Supplementary Information: The Effects of Policy Design Complexity on Public Support for Climate Policy

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National and sample statistics for age, gender, rural urban and income variables

Germany	National Statistics[1]	Sample
Gender		
Male	51%	51%
Female	49%	49%
Age		
18-24	9.0%	13%
25-39	22.5%	23%
40-64	43.5%	43%
65+	25.0%	21%
Income (monthly)		
960 € or less	10%	10%
960 - 1290 €	10%	9%
1290 - 1640 €	10%	12%
1640 - 1975 €	10%	8%
1975 - 2365 €	10%	13%
2365 - 2860 €	10%	13%
2860 - 3440 €	10%	14%
3440 - 4215 €	10%	11%
4215 - 5515 €	10%	6%
More than 5515 €	10%	4%
Urban-Rural		
Urban	76%	77%
Rural	24%	23%

Table SI-1: National and sample statistics German sample

[1] Source: De-Statitis 2017

USA	National Statistics[2]	Sample
Gender		
Male	48%	48%
Female	52%	52%
Age		
18-24	13%	19%
25-44	35%	28%
45-64	35%	32%
+65	17%	21%
Income (annualy)		
$22,500 or less	20%	21%
$22,501 - $43,500	20%	24%
$43,501- $72,000	20%	24%
$72,001- $117,000	20%	20%
$117,001 - $214'500	15%	9%
More than $214'500	5%	2%
Urban-Rural		
Urban	82%	80%
Rural	18%	20%

Table SI-2: National and sample statistics US sample

[2] Source: U.S. Census Bureau 2015

Model high complexity: Choice outcome – United States	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.061778776	0.010270469
	Restrictions	Low	-0.006516149	0.011005176
	Restrictions	High	-0.0724878	0.011503814
	Standards	Low	0.057288505	0.010478512
	Standards	High	0.044606056	0.010904313
	Support	Low	0.081425896	0.010812458
	Support	High	0.078101783	0.011017195
	Tax	Low	-0.082371533	0.010853703
	Tax	High	-0.182594722	0.011441244
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	High Complexity	12992		
Number of Respondents	High Complexity	1624		

Table SI-3: Model High Complexity: Choice Outcome – US Case

Models low complexity: Choice outcome – United States	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.145043561	0.01063168
	Restrictions	Low	0.069573774	0.013638148
	Restrictions	High	-0.042545514	0.013688518
	Standards	Low	0.194943131	0.012978889
	Standards	High	0.190539487	0.012938402
	Support	Low	0.198384236	0.013082344
	Support	High	0.205231693	0.012936735
	Tax	Low	-0.122327082	0.013821469
	Tax	High	-0.272464659	0.013499399
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	Low Complexity	39008		
Number of Respondents	Low Complexity	4876		

Table SI-4: Models Low Complexity: Choice Outcome – US Case

Model high complexity: Choice outcome – Germany	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0,04053	0,012591
	Restrictions	Low	0,016386	0,011664
	Restrictions	High	-0,05205	0,011716
	Standards	Low	0,078369	0,011519
	Standards	High	0,094462	0,011794
	Support	Low	0,10889	0,011547
	Support	High	0,141594	0,01149
	Tax	Low	-0,03639	0,015736
	Tax	High	-0,08857	0,011976
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	High Complexity	11272		
Number of Respondents	High Complexity	1409		

Table SI-5: Model High Complexity: Choice Outcome – German Case

Models low complexity: Choice outcome – Germany	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0,09985	0,011644
	Restrictions	Low	0,090691	0,014436
	Restrictions	High	-0,00458	0,014637
	Standards	Low	0,23285	0,013807
	Standards	High	0,320425	0,013232
	Support	Low	0,261208	0,01365
	Support	High	0,346888	0,013243
	Tax	Low	-0,00918	0,016518
	Tax	High	-0,1505	0,014884
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	Low Complexity	33824		
Number of Respondents	Low Complexity	4228		

Table SI-6: Models Low Complexity: Choice – German Case

Model high complexity: Effective outcome – United States	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.250084067	0.031749085
	Restrictions	Low	0.146685902	0.036653905
	Restrictions	High	0.164881685	0.036981518
	Standards	Low	0.175253409	0.036808957
	Standards	High	0.200640313	0.037425134
	Support	Low	0.14953165	0.03718622
	Support	High	0.148870183	0.0372973
	Tax	Low	0.010952913	0.037743594
	Tax	High	0.000245588	0.038037253
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	High Complexity	12992		
Number of Respondents	High Complexity	1624		

Table SI-7: Model High Complexity: Effective Outcome – US Case

Models low complexity: Effective outcome – United States	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.450572259	0.033400927
	Restrictions	Low	0.379320945	0.042264022
	Restrictions	High	0.43504289	0.042223855
	Standards	Low	0.571357727	0.042384445
	Standards	High	0.661399781	0.043111601
	Support	Low	0.424345943	0.039647893
	Support	High	0.491101977	0.041290222
	Tax	Low	0.028075975	0.04811428
	Tax	High	-0.078570433	0.048498223
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	Low Complexity	39008		
Number of Respondents	Low Complexity	4876		

