Heterogenous Treatment Effects & Policy Views Decomposition

Countries: US, France, Denmark, Germany

October 2021

Heterogenous Treatment Effects

Main Results

- Negative effect of Climate Treatment on right-wing respondents for support on policies, but policy treatment has positive effect on willingness to adopt climate friendly behavior
- Both treatment have a negative effects on left-leaning persons
- Policy treatment has a negative effect on both right- and left-leaning persons on thinking that rich people are responsible for CC

- Climate treatment has strong effects on the main origin/race of the country

- Also strong effects of both treatments on retired people and older people

Table 1: Heterogenous Treatment Effects – Political

	Knowledge Index	Index main policies	Index all policies	Index willing to change	Index global policies	Trust government	Companies Responsible	Rich responsible
Control group mean	0	-0.106	-0.067	0.002	-0.028	0.27	0.721	0.433
Center	0.136***	0.419***	0.509***	0.137*	0.333***	0.046	0.086***	0.032
	(0.031)	(0.069)	(0.069)	(0.071)	(0.070)	(0.032)	(0.032)	(0.036)
Left	0.150***	0.725***	0.915***	0.492***	0.768***	0.081**	0.172***	0.227***
	(0.034)	(0.075)	(0.075)	(0.077)	(0.077)	(0.035)	(0.034)	(0.039)
Right	−0.004	0.189**	0.231***	−0.074	0.042	0.023	−0.039	0.002
	(0.034)	(0.074)	(0.074)	(0.076)	(0.076)	(0.035)	(0.034)	(0.038)
Treatment Climate	0.102**	0.183*	0.198**	0.057	0.015	−0.022	0.056	0.077
	(0.042)	(0.094)	(0.093)	(0.096)	(0.095)	(0.044)	(0.043)	(0.048)
Treatment Policy	−0.009	0.138	0.148	−0.178*	0.032	0.019	0.060	0.152***
	(0.042)	(0.092)	(0.092)	(0.094)	(0.094)	(0.043)	(0.042)	(0.048)
Treatment Both	0.014	0.327***	0.263***	0.051	0.019	0.001	−0.015	0.108**
	(0.039)	(0.087)	(0.087)	(0.089)	(0.089)	(0.041)	(0.040)	(0.045)
Center × Treatment Climate	−0.045	−0.086	−0.100	0.011	0.073	0.059	−0.022	−0.025
	(0.046)	(0.102)	(0.102)	(0.105)	(0.104)	(0.048)	(0.047)	(0.053)
Left × Treatment Climate	−0.018	−0.083	−0.160	−0.146	−0.011	0.052	−0.030	−0.101*
	(0.052)	(0.115)	(0.114)	(0.117)	(0.117)	(0.053)	(0.053)	(0.059)
Right × Treatment Climate	−0.094*	−0.191*	−0.211*	−0.053	−0.023	0.031	−0.030	−0.060
	(0.051)	(0.112)	(0.112)	(0.115)	(0.115)	(0.052)	(0.051)	(0.058)
Center × Treatment Policy	−0.002	0.058	−0.037	0.173*	0.028	0.011	−0.056	−0.049
	(0.046)	(0.102)	(0.101)	(0.104)	(0.104)	(0.047)	(0.047)	(0.053)
Left × Treatment Policy	0.006	0.024	−0.150	0.067	−0.173	0.002	−0.051	−0.149**
	(0.051)	(0.112)	(0.112)	(0.115)	(0.114)	(0.052)	(0.051)	(0.058)
Right × Treatment Policy	−0.017	−0.090	−0.160	0.224**	−0.017	−0.004	−0.083	−0.136**
	(0.050)	(0.111)	(0.110)	(0.113)	(0.113)	(0.052)	(0.051)	(0.057)
Center × Treatment Both	0.009	−0.106	−0.099	0.008	0.066	0.001	0.035	0.019
	(0.044)	(0.097)	(0.097)	(0.099)	(0.099)	(0.045)	(0.045)	(0.050)
Left × Treatment Both	0.035	−0.158	−0.161	−0.192*	−0.006	0.021	0.016	−0.111**
	(0.049)	(0.109)	(0.109)	(0.112)	(0.111)	(0.051)	(0.050)	(0.057)
Right × Treatment Both	−0.001	−0.166	−0.149	−0.028	0.140	0.059	0.102**	−0.036
	(0.049)	(0.108)	(0.108)	(0.110)	(0.110)	(0.050)	(0.049)	(0.056)
Observations	8,010	8,010	8,010	8,010	8,010	8,010	8,010	8,010

