Fighting Climate Change:
Attitudes Toward Climate Policies in Ukraine

Supplement for "Fighting Climate Change:
International Attitudes Toward Climate Policies"
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This supplement to "Fighting Climate Change: International Attitudes Toward Climate Policies" presents results for Ukraine, based on a sample of 1,564 respondents.

The full questionnaire for Ukraine is available through the following link:

Ukrainian:
https://lse.eu.qualtrics.com/jfe/form/SV_3gdsY6iHVO6IKNg?Q_Language=UK
Russian:
https://lse.eu.qualtrics.com/jfe/form/SV_3gdsY6iHVO6IKNg?Q_Language=RU

The climate policies video is available here:
Ukrainian:
https://lse.eu.qualtrics.com/WRQualtricsControlPanel/File.php?F=F_bDbSZHrj0tU9b7w.
Russian:
https://lse.eu.qualtrics.com/WRQualtricsControlPanel/File.php?F=F_3wr99GUKuUVgK3k.

The climate impacts video is available here:
Ukrainian:
https://lse.eu.qualtrics.com/WRQualtricsControlPanel/File.php?F=F_1Bz6VaDS6IzAMGq.
Russian:
https://lse.eu.qualtrics.com/WRQualtricsControlPanel/File.php?F=F_bemd3trrg7wgFym.

Table 1: Sample representativeness – Ukraine

	Ukraine	
	Population	Sample
Sample size	NA	1,564
Male	0.45	0.61
18-24 years old	0.08	0.12
25-34 years old	0.18	0.25
35-49 years old	0.28	0.40
More than 50 years old	0.46	0.24
Income Q1	0.25	0.17
Income Q2	0.25	0.24
Income Q3	0.25	0.24
Income Q4	0.25	0.36
Region 1	0.31	0.37
Region 2	0.21	0.17
Region 3	0.22	0.26
Region 4	0.25	0.20
Urban	0.70	0.88
College education (25-64)	NA	0.67
Share of voters	0.53	0.76
Voters: Left	0.16	0.19
Voters: Center	0.67	0.69
Voters: Right	0.13	0.03
Voters: Other	0.03	NA
Voters: Not reported	NA	0.10
Inactivity rate (15-64)	0.38	0.15
Unemployment rate (15-64)	0.10	0.10
Employment rate (15-64)	0.56	0.76

Note: This table displays summary statistics of the sample alongside nationally representative statistics. For *College education (25-64)*, the sample statistics are provided for respondents aged between 25 and 64 years old. For the *Share of voters*, the sample statistics include the share of people who indicated having voted. For the *Voters* variables, the sample statistics include the share of respondents who indicated voted for a party/candidate classified in each category, among respondents who indicated having voted. The *Voters: Not reported* category includes people who indicated having voted but did not report the candidate/party they voted for. For *Inactivity rate (15-64)*, the sample statistics include the share of respondents aged between 15 and 64 years old who indicated being either "*Inactive (not searching for a job)*," a "*Student*," or "*Retired*." For *Unemployment rate (15-64)*, the sample statistics include the share of respondents aged between 15 and 64 years old who indicated being "*Unemployed (searching for a job)*", among active people ('*Unemployed (searching for a job)*," "*Full-time employed*," "*Part-time employed*," or "*Self-employed*"). For *Employment rate (15-64)*, the sample statistics include the share of respondents aged between 15 and 64 years old who indicated being either "*Full-time employed*," "*Part-time employed*," or "*Self-employed*." Detailed sources for each variable, as well as the definitions of regions, college education, urban, and voting categories are available in Appendix A-7 of "Fighting Climate Change: International Attitudes Toward Climate Policies."
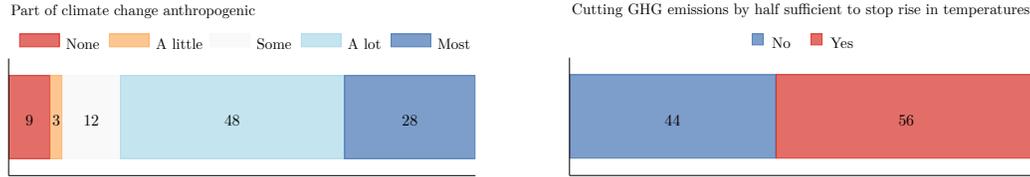
Table 2: Distribution of economic leaning by vote

	Economic leaning					
	Very left	Left	Center	Right	Very right	Not reported
Anatoliy Hrytsenko	NA	NA	0.01	0.02	0.02	NA
Ihor Smeshko	NA	0.01	0.01	0.00	0.01	NA
Ioulia Tymochenko	0.01	0.02	0.02	0.03	0.01	NA
Iouri Boïko	0.09	0.03	0.02	0.00	0.03	0.02
Oleh Lyashko	0.01	0.01	0.01	0.00	0.00	NA
Oleksandr Vilkul	0.02	0.02	0.01	0.00	0.01	0.02
Petro Poroshenko	0.02	0.06	0.10	0.25	0.25	0.14
Ruslan Koshulynskyi	0.01	0.01	0.00	0.00	0.03	NA
Volodymyr Zelensky	0.50	0.46	0.48	0.47	0.35	0.33
Vote not reported	0.03	0.04	0.10	0.05	0.05	0.12
Did not vote	0.29	0.34	0.25	0.16	0.23	0.37

Note: This table displays for each economic leaning the share of votes (among people who indicated having voted), as well as the share of respondents who did not indicate having voted.
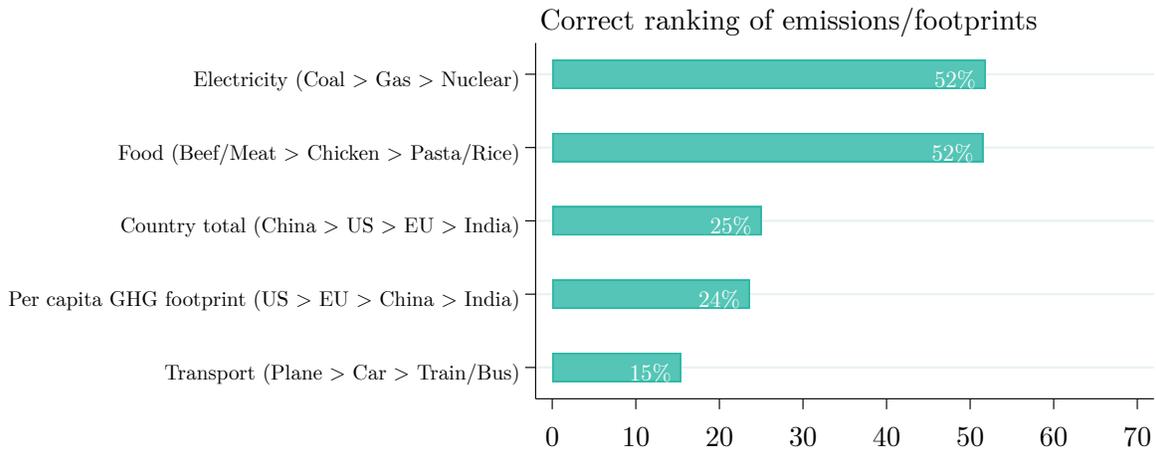
Figure 1: Knowledge about climate change

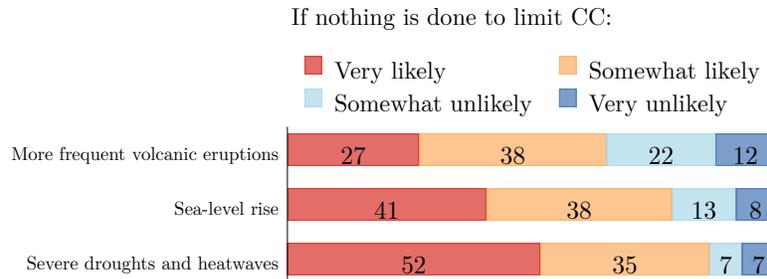(A) "What part of climate change
do you think is due to human activity?"

(B) "Do you think that
cutting global GHG emissions by half
would be sufficient to eventually
stop temperatures from rising?"

