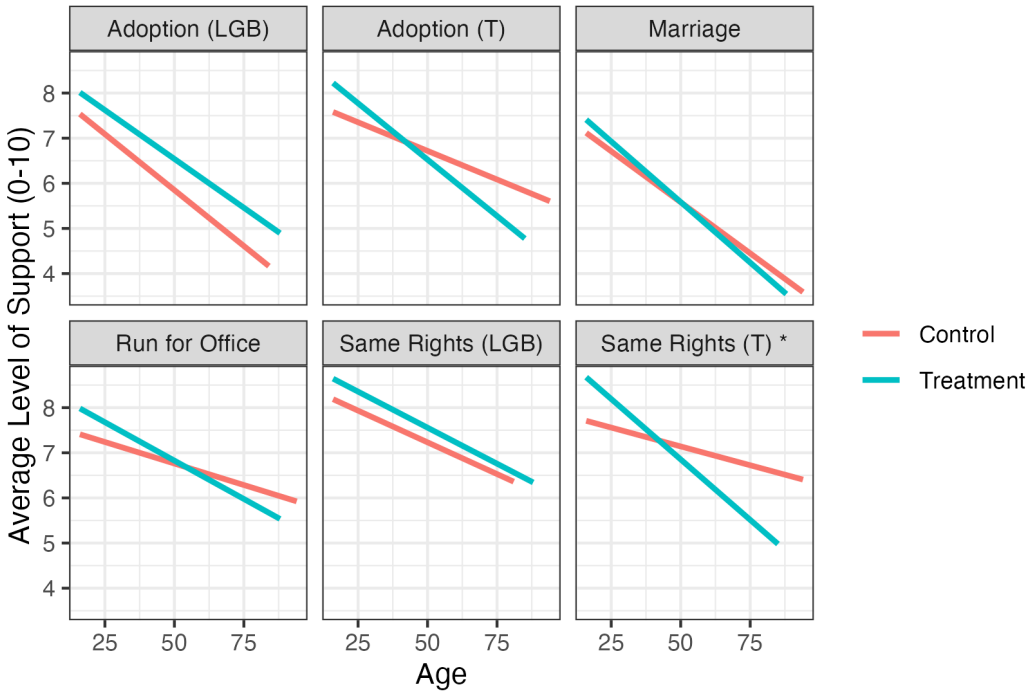
for LGB adoption rights, and this relationship between age and support is amplified in the treatment group. The youngest respondents express higher support for LGB adoption rights when treated (the blue line falls above the red line here); the oldest respondents express lower support when treated (the blue line falls below the red line here). The point at which the direction of the estimated treatment effect flips is approximately age 38 for the right to run for office, 42 for same-sex marriage, 46 for LGB equal rights, and 47 for LGB adoption rights.

FIGURE A5. Heterogeneous Effects by Age in Argentina

Note: These plots illustrate the linear regression fit for a model interacting age with treatment. Asterisks indicate that our main pre-registered interaction model (which also controls for interviewer ID, interview observers, and urban/rural residence) identifies a statistically significant treatment effect.

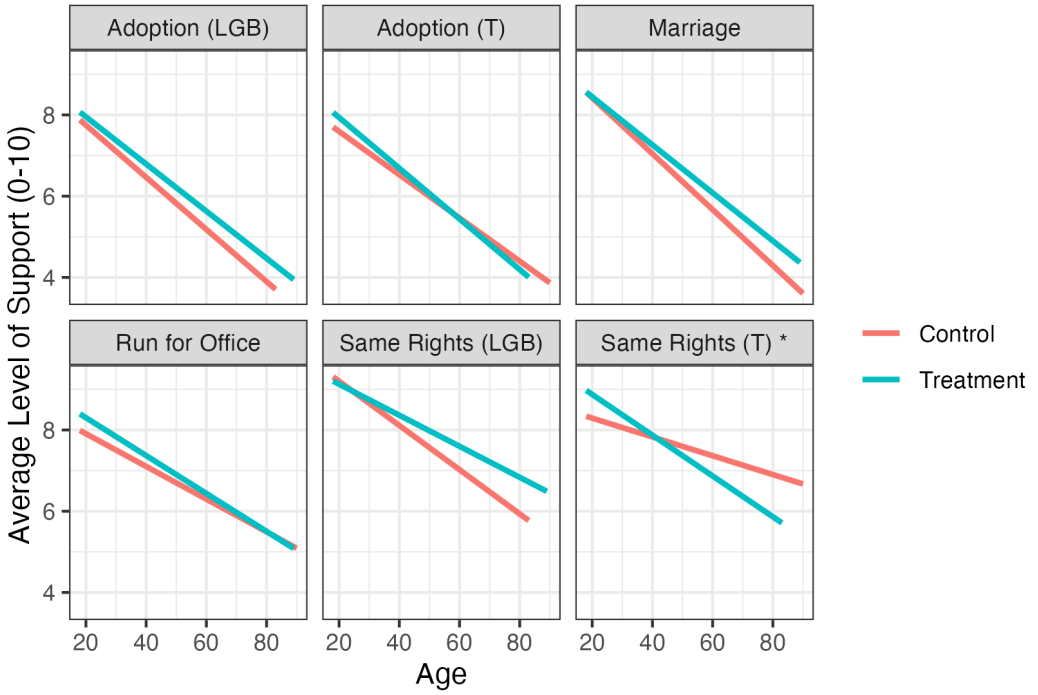
In Brazil and Chile, the treatment has a significant effect for one outcome variable in our interacted models: support for equal rights for gender minorities (see Figures A6 and A7). In both countries, the point at which the estimated effect flips from positive to negative is about 42. Respondents on the younger side of this cutpoint express stronger support for gender minority rights when treated; older respondents react to treatment by expressing weaker support for gender minority rights.