Note: Controls include categorical variables for having dominant origin in the country, gender, having children, college education, income quartiles, employment tatus, age, political affiliation, living in an urban area, and the country is which the survey occured.

Table 2: Heterogenous Treatment Effects – Origin

	Knowledge Index	Index main policies	Index all policies	Index willing to change	Index global policies	Trust government	Companies Responsible	Rich responsible
Control group mean	0	-0.106	-0.067	0.002	-0.028	0.27	0.721	0.433
origin: largest group	0.043*	−0.201***	−0.151***	−0.094	−0.168***	−0.034	−0.038	−0.016
	(0.026)	(0.057)	(0.057)	(0.058)	(0.058)	(0.027)	(0.026)	(0.030)
Treatment Climate	0.054	−0.140*	−0.097	−0.227***	−0.087	−0.003	−0.028	0.029
	(0.036)	(0.079)	(0.079)	(0.080)	(0.080)	(0.037)	(0.036)	(0.041)
Treatment Policy	0.004	0.046	−0.014	−0.119	−0.087	0.002	−0.022	0.029
	(0.035)	(0.078)	(0.077)	(0.079)	(0.079)	(0.036)	(0.036)	(0.040)
Treatment Both	−0.008	−0.078	−0.080	−0.244***	−0.109	0.004	−0.063*	0.020
	(0.036)	(0.079)	(0.079)	(0.081)	(0.081)	(0.037)	(0.036)	(0.041)
origin: largest group × Treatment Climate	0.002	0.260***	0.197**	0.289***	0.152*	0.030	0.071*	0.005
	(0.038)	(0.085)	(0.085)	(0.087)	(0.086)	(0.040)	(0.039)	(0.044)
origin: largest group × Treatment Policy	−0.019	0.124	0.093	0.105	0.109	0.024	0.030	0.044
	(0.038)	(0.084)	(0.084)	(0.086)	(0.085)	(0.039)	(0.038)	(0.043)
origin: largest group × Treatment Both	0.038	0.336***	0.271***	0.297***	0.220**	0.018	0.104***	0.076*
	(0.039)	(0.085)	(0.085)	(0.087)	(0.087)	(0.040)	(0.039)	(0.044)
Observations	8,010	8,010	8,010	8,010	8,010	8,010	8,010	8,010