Part of climate change anthropogenic

None | A little | Some | A lot | Most

| 9 | 3 | 12 | 48 | 28 |

Cutting GHG emissions by half sufficient to stop rise in temperatures

No | Yes

| 44 | 56 |

(C) GHG Emission Ranking

Correct ranking of emissions/footprints

Category	Percentage
Electricity (Coal > Gas > Nuclear)	52%
Food (Beef/Meat > Chicken > Pasta/Rice)	52%
Country total (China > US > EU > India)	25%
Per capita GHG footprint (US > EU > China > India)	24%
Transport (Plane > Car > Train/Bus)	15%

(axis: 0 10 20 30 40 50 60 70)

(D) "If nothing is done to limit climate change,
how likely do you think it is that climate change will
lead to the following events?"

If nothing is done to limit CC:

Very likely | Somewhat likely
Somewhat unlikely | Very unlikely

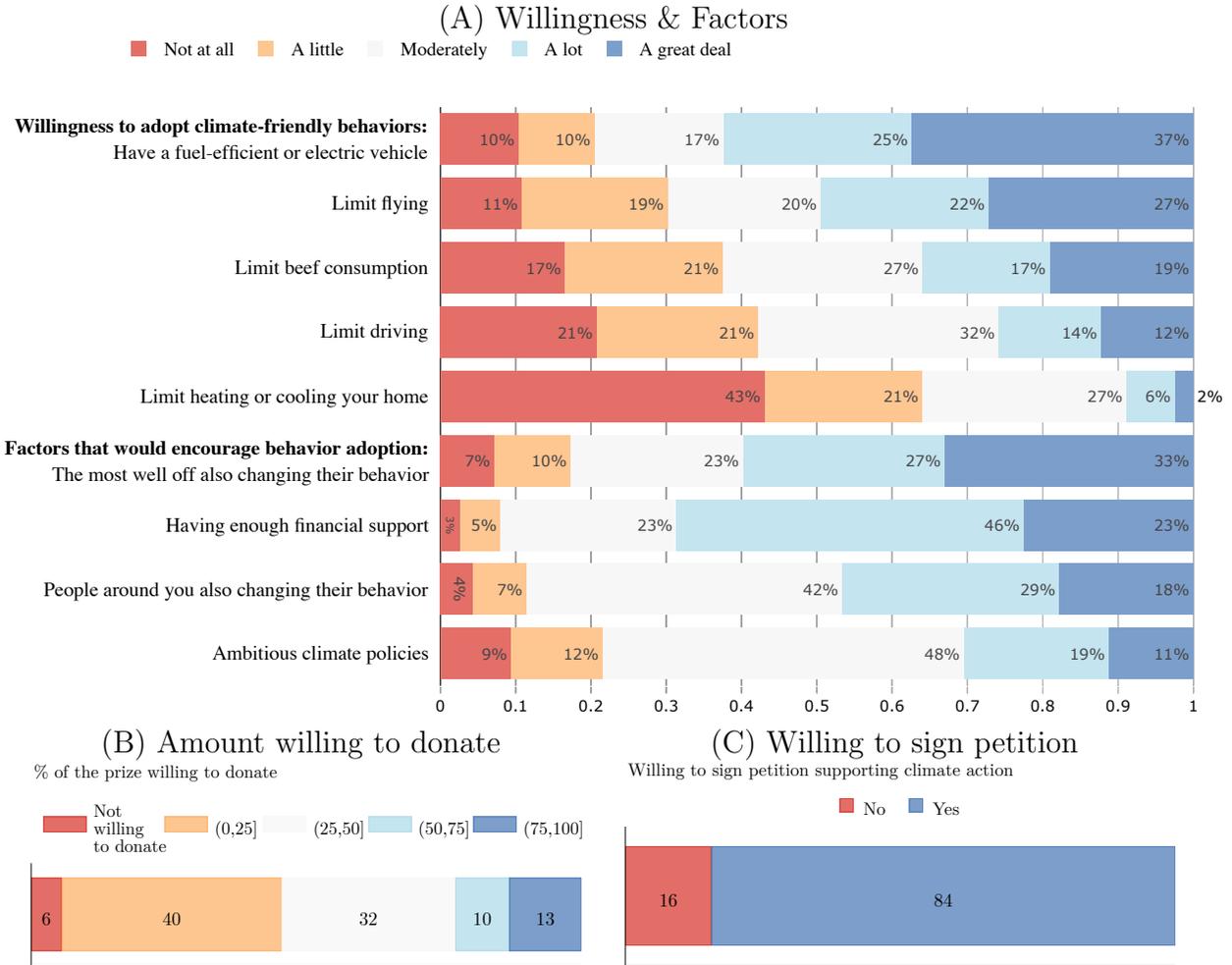| Event	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely
More frequent volcanic eruptions	27	38	22	12
Sea-level rise	41	38	13	8
Severe droughts and heatwaves	52	35	7	7

Note: Panel A, B, and C show the distribution of answers to each of the questions mentioned. Panel C shows the percentage of respondents who gave the correct ranking in terms of greenhouse gas emissions for each topic. The shares represented are based on respondents in the control group only (who did not see any pedagogical videos)

