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 effect on left-leaning people.
- Policy treatment has a negative effect on both right- and left-leaning people 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.

	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)
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 respondent's country.

Table 1: Heterogenous Treatment Effects – Origin

	Knowledge Index	Index main policies	Index all policies	Index willing to change	Index global policies	Trust government	Companies Responsible	Rich responsi
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)
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

	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)
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

	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)
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

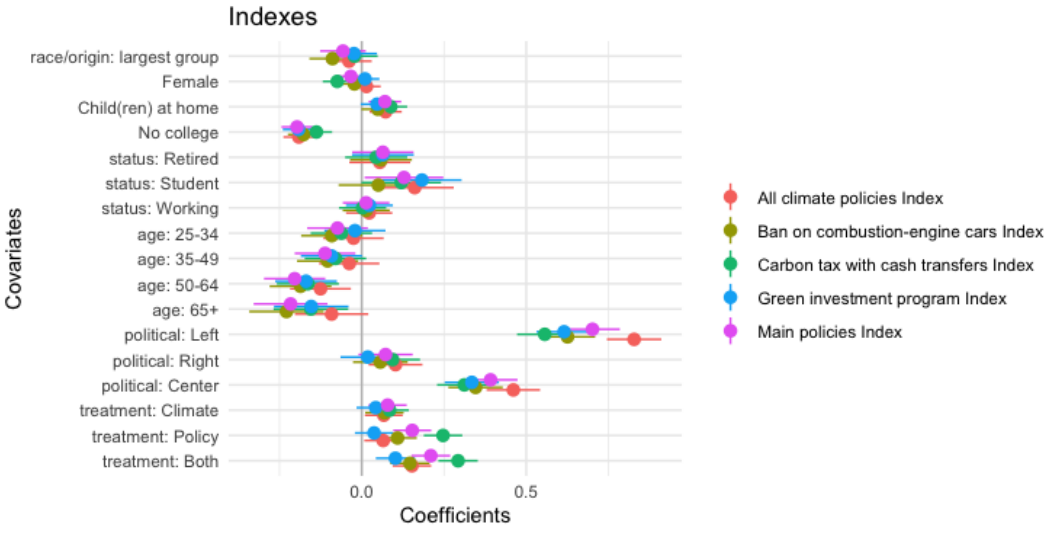
Main Results

- Political leaning and age are important drivers of support.

- Belief in efficiency is key.
- Thinking that climate change will/is affect(ing) oneself is much more important than being actually vulnerable to climate change.

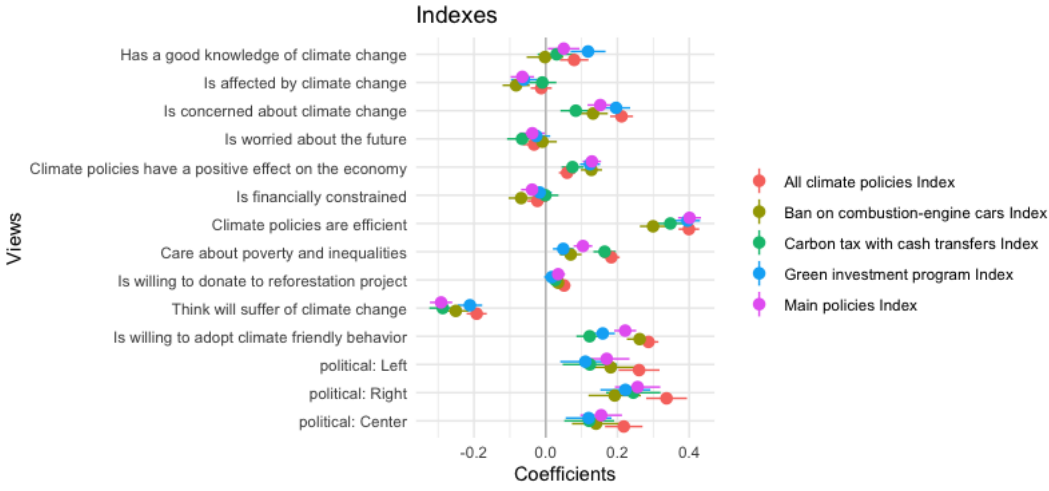
- Partisan gap is also explained by different views on the efficiency of climate policies, as well as the importance of addressing poverty and inequalities, and not so much by objective characteristics (e.g., being vulnerable to CC or financially constrained).
- The geographical gap is largely explained by feeling affected by CC.
- Being concerned about climate change only plays a secondary role.

Decomposing Policy View – Individual Characteristics



Notes: In this figure, the dependent variable are policy indices. Depicted are coefficients on 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.