Table 3: Heterogenous Treatment Effects – Employment

	Knowledge Index	Index main policies	Index all policies	Index willing to change	Index global policies	Trust government	Companies Responsible	Rich responsible
Control group mean	0	-0.106	-0.067	0.002	-0.028	0.27	0.721	0.433
Retired	−0.020	−0.017	−0.048	−0.079	−0.083	0.025	−0.016	0.031
	(0.033)	(0.073)	(0.073)	(0.075)	(0.075)	(0.034)	(0.034)	(0.038)
Student	0.158***	0.171*	0.131	0.023	0.074	0.056	0.081*	−0.032
	(0.046)	(0.101)	(0.101)	(0.104)	(0.104)	(0.047)	(0.047)	(0.053)
Working	0.021	0.053	0.037	−0.066	0.030	0.071**	−0.012	−0.061*
	(0.029)	(0.065)	(0.065)	(0.066)	(0.066)	(0.030)	(0.030)	(0.034)
Treatment Climate	0.052	0.089	−0.002	−0.061	−0.103	0.007	0.016	0.053
	(0.039)	(0.087)	(0.087)	(0.089)	(0.089)	(0.040)	(0.040)	(0.045)
Treatment Policy	−0.034	0.158*	0.086	−0.048	−0.013	0.043	0.079**	0.121***
	(0.039)	(0.087)	(0.087)	(0.089)	(0.089)	(0.041)	(0.040)	(0.045)
Treatment Both	0.075*	0.038	−0.036	−0.220**	−0.030	0.026	−0.026	0.044
	(0.039)	(0.087)	(0.086)	(0.089)	(0.088)	(0.040)	(0.040)	(0.045)
Retired × Treatment Climate	0.032	0.040	0.151	0.104	0.237**	0.033	0.022	−0.082
	(0.046)	(0.101)	(0.101)	(0.104)	(0.104)	(0.047)	(0.046)	(0.053)
Student × Treatment Climate	−0.047	−0.167	−0.022	0.054	0.173	0.051	−0.019	−0.033
	(0.069)	(0.152)	(0.152)	(0.155)	(0.155)	(0.071)	(0.070)	(0.079)
Working × Treatment Climate	−0.007	−0.018	0.055	0.092	0.121	0.005	0.021	0.013
	(0.043)	(0.096)	(0.095)	(0.098)	(0.098)	(0.045)	(0.044)	(0.050)
Retired × Treatment Policy	0.039	0.081	0.068	0.048	0.098	0.009	−0.045	−0.090*
	(0.046)	(0.102)	(0.102)	(0.104)	(0.104)	(0.048)	(0.047)	(0.053)
Student × Treatment Policy	−0.058	−0.225	−0.124	−0.110	−0.031	0.085	−0.140**	−0.113
	(0.065)	(0.143)	(0.142)	(0.146)	(0.145)	(0.067)	(0.065)	(0.074)
Working × Treatment Policy	0.025	−0.032	−0.065	0.021	−0.018	−0.054	−0.098**	−0.036
	(0.043)	(0.096)	(0.096)	(0.098)	(0.098)	(0.045)	(0.044)	(0.050)
Retired × Treatment Both	−0.026	0.342***	0.319***	0.360***	0.209**	−0.011	0.076	0.023
	(0.047)	(0.103)	(0.103)	(0.106)	(0.105)	(0.048)	(0.047)	(0.053)
Student × Treatment Both	−0.075	0.072	0.147	0.044	0.016	0.006	−0.044	−0.092
	(0.067)	(0.148)	(0.148)	(0.151)	(0.151)	(0.069)	(0.068)	(0.077)
Working × Treatment Both	−0.070	0.135	0.164*	0.237**	0.089	−0.011	0.060	0.079
	(0.043)	(0.096)	(0.095)	(0.098)	(0.097)	(0.045)	(0.044)	(0.049)
Observations	8,010	8,010	8,010	8,010	8,010	8,010	8,010	8,010