Figure 2: Correlation between knowledge (*Knowledge index*) and socioeconomic characteristics
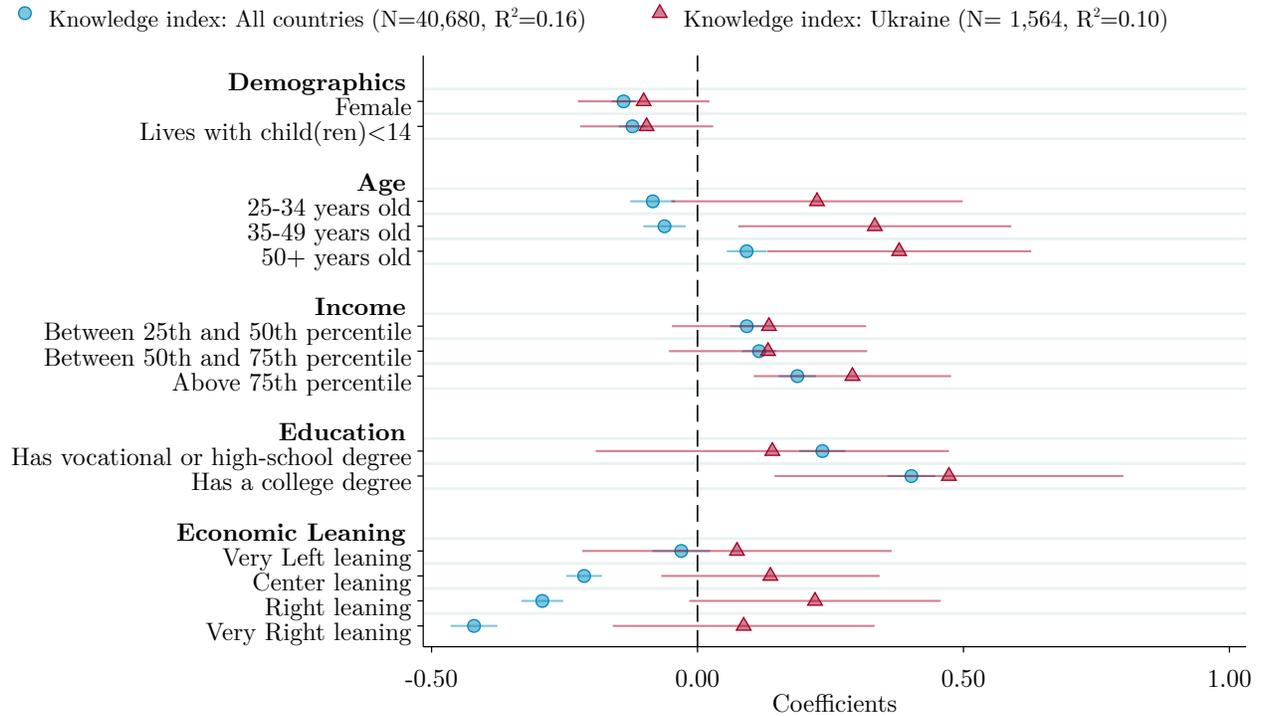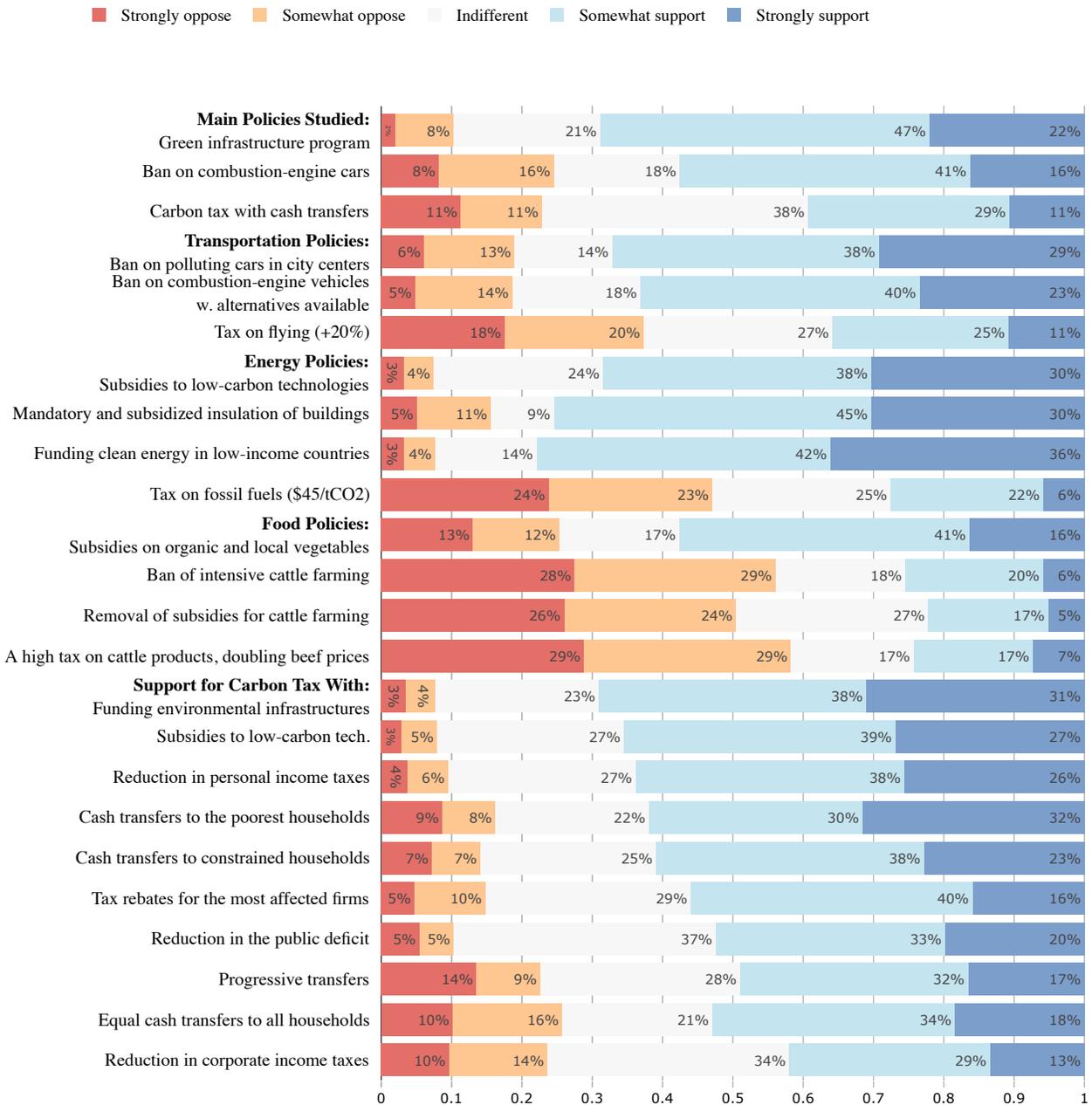

Note: The figure shows the coefficients from an OLS regression of the *Knowledge index* on indicators for individual socioeconomic characteristics. Treatment indicators are included but not displayed. The omitted categories are "male" for *gender* (*gender*: "other" is not displayed), "18-34 years old" for *age*, lowest income quartile for *income*, "no schooling, or highest level achieved is primary or lower secondary education" for *education*, "left leaning" for *economic leaning*. See Appendix A-1 of "Fighting Climate Change: International Attitudes Toward Climate Policies" for variable definitions.

Figure 3: Willingness to adopt climate-friendly behaviors

(A) Willingness & Factors

Not at all | A little | Moderately | A lot | A great deal

Behavior	Not at all	A little	Moderately	A lot	A great deal
Willingness to adopt climate-friendly behaviors: Have a fuel-efficient or electric vehicle	10%	10%	17%	25%	37%
Limit flying	11%	19%	20%	22%	27%
Limit beef consumption	17%	21%	27%	17%	19%
Limit driving	21%	21%	32%	14%	12%
Limit heating or cooling your home	43%	21%	27%	6%	2%
Factors that would encourage behavior adoption: The most well off also changing their behavior	7%	10%	23%	27%	33%
Having enough financial support	3%	5%	23%	46%	23%
People around you also changing their behavior	4%	7%	42%	29%	18%
Ambitious climate policies	9%	12%	48%	19%	11%

(B) Amount willing to donate

% of the prize willing to donate

Not willing to donate | (0,25] | (25,50] | (50,75] | (75,100]

Not willing to donate	(0,25]	(25,50]	(50,75]	(75,100]
6	40	32	10	13

(C) Willing to sign petition

Willing to sign petition supporting climate action

No | Yes

| No	Yes
16	84

Note: Panel A shows the distribution of answers to two questions, *Willingness to adopt climate-friendly behaviors* are answers to the question "*To what extent would you be willing to adopt the following behaviors?*" and *Factors that would encourage behavior adoption* correspond to answers to the question "*How important are the factors below in order for you to adopt a sustainable lifestyle (i.e. limit driving, flying, and consumption, cycle more, etc.)?*". Panel B displays the percentage of the prize people are willing to donate (0%, between 0% and 25%, between 25% and 50%, between 50% and 75%, above 75%). Panel C shows the shares of respondents willing to sign a petition to "stand up for real climate action". All results are based on answers from respondents in the control group only (who did not see any pedagogical videos).

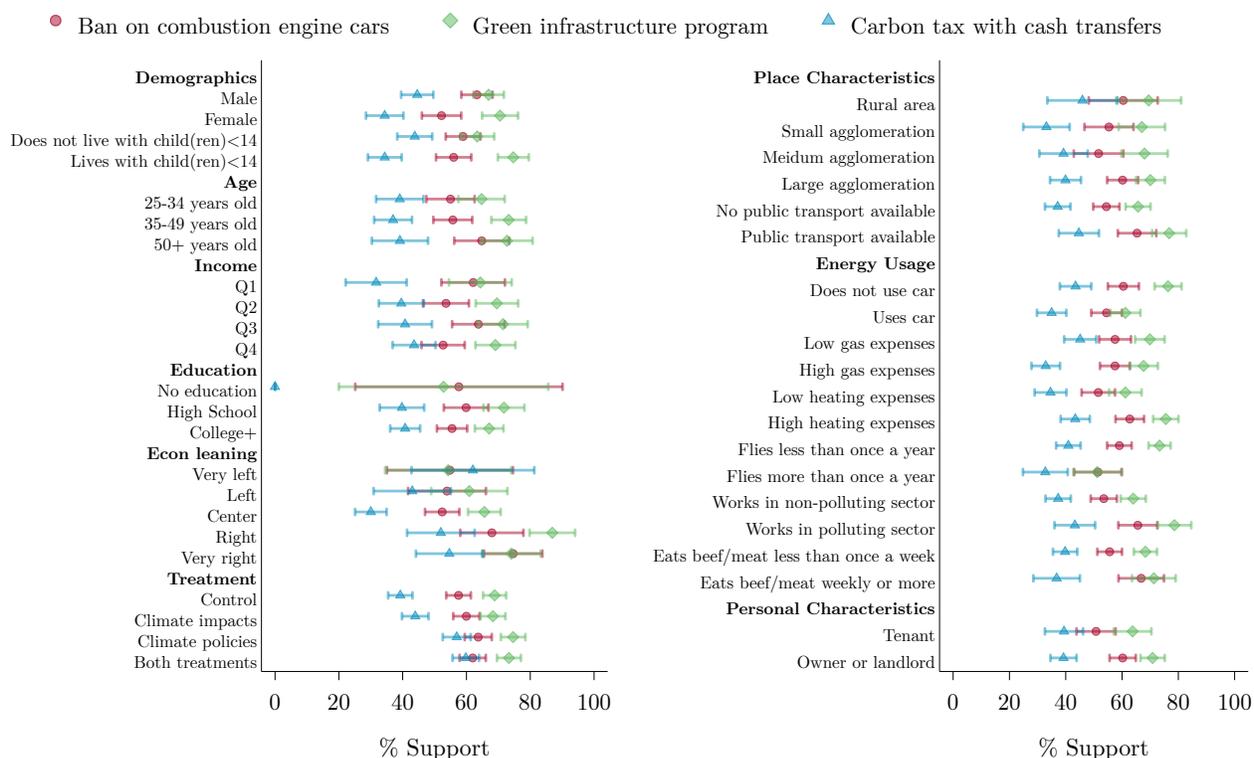Figure 4: Share of respondents who support or oppose climate change policies.