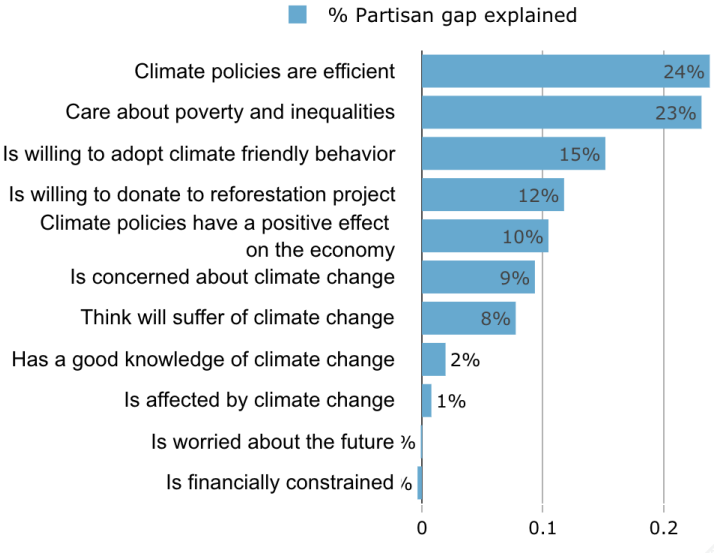
Decomposing Policy View – Mechanisms



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...

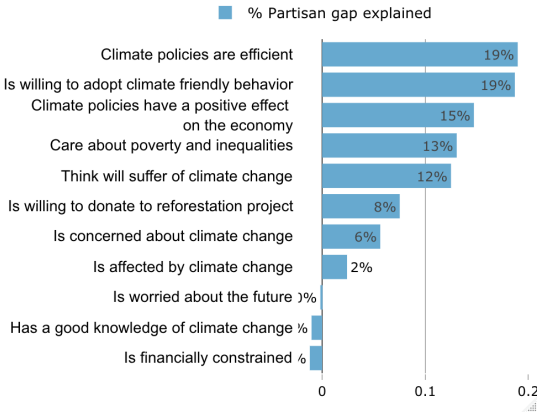
... all climate policies



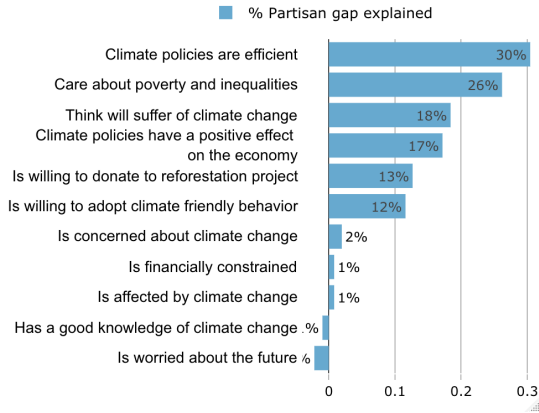
Explaining the Partisan Gap

Gelbach decomposition of the partisan gap in support for:

(a) Ban on combustion-engine cars



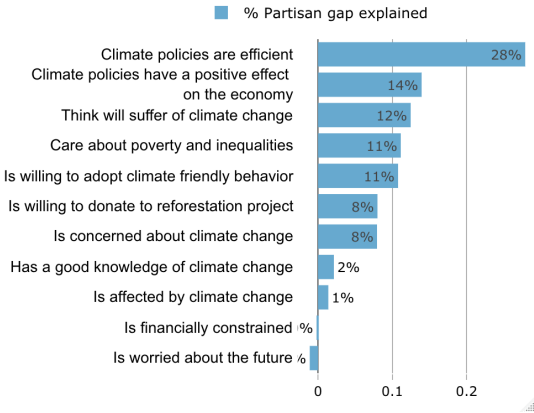
(b) Carbon tax with cash transfers



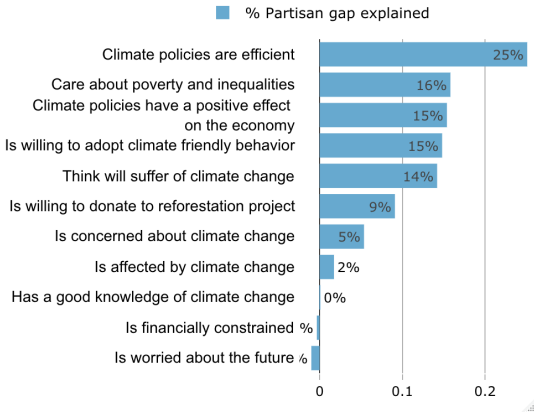
Explaining the Partisan Gap

Gelbach decomposition of the partisan gap in support for:

(a) Green investment program

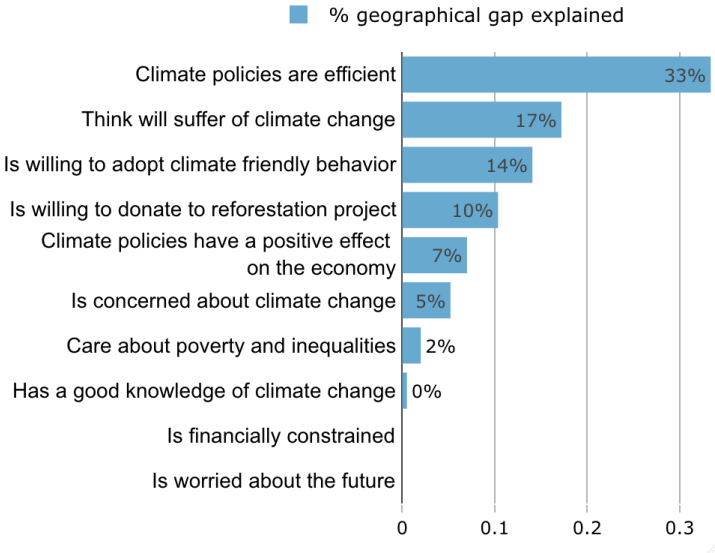


(b) All 3 policies



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

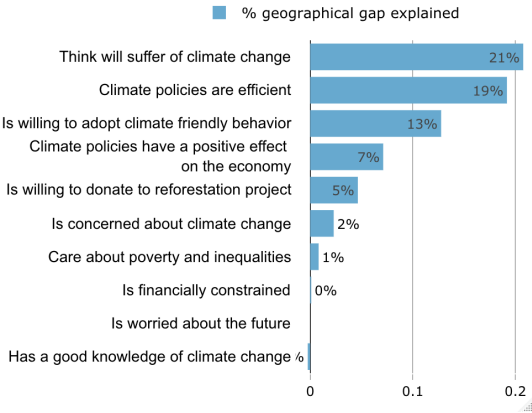
... all climate policies



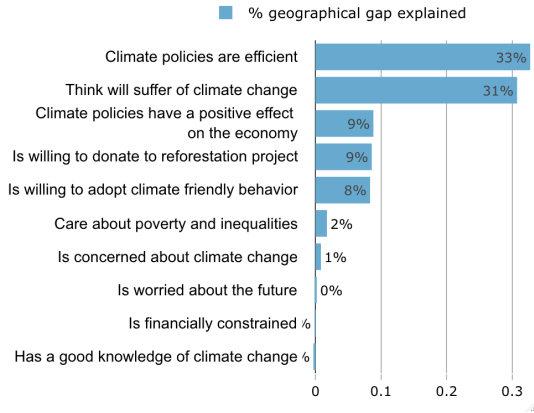
Explaining the Geographical Gap

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

(a) Ban on combustion-engine cars



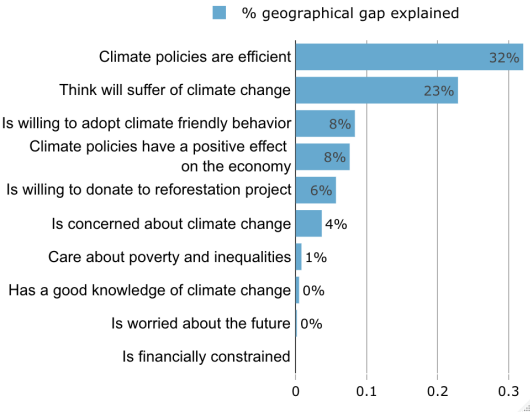
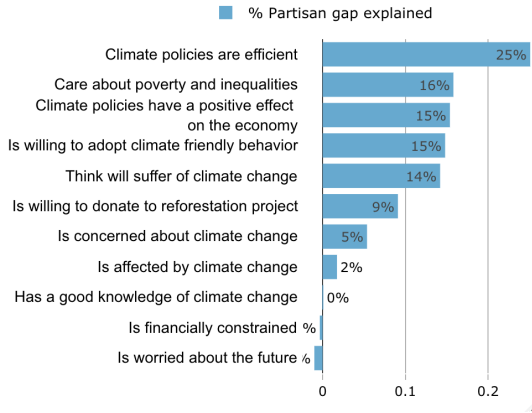
(b) Carbon tax with cash transfers



Explaining the Geographical Gap

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

(a) Green investment program



(b) All 3 policies