Table 4: Heterogenous Treatment Effects – Age

	Knowledge Index	Index main policies	Index all policies	Index willing to change	Index global policies	Trust government	Companies Responsible	Rich responsible
Age: 25-34	−0.063*	−0.080	0.024	−0.023	0.163***	0.028	0.014	−0.036
	(0.036)	(0.080)	(0.080)	(0.082)	(0.081)	(0.037)	(0.037)	(0.041)
Age: 35-49	−0.040	−0.159**	−0.035	−0.217***	0.053	0.029	−0.024	−0.027
	(0.035)	(0.077)	(0.077)	(0.079)	(0.078)	(0.036)	(0.035)	(0.040)
Age: 50-64	0.030	−0.203***	−0.079	−0.209***	−0.010	0.032	0.007	−0.068*
	(0.034)	(0.076)	(0.076)	(0.078)	(0.078)	(0.036)	(0.035)	(0.039)
Age: 65+	0.056	−0.357***	−0.178**	−0.446***	−0.040	0.030	−0.019	−0.066
	(0.037)	(0.082)	(0.082)	(0.084)	(0.083)	(0.038)	(0.037)	(0.042)
Treatment Climate	0.069*	0.106	0.179*	−0.005	0.224**	0.015	0.028	0.079*
	(0.042)	(0.092)	(0.092)	(0.094)	(0.094)	(0.043)	(0.042)	(0.048)
Treatment Policy	−0.100**	0.081	0.062	−0.045	0.039	0.097**	−0.047	0.109**
	(0.039)	(0.087)	(0.086)	(0.089)	(0.088)	(0.040)	(0.040)	(0.045)
Treatment Both	−0.011	0.085	0.082	−0.085	0.028	0.022	−0.041	0.016
	(0.040)	(0.089)	(0.088)	(0.091)	(0.090)	(0.041)	(0.041)	(0.046)
Age: 25-34 × Treatment Climate	−0.039	−0.047	−0.157	−0.035	−0.350***	0.003	−0.031	−0.027
	(0.053)	(0.118)	(0.118)	(0.121)	(0.120)	(0.055)	(0.054)	(0.061)
Age: 35-49 × Treatment Climate	−0.021	0.010	−0.095	0.096	−0.178	0.010	0.032	−0.002
	(0.050)	(0.110)	(0.110)	(0.112)	(0.112)	(0.051)	(0.050)	(0.057)
Age: 50-64 × Treatment Climate	−0.028	−0.138	−0.214**	−0.067	−0.206*	−0.012	0.006	−0.059
	(0.049)	(0.109)	(0.108)	(0.111)	(0.111)	(0.051)	(0.050)	(0.056)
Age: 65+ × Treatment Climate	0.019	0.066	−0.024	0.099	−0.128	0.031	0.001	−0.107*
	(0.049)	(0.108)	(0.108)	(0.111)	(0.110)	(0.051)	(0.050)	(0.056)
Age: 25-34 × Treatment Policy	0.100*	0.010	−0.056	−0.031	−0.171	−0.048	0.069	0.006
	(0.051)	(0.113)	(0.112)	(0.115)	(0.115)	(0.053)	(0.052)	(0.058)
Age: 35-49 × Treatment Policy	0.110**	0.088	0.0001	0.097	−0.042	−0.077	0.069	−0.063
	(0.048)	(0.107)	(0.106)	(0.109)	(0.109)	(0.050)	(0.049)	(0.055)
Age: 50-64 × Treatment Policy	0.053	0.015	−0.067	−0.096	−0.065	−0.107**	0.017	−0.046
	(0.047)	(0.104)	(0.104)	(0.107)	(0.106)	(0.049)	(0.048)	(0.054)
Age: 65+ × Treatment Policy	0.132***	0.169	0.104	0.080	0.070	−0.088*	0.078*	−0.068
	(0.047)	(0.104)	(0.104)	(0.106)	(0.106)	(0.048)	(0.048)	(0.054)
Age: 25-34 × Treatment Both	0.039	0.021	−0.049	−0.019	−0.185	−0.018	0.024	0.089
	(0.052)	(0.115)	(0.114)	(0.117)	(0.117)	(0.054)	(0.053)	(0.059)
Age: 35-49 × Treatment Both	−0.023	0.041	0.010	0.075	0.022	0.017	0.103**	0.078
	(0.049)	(0.107)	(0.107)	(0.110)	(0.110)	(0.050)	(0.049)	(0.056)
Age: 50-64 × Treatment Both	0.052	0.121	0.067	0.057	0.120	0.008	0.052	0.086
	(0.048)	(0.106)	(0.106)	(0.109)	(0.108)	(0.050)	(0.049)	(0.055)
Age: 65+ × Treatment Both	0.096**	0.360***	0.260**	0.298***	0.199*	−0.030	0.113**	0.074
	(0.049)	(0.108)	(0.108)	(0.111)	(0.110)	(0.051)	(0.050)	(0.056)
Observations	8,010	8,010	8,010	8,010	8,010	8,010	8,010	8,010