Legend: ■ Strongly oppose ■ Somewhat oppose □ Indifferent ■ Somewhat support ■ Strongly support

Main Policies Studied:
Green infrastructure program — 2%, 8%, 21%, 47%, 22%
Ban on combustion-engine cars — 8%, 16%, 18%, 41%, 16%
Carbon tax with cash transfers — 11%, 11%, 38%, 29%, 11%

Transportation Policies:
Ban on polluting cars in city centers — 6%, 13%, 14%, 38%, 29%
Ban on combustion-engine vehicles w. alternatives available — 5%, 14%, 18%, 40%, 23%
Tax on flying (+20%) — 18%, 20%, 27%, 25%, 11%

Energy Policies:
Subsidies to low-carbon technologies — 3%, 4%, 24%, 38%, 30%
Mandatory and subsidized insulation of buildings — 5%, 11%, 9%, 45%, 30%
Funding clean energy in low-income countries — 3%, 4%, 14%, 42%, 36%
Tax on fossil fuels ($45/tCO2) — 24%, 23%, 25%, 22%, 6%

Food Policies:
Subsidies on organic and local vegetables — 13%, 12%, 17%, 41%, 16%
Ban of intensive cattle farming — 28%, 29%, 18%, 20%, 6%
Removal of subsidies for cattle farming — 26%, 24%, 27%, 17%, 5%
A high tax on cattle products, doubling beef prices — 29%, 29%, 17%, 17%, 7%

Support for Carbon Tax With:
Funding environmental infrastructures — 3%, 4%, 23%, 38%, 31%
Subsidies to low-carbon tech. — 3%, 5%, 27%, 39%, 27%
Reduction in personal income taxes — 4%, 6%, 27%, 38%, 26%
Cash transfers to the poorest households — 9%, 8%, 22%, 30%, 32%
Cash transfers to constrained households — 7%, 7%, 25%, 38%, 23%
Tax rebates for the most affected firms — 5%, 10%, 29%, 40%, 16%
Reduction in the public deficit — 5%, 5%, 37%, 33%, 20%
Progressive transfers — 14%, 9%, 28%, 32%, 17%
Equal cash transfers to all households — 10%, 16%, 21%, 34%, 18%
Reduction in corporate income taxes — 10%, 14%, 34%, 29%, 13%

Note: The figure shows the distribution of support to each policy, based on answers from respondents in the control group only (who did not see any pedagogical videos). For the exact phrasing of each question, see Appendix A-5 of "Fighting Climate Change: International Attitudes Toward Climate Policies."

Figure 5: Correlation between *"Support for main climate policies index"* and socioeconomic and energy usage characteristics
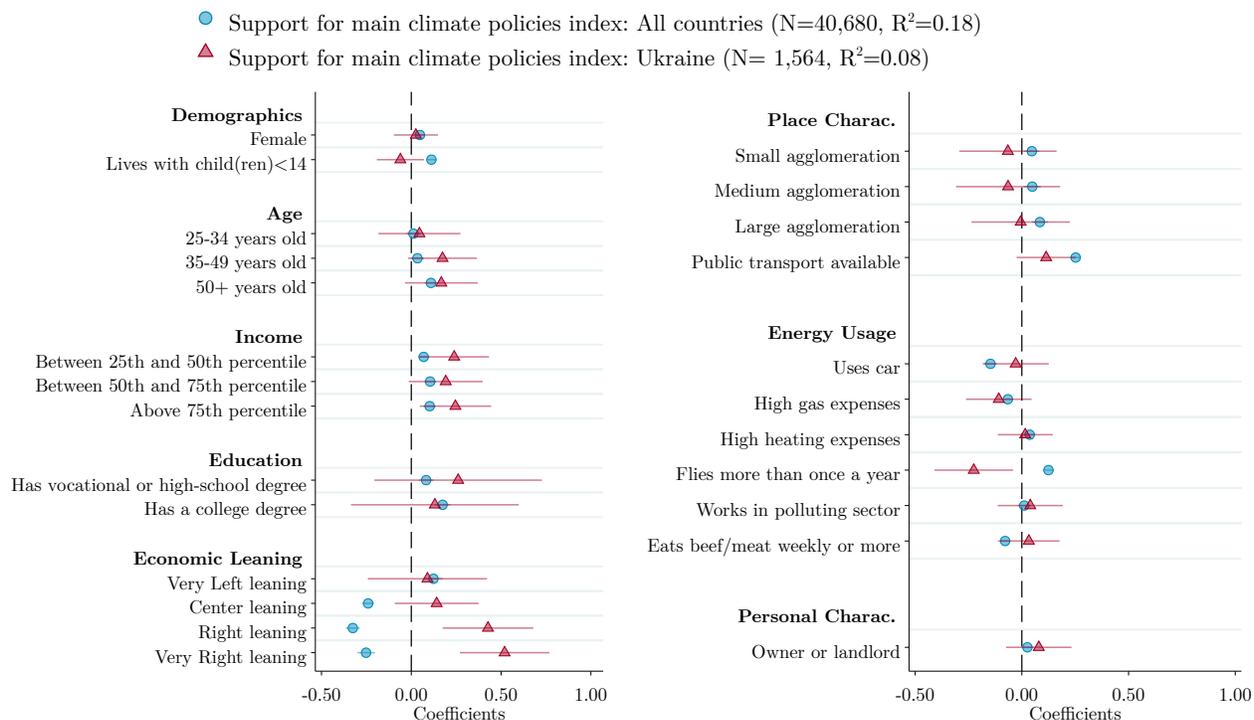
Note: The figure shows the coefficients from a regression of the *Support for main climate policies* index on socioeconomic indicators (left panel) and energy usage indicators (right panel). In the right panel, we control for but do not display the coefficients on socioeconomic indicators. Treatment indicators are included but not displayed. The omitted category for *Place characteristics* is "Rural or very small agglomeration." For a list of all omitted categories, see the notes to Figure 2. See Appendix A-1 of "Fighting Climate Change: International Attitudes Toward Climate Policies" for detailed definitions of the variables.

Figure 6: Share who support the main climate policies by socioeconomic, energy usage characteristics, and treatment group

Note: The figure shows the share of respondents who support (somewhat or strongly) each of the three main policies, by group. Except for the rows labeled "Treatment" all means are taken over respondents in the control group only (who did not see any pedagogical videos). A 90% confidence interval is displayed. See Appendix A-1 of "Fighting Climate Change: International Attitudes Toward Climate Policies" for detailed variable definitions.