FIGURE A6. Heterogeneous Effects by Age in Brazil



Note: These plots illustrate the linear regression fit for a model interacting age with treatment. Asterisks indicate that our main pre-registered interaction model (which also controls for interviewer ID, interview observers, and urban/rural residence) identifies a statistically significant treatment effect.

FIGURE A7. Heterogeneous Effects by Age in Chile



Note: These plots illustrate the linear regression fit for a model interacting age with treatment.

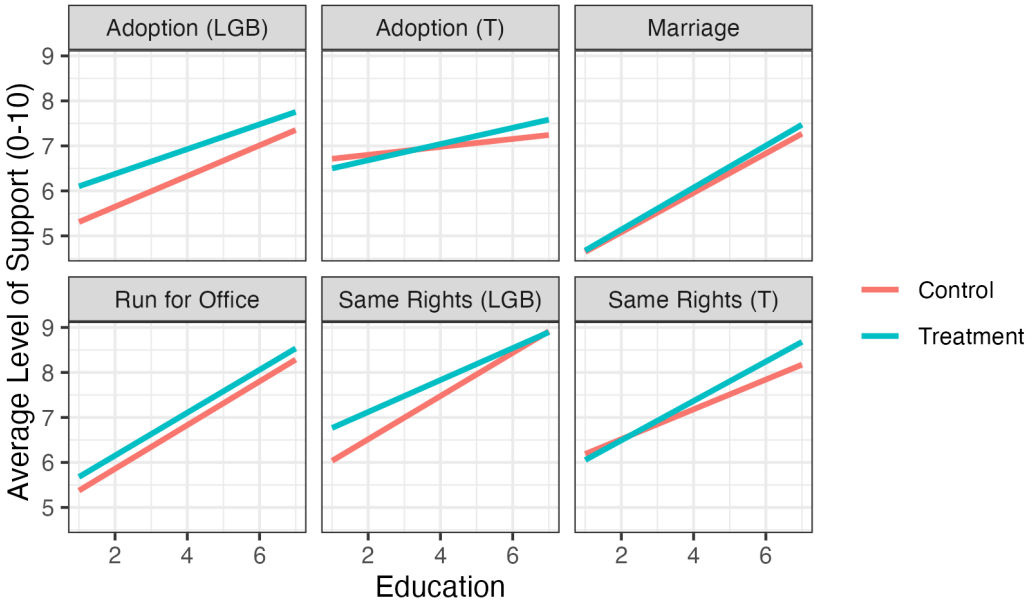
Education Interaction

We ran the same interaction analyses for education. We did not identify any statistically significant interaction effects for education.

FIGURE A8. Heterogeneous Effects by Education in Argentina

Note: These plots illustrate the linear regression fit for a model interacting education with treatment. Asterisks indicate that our main pre-registered interaction model identifies a statistically significant treatment effect.

FIGURE A9. Heterogeneous Effects by Education in Brazil



Note: These plots illustrate the linear regression fit for a model interacting education with treatment. Asterisks indicate that our main pre-registered interaction model identifies a statistically significant treatment effect.

FIGURE A10. Heterogeneous Effects by Education in Chile

Note: These plots illustrate the linear regression fit for a model interacting education with treatment. Asterisks indicate that our main pre-registered interaction model identifies a statistically significant treatment effect.

AmericasBarometer 2023

TABLE A6. AmericasBarometer 2023 Gender Self-Identification Question

	Total	Number of neither male/man or female/woman	Number of interviewer miscategorizations	Missingness rate
Mexico	1,622	0	2	0.31%
Guatemala	1,556	0	7	0.58%
El Salvador	1,516	0	4	0.00%
Honduras	1,602	1	19	1.19%
Costa Rica	1,527	4	6	1.11%
Panama	1,532	2	4	1.17%
Colombia	1,503	0	7	0.47%
Ecuador	1,604	1	7	1.12%
Bolivia	1,706	6	5	3.40%
Peru	1,535	0	0	0.33%
Paraguay	1,524	2	22	4.72%
Chile	1,647	1	2	0.18%
Uruguay	1,517	1	7	0.26%
Brazil	1,506	11	5	4.71%
Argentina	1,528	2	1	0.65%
Dominican Republic	1,596	1	13	0.44%
Jamaica	1,521	0	8	3.09%
Trinidad and Tobago	1,660	1	2	0.30%
Belize	1,550	0	3	1.10%
Suriname	1,539	1	6	3.18%
Bahamas	1,577	2	7	2.28%
Grenada	1,553	1	15	0.71%

Note: The number of interviewer miscategorizations is the number of individuals who self-identified as women who were initially coded by the interviewer as men or vice versa. The missingness rate is the percentage of "don't knows" or no responses.