Decomposition of Policy Views

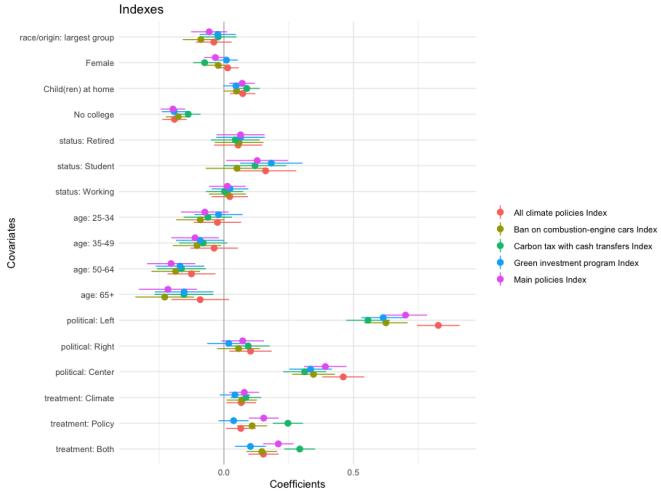
Main Results

- Importance of political-leaning and age on support

- Believing that policies are efficient is a key determinant of the support for all policies
- Thinking that climate change will/is affect(ing) oneself way more important than being actually vulnerable to climate change

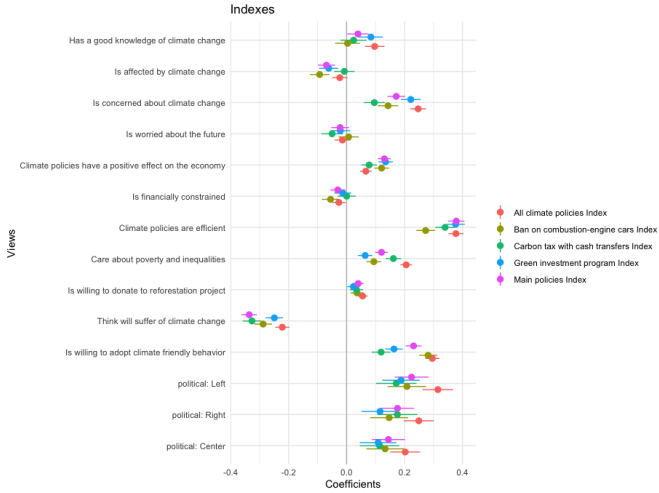
- Partisan gap is also explained by different views on the efficiency of climate policies, as well as the importance of addressing poverty and inequalities, and not so much by objective characteristics (e.g., being vulnerable to CC or financially constrained)
- For the geographical gap, believing that climate change will affect oneself is also an important determinant.
- Being concerned about climate change only plays a role at the margins.

Decomposing Policy View – Individual Characteristics



Notes: In this figure, the dependent variable are policy indices. Depicted are coefficients of different types of variables and from two different specifications. We show the coefficients from the regressions of each policy index on (only) treatment indicators and on the full set of individual covariates.

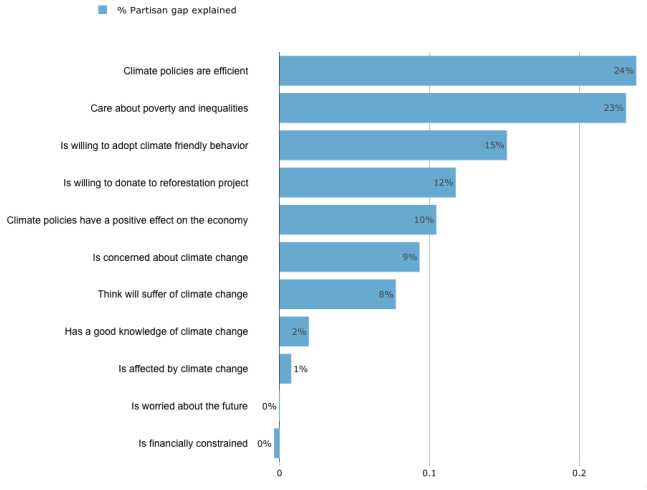
Decomposing Policy View – Mechanisms



Notes: We show the coefficients on the different policy views from the regressions of each policy index on these factors, controlling for the full array of individual covariates and treatment indicators. We do not show the coefficients on all individual-level controls, except for the coefficient on the political indicators.