Figure 7: Perceived characteristics of the main policies

	Green Infrastructure Program			Carbon Tax w. Cash Transfers			Ban on Combustion-Engine Cars		
	Ukraine	High Inc.	Middle Inc.	Ukraine	High Inc.	Middle Inc.	Ukraine	High Inc.	Middle Inc.
Effectiveness of Main Climate Policies									
Reduce air pollution	77	76	83	74	68	80	83	79	84
Reduce GHG emissions/Reduce CO_2 emissions from cars				65	64	75	76	73	78
Make electricity production greener	73	70	78						
Encourage insulation of buildings				73	64	69			
Increase the use of public transport/Encourage less driving	61	60	71	51	51	69			
Positive effect on economy and employment	40	37	45	39	31	42	36	35	40
Costless way to fight climate change	33	30	39	31	27	36	37	29	38
Distributional Impacts of Main Climate Policies									
Believes the following groups would gain									
Those living in rural areas	22	25	50	17	21	43	13	16	36
Low-income earners	18	21	48	17	22	42	15	12	35
The middle class	26	22	49	18	21	40	15	15	35
High-income earners	42	39	51	32	33	41	37	40	49
Self-Interest									
Believes own household would gain	16	23	50	14	20	41	12	15	36
Perceived Fairness and Support									
Support main climate policies	69	57	78	39	37	59	58	43	65
Main climate policies are fair	56	51	72	41	35	55	51	39	59

Note: The questions on the effectiveness and fairness have answer options *Strongly disagree/Somewhat disagree/Neither agree nor disagree/Somewhat agree/Strongly agree.* We report the share of respondents who answer "Somewhat agree" or "Strongly agree." Questions on the distributional impacts and self-interest have answer options *Lose a lot/Mostly lose/Neither win nor lose/Mostly win/Win a lot.* Depicted is the share of respondents who say "Mostly win" or "Win a lot." "Support main climate policies" has answer options *Strongly oppose/Somewhat oppose/Neither support nor oppose/Somewhat support/Strongly support.* We show the share of respondents who "Somewhat support" or "Strongly support." The shares represented are based on respondents in the control group only (who did not see any pedagogical videos). For the exact phrasing of each question, see Appendix A-5 of "Fighting Climate Change: International Attitudes Toward Climate Policies."
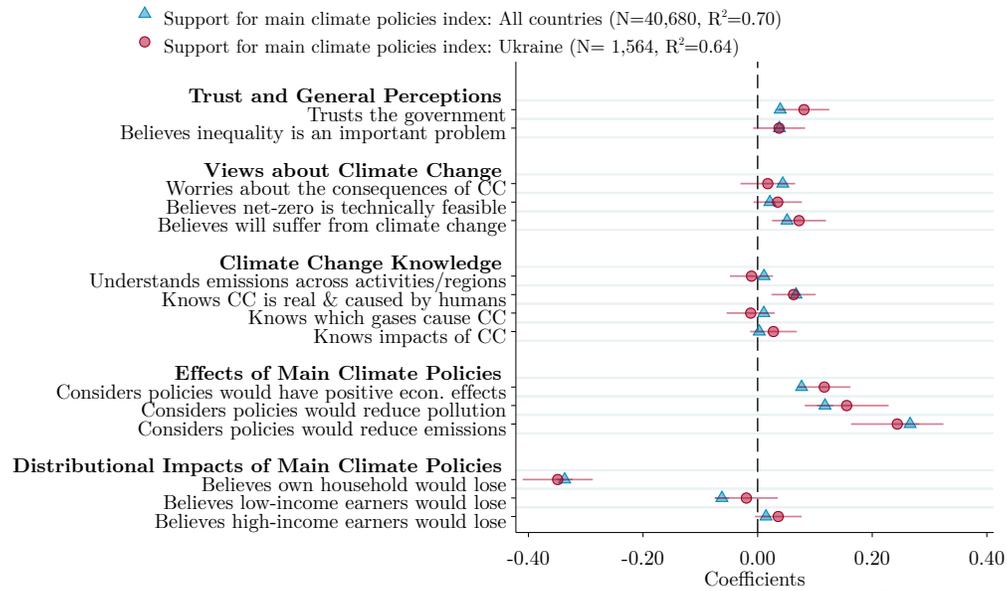
Figure 8: How different groups perceive the effectiveness and distributional effects of the three main climate policies
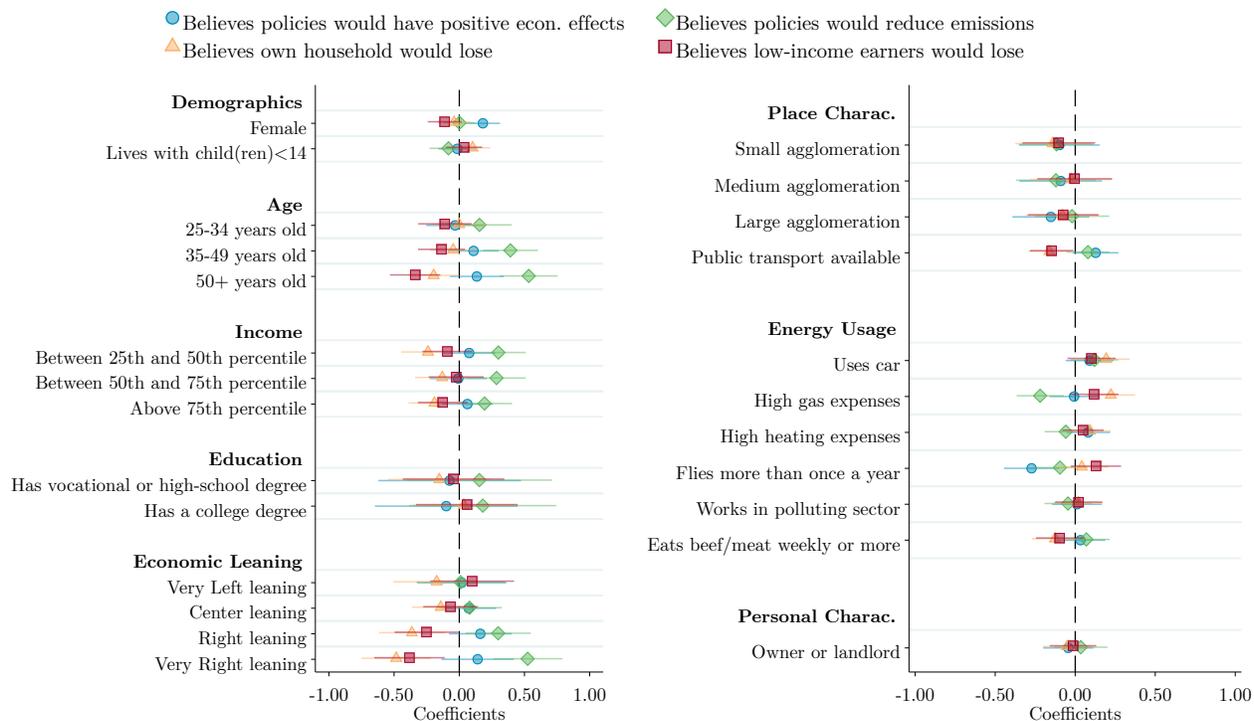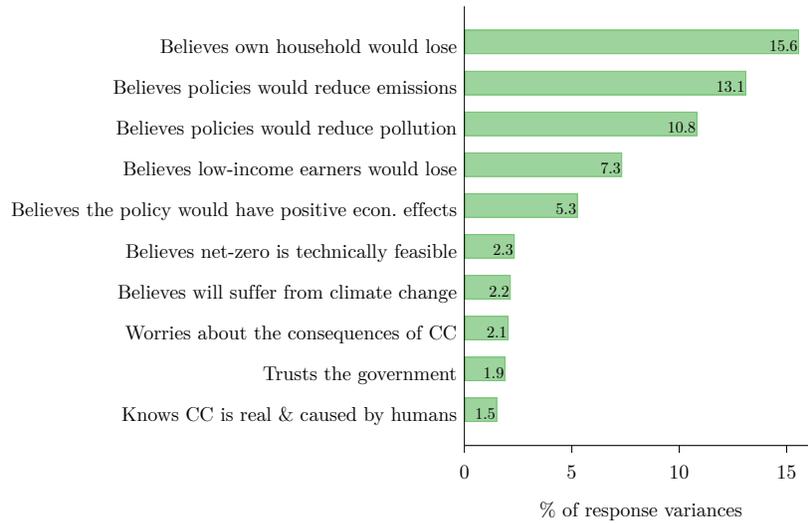

Note: The figure shows the coefficients from two regressions. In the left panel, the indices listed in the legend are regressed on indicator variables for socioeconomic characteristics, as well as treatment indicators (not shown). In the right panel, the same indices are regressed on energy usage indicators, as well as treatment indicators, and socioeconomic characteristics (not shown). Each index is constructed by averaging the z-scores of the answers to a given question (e.g., "believes policies would have economic effects") across all three main policies and standardizing again. See Appendix A-1 of "Fighting Climate Change: International Attitudes Toward Climate Policies" for detailed variable definitions. See the notes to Figure **??** for a list of the omitted categories.

Figure 9: Beliefs underlying support for the main climate policies

(A) Correlation between support for the three main policies and beliefs

△ Support for main climate policies index: All countries (N=40,680, R²=0.70)
● Support for main climate policies index: Ukraine (N= 1,564, R²=0.64)

Trust and General Perceptions
Trusts the government
Believes inequality is an important problem

Views about Climate Change
Worries about the consequences of CC
Believes net-zero is technically feasible
Believes will suffer from climate change

Climate Change Knowledge
Understands emissions across activities/regions
Knows CC is real & caused by humans
Knows which gases cause CC
Knows impacts of CC

Effects of Main Climate Policies
Considers policies would have positive econ. effects
Considers policies would reduce pollution
Considers policies would reduce emissions

Distributional Impacts of Main Climate Policies
Believes own household would lose
Believes low-income earners would lose
Believes high-income earners would lose

-0.40   -0.20   0.00   0.20   0.40
Coefficients

(B) Share of the variation in *Support for main policies* explained by different beliefs

Belief	%
Believes own household would lose	15.6
Believes policies would reduce emissions	13.1
Believes policies would reduce pollution	10.8
Believes low-income earners would lose	7.3
Believes the policy would have positive econ. effects	5.3
Believes net-zero is technically feasible	2.3
Believes will suffer from climate change	2.2
Worries about the consequences of CC	2.1
Trusts the government	1.9
Knows CC is real & caused by humans	1.5

% of response variances

Note: Panel A shows the coefficients from a regression of support for each policy (indicator variable equal to 1 if the respondent supports the policy somewhat or strongly) on standardized variables measuring respondents' beliefs and perceptions. Treatment indicators, and individual socioeconomic characteristics are included but not displayed. Panel B depicts the share of the variance in the *Support for main policies* index that is explained by each belief and perception. We use the LMG method (see Grömping 2007). See Appendix A-1 of "Fighting Climate Change: International Attitudes Toward Climate Policies" for detailed variable definitions.
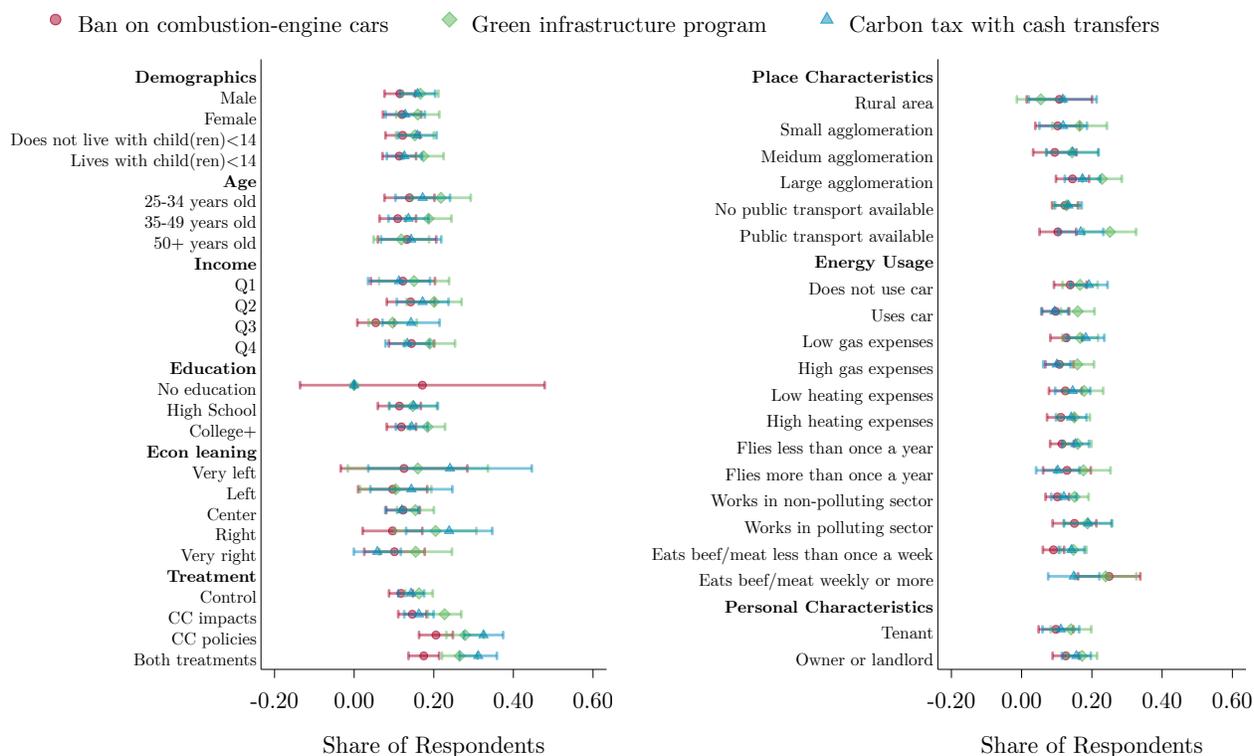
Figure 10: Share of respondents who hold key beliefs about the main climate policies by socioeconomic characteristics, energy usage, and treatment group