Gelbach decomposition of the partisan gap in support for…

… all climate policies

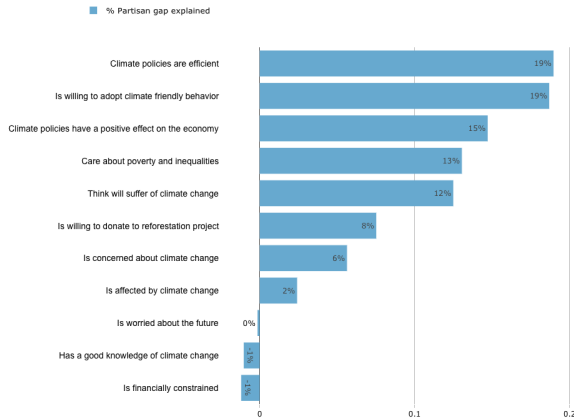


Notes: Each bar indicates the share of the partisan gap explained by each of the factors.

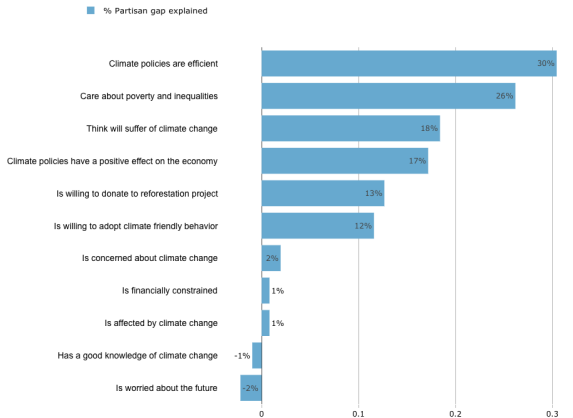
Explaining the Partisan Gap

Gelbach decomposition of the partisan gap in support for:

(a) Ban on combustion-engine cars



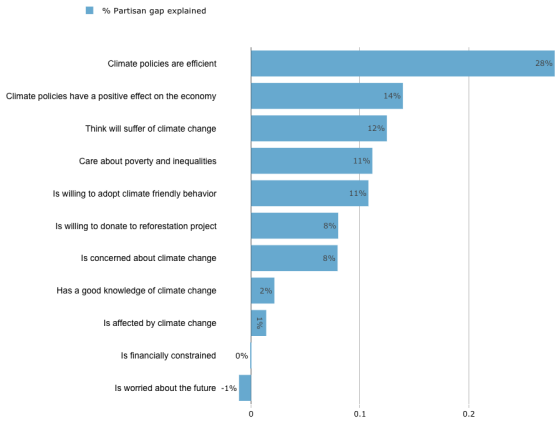
(b) Carbon tax with cash transfers



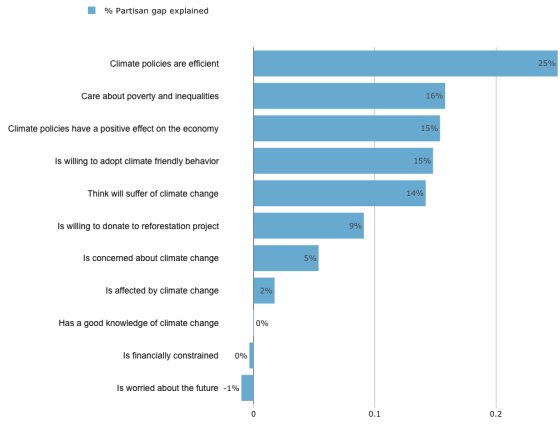
Explaining the Partisan Gap

Gelbach decomposition of the partisan gap in support for:

(a) Green investment program

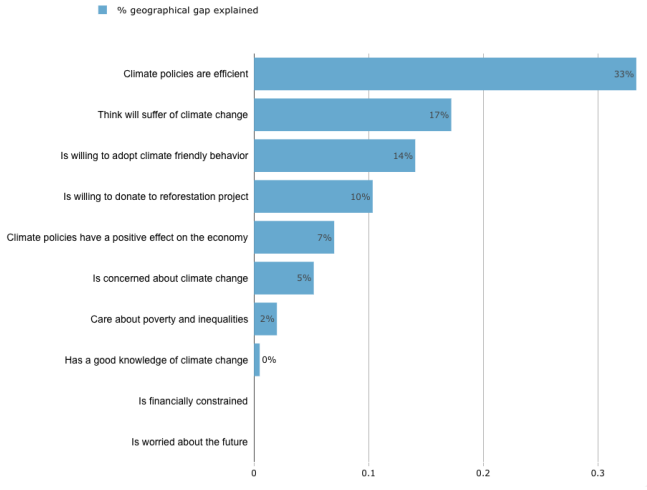


(b) All 3 policies



Gelbach decomposition of the geographical gap (urban vs. rural) in support for…

… all climate policies

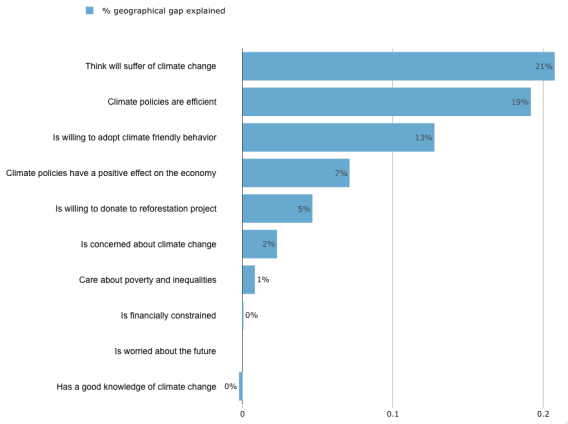


Notes: Each bar indicates the share of the geographical gap explained by each of the factors.

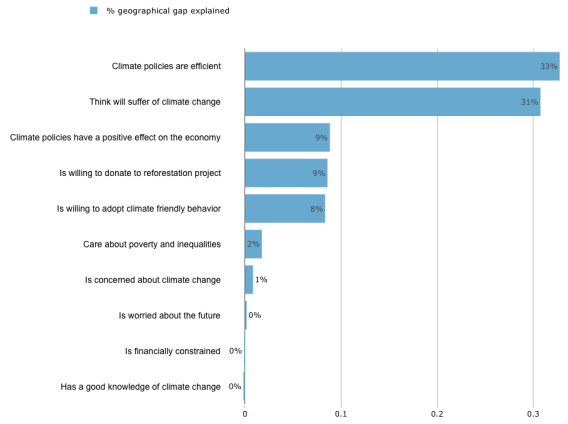
Explaining the Geographical Gap

Gelbach decomposition of the geographical gap (urban vs. rural) in support for:

(a) Ban on combustion-engine cars



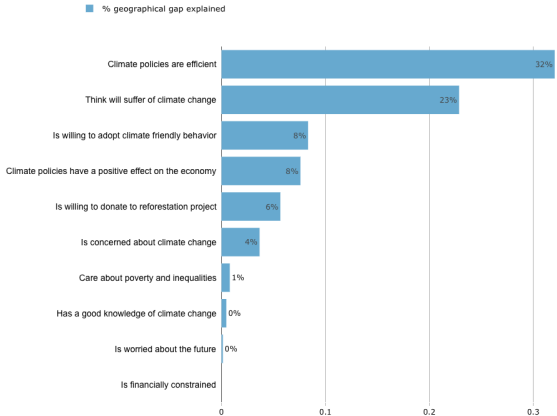
(b) Carbon tax with cash transfers



Explaining the Geographical Gap

Gelbach decomposition of the geographical gap (urban vs. rural) in support for:

(a) Green investment program



(b) All 3 policies