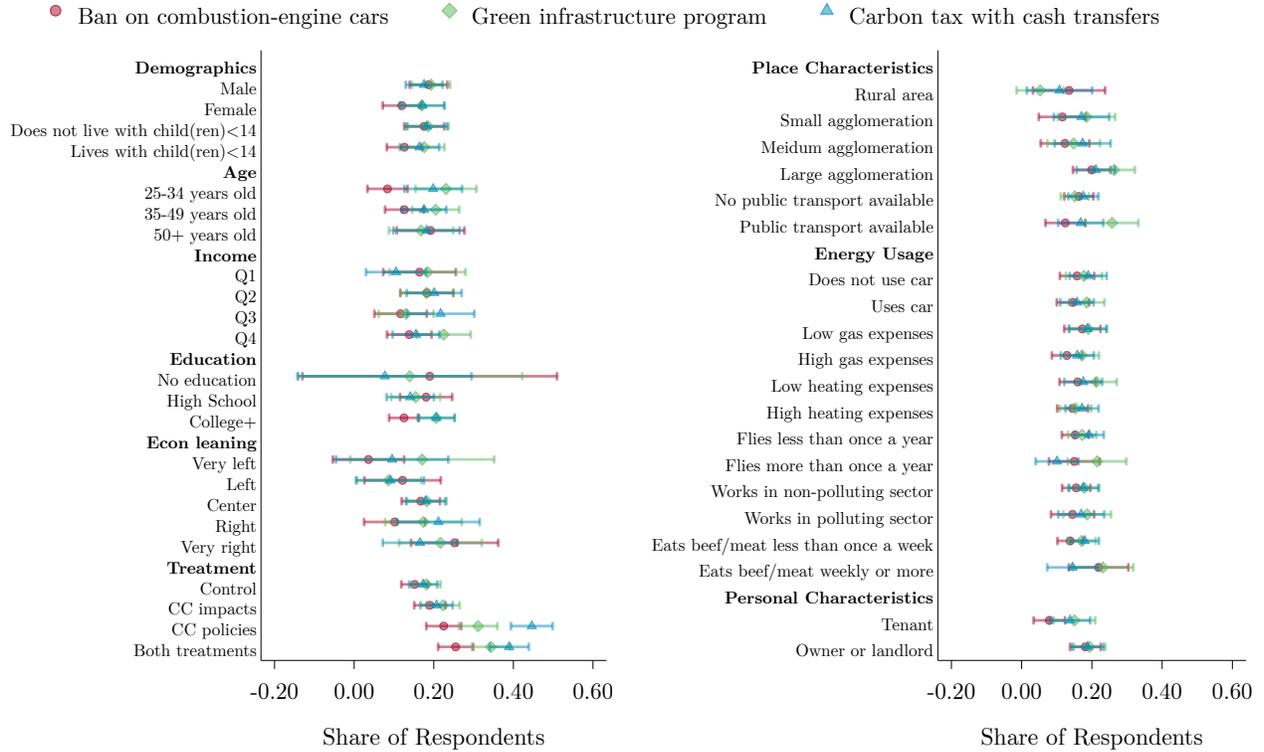(A) Share who believes [policy] would reduce pollution
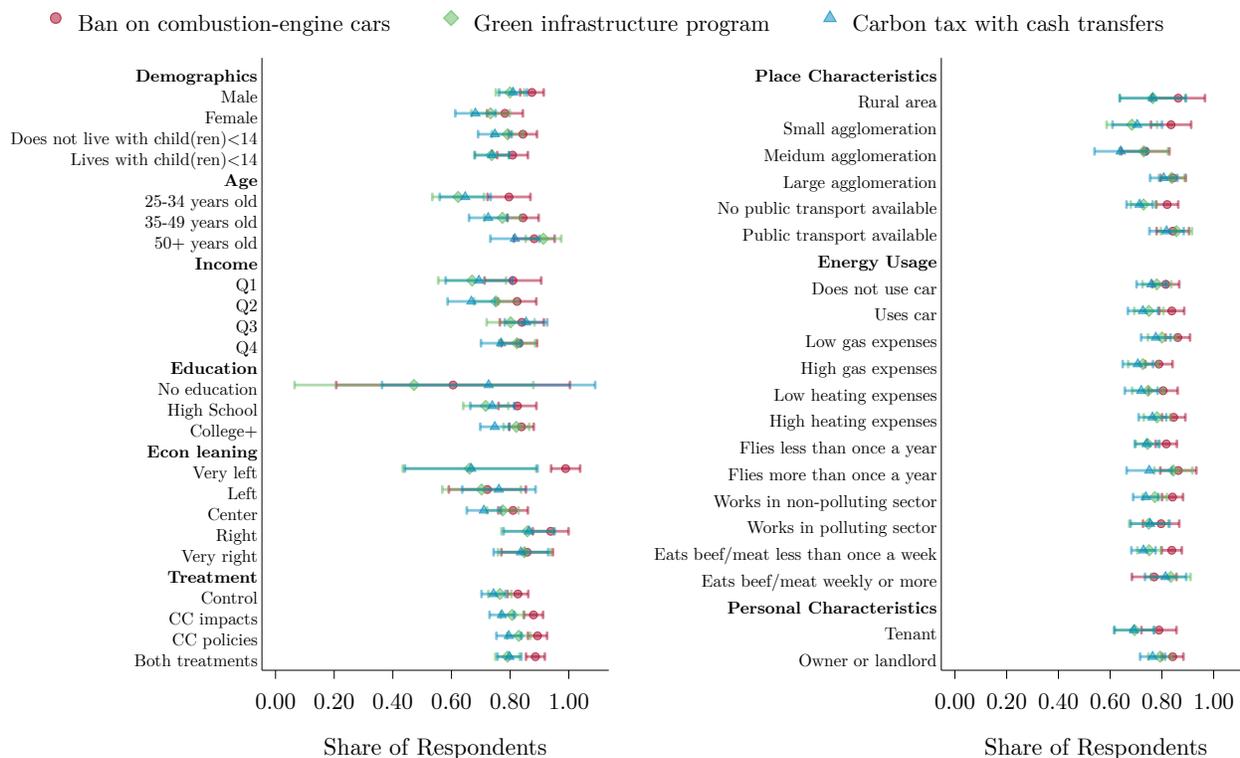
(B) Share who believes own household would lose from [policy]

## (C) Share who believes low-income earners would lose from [policy]

● Ban on combustion-engine cars   ◆ Green infrastructure program   ▲ Carbon tax with cash transfers

Note: The figure shows the share of respondents who agree (somewhat or strongly) with the statement. Means are shown by socioeconomic characteristics, treatment group, and energy usage. Except for the rows labeled "Treatment," the means are taken over respondents in the control group only (who did not see any pedagogical videos). A 90% confidence interval is displayed. See Appendix A-1 of "Fighting Climate Change: International Attitudes Toward Climate Policies" for detailed variable definitions.

Figure 11: Effects of the treatments on support for climate action
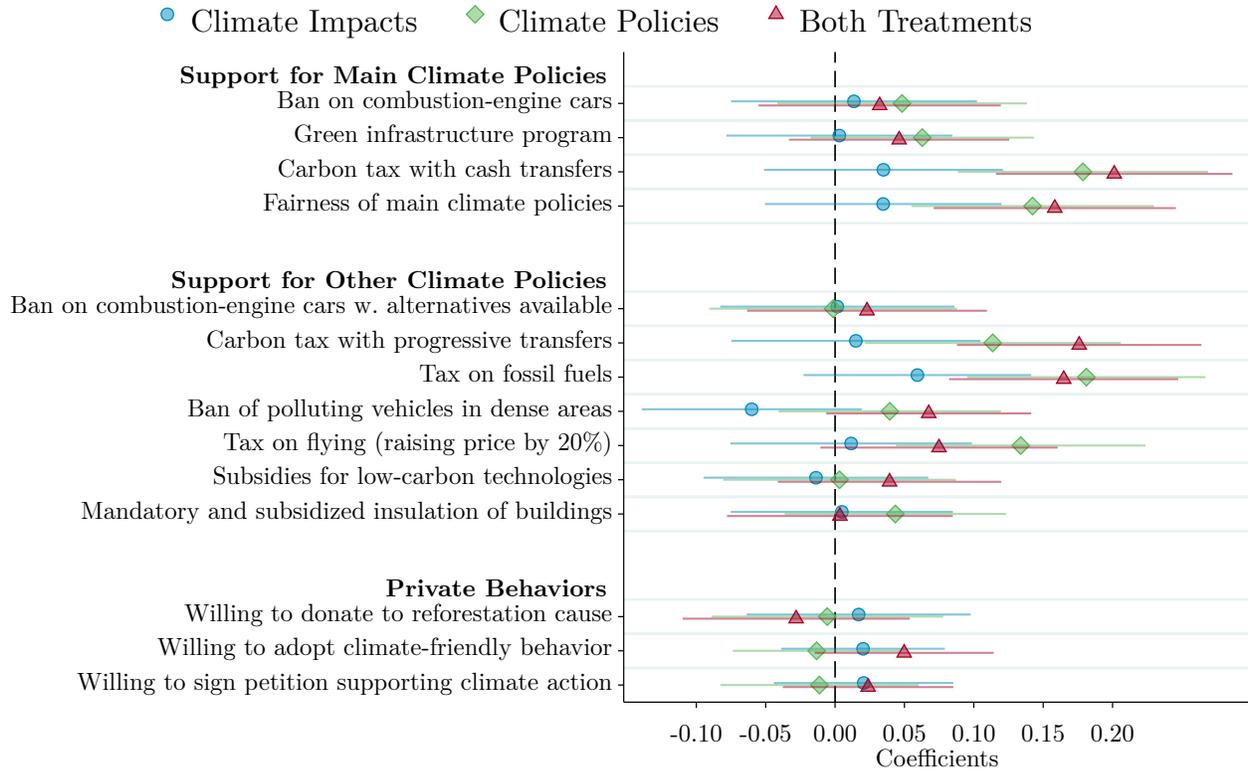
Note: The figure shows the coefficients from a regression of the indicator variables listed on the left, capturing support for various policies and willingness to change behaviors, on indicators for each treatment, controlling for socioeconomic characteristics (not shown). See Appendix A-1 of "Fighting Climate Change: International Attitudes Toward Climate Policies" for variable definitions.

Figure 12: Climate attitudes by treatment group

■ Control ● Climate Impacts ◆ Climate Policies ▲ Both Treatments
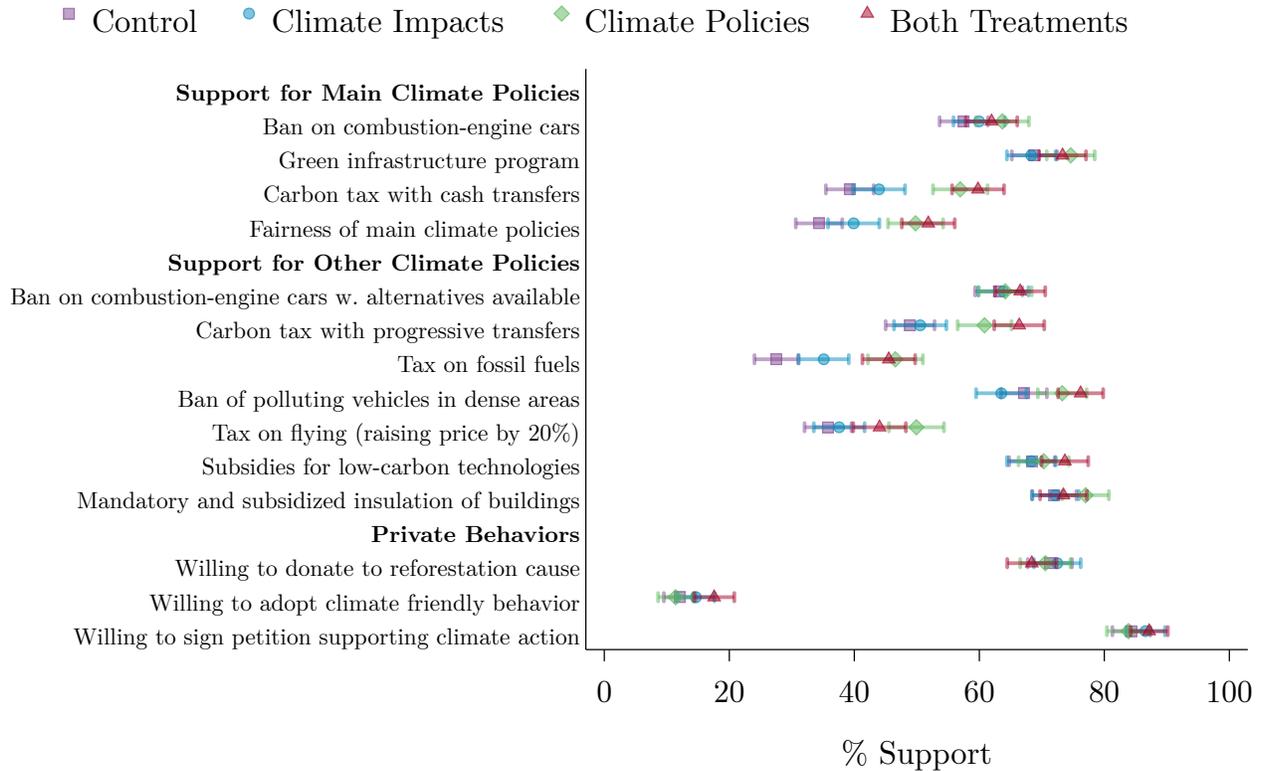
Note: This figure displays the mean of indicator variables by treatment group. Support for policy is an indicator variable equal to 1 if the respondent supports the policy somewhat or strongly. *Fairness of main climate policies* is an indicator variable equal 1 if on average the respondent somewhat or strongly agrees that each climate policy is fair. *Willing to donate to reforestation cause* equals 1 if the respondent is willing to donate more than 20% of the money prize. *Willing to adopt climate-friendly behavior* is an indicator variable equal 1 if on average the respondent is willing to adopt each climate-friendly behavior a lot or a great deal. *Willing to sign petition supporting climate action* equals 1 if the respondent is willing to sign a petition supporting climate action.

Figure 13: Effects of the treatments on beliefs

(A) Effects of the treatments on reasoning
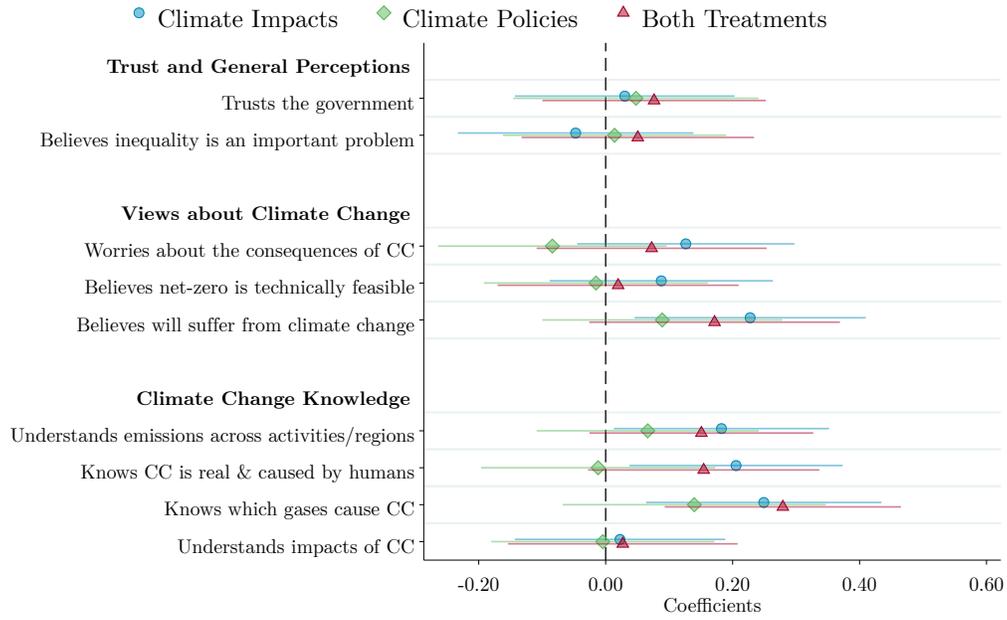
(B) Effects of the treatments on beliefs about properties of the main climate policies
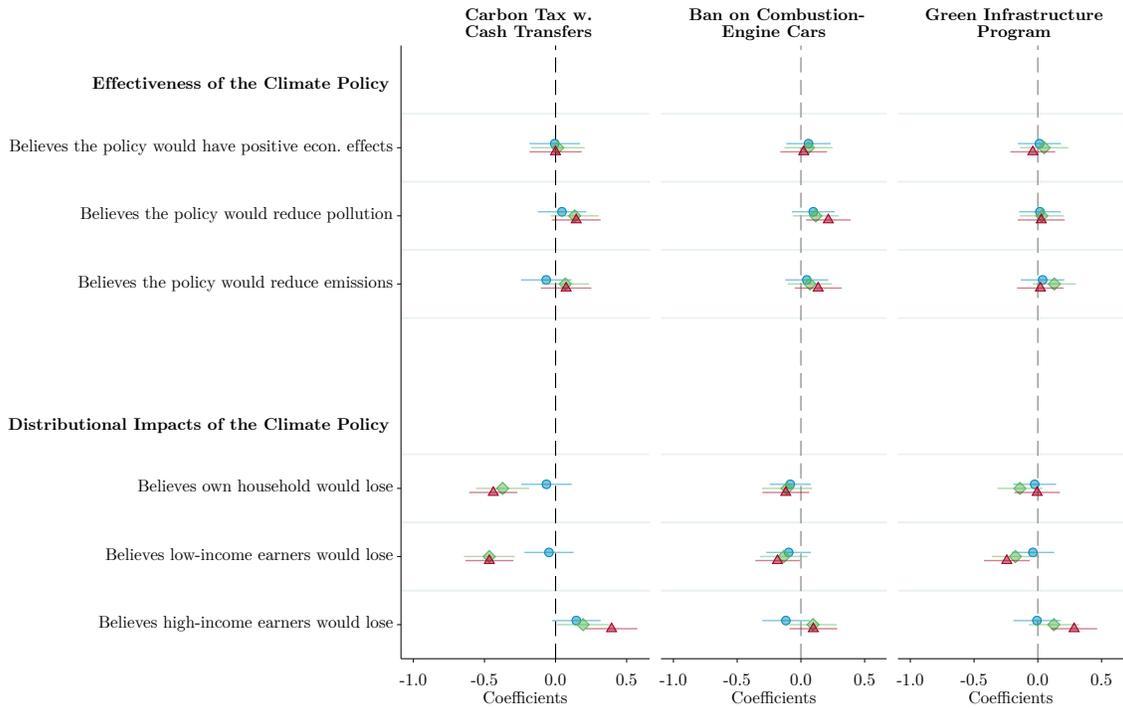
Note: The figure shows the coefficients from a regression of indices listed on the left, capturing respondents' beliefs and perceptions, on indicators for each treatment, controlling for socioeconomic characteristics (not shown). Panel A displays the coefficients from the regressions for reasoning, while Panel B displays the coefficients from regressions of beliefs about properties of each of the three policies. See Appendix A-1 of "Fighting Climate Change: International Attitudes Toward Climate Policies" for detailed variable definitions.