Table SI-8: Models Low Complexity: Effective Outcome – US Case

Model high complexity: Effective outcome – Germany	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.174993537	0.037869609
	Restrictions	Low	0.020416167	0.034782876
	Restrictions	High	0.019380273	0.03654117
	Standards	Low	0.128869476	0.036074983
	Standards	High	0.166783024	0.036301315
	Support	Low	0.134143261	0.037892319
	Support	High	0.191344055	0.036673553
	Tax	Low	-0.017213102	0.044982431
	Tax	High	-0.070821565	0.035029394
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	High Complexity	11272		
Number of Respondents	High Complexity	1409		

Table SI-9: Model High Complexity: Effective Outcome – German Case

Models low complexity: Effective outcome – Germany	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.29668087	0.034297366
	Restrictions	Low	0.216940273	0.042459655
	Restrictions	High	0.190586433	0.043830823
	Standards	Low	0.507444924	0.042045826
	Standards	High	0.76067651	0.042675539
	Support	Low	0.513404693	0.041708693
	Support	High	0.677494599	0.043506071
	Tax	Low	-0.030086641	0.052848738
	Tax	High	-0.063121228	0.048881786
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	Low Complexity	33824		
Number of Respondents	Low Complexity	4228		

Table SI-10: Models Low Complexity: Effective Outcome – German Case

Model high complexity: Restrictive outcome – United States	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.086088296	0.0362224
	Restrictions	Low	0.110940037	0.037166359
	Restrictions	High	0.220401736	0.037318119
	Standards	Low	0.004638455	0.036131981
	Standards	High	0.059850877	0.037412722
	Support	Low	0.11813564	0.036494945
	Support	High	0.13566414	0.035496433
	Tax	Low	0.249728605	0.039394343
	Tax	High	0.320869073	0.041593471
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	High Complexity	12992		
Number of Respondents	High Complexity	1624		

Table SI-11: Model High Complexity: Restrictive Outcome – US Case

Models low complexity: Restrictive outcome – United States	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.036857691	0.036715813
	Restrictions	Low	0.231095555	0.044595507
	Restrictions	High	0.492018691	0.044490934
	Standards	Low	0.167006996	0.041737601
	Standards	High	0.218056528	0.042905332
	Support	Low	0.104381532	0.041651327
	Support	High	0.087414145	0.041366104
	Tax	Low	0.533652205	0.049348966
	Tax	High	0.671153589	0.049290701
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	Low Complexity	39008		
Number of Respondents	Low Complexity	4876		

Table SI-12: Models Low Complexity: Restrictive Outcome – US Case

Model high complexity: Restrictive outcome – Germany	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.213147208	0.04703762
	Restrictions	Low	0.123903361	0.039209693
	Restrictions	High	0.303958419	0.041764755
	Standards	Low	0.083996337	0.039418153
	Standards	High	0.081600449	0.041491206
	Support	Low	0.019297128	0.041624254
	Support	High	0.025221859	0.040475329
	Tax	Low	0.32947587	0.053475049
	Tax	High	0.346909199	0.041101728
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	High Complexity	11272		
Number of Respondents	High Complexity	1409		

Table SI-13: Model High Complexity: Restrictive Outcome – German Case

Models low complexity: Restrictive outcome – Germany	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Policy Goal	Meat Reduction	-0.102944144	0.040492255
	Restrictions	Low	0.086934576	0.047104186
	Restrictions	High	0.376062416	0.047597099
	Standards	Low	0.116491618	0.044118145
	Standards	High	0.202756458	0.045415402
	Support	Low	-0.021837506	0.044781353
	Support	High	0.022038932	0.04656974
	Tax	Low	0.377248649	0.056835174
	Tax	High	0.457759037	0.05242192
	Baseline Levels			
	Policy Goal	Car Reduction		
	Restrictions	No increased restrictions		
	Standards	No increased standards		
	Support	No increased support		
	Tax	No increased tax		
Number of Obs.	Low Complexity	33824		
Number of Respondents	Low Complexity	4228		

Table SI-14: Models Low Complexity: Effective Outcome – German Case

Design complexity effects: Effective outcome – Germany	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Design Complexity	High Complexity	0.1235	0.037298
	Baseline Levels			
	Low Complexity Condition			
Number of Obs.	45096			
Number of Respondents	4228			

Table SI-15: Design Complexity Effects: Effective Outcome – German Case

Design complexity effects: Restrictive outcome – Germany	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Design Complexity	High Complexity	0.13138	0.039913
	Baseline Levels			
	Low Complexity Condition			
Number of Obs.	45096			
Number of Respondents	4228			

Table SI-16: Design Complexity Effects: Restrictive Outcome – German Case

Design complexity effects: Effective outcome – United States	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Design Complexity	High Complexity	0.07821	0.041787
	Baseline Levels			
	Low Complexity Condition			
Number of Obs.	51998			
Number of Respondents	4876			

Table SI-17: Design Complexity Effects: Effective Outcome – USA Case

Design complexity effects: Restrictive outcome – United States	**Attribute**	**Level**	**Average Marginal Component Effects**	**Std. Err**
	Design Complexity	High Complexity	0.15932	0.037763
	Baseline Levels			
	Low Complexity Condition			
Number of Obs.	51998			
Number of Respondents	4876			

Table SI-18: Design Complexity Effects: Restrictive Outcome – USA Case

Interaction effects between policy goals and instruments on choice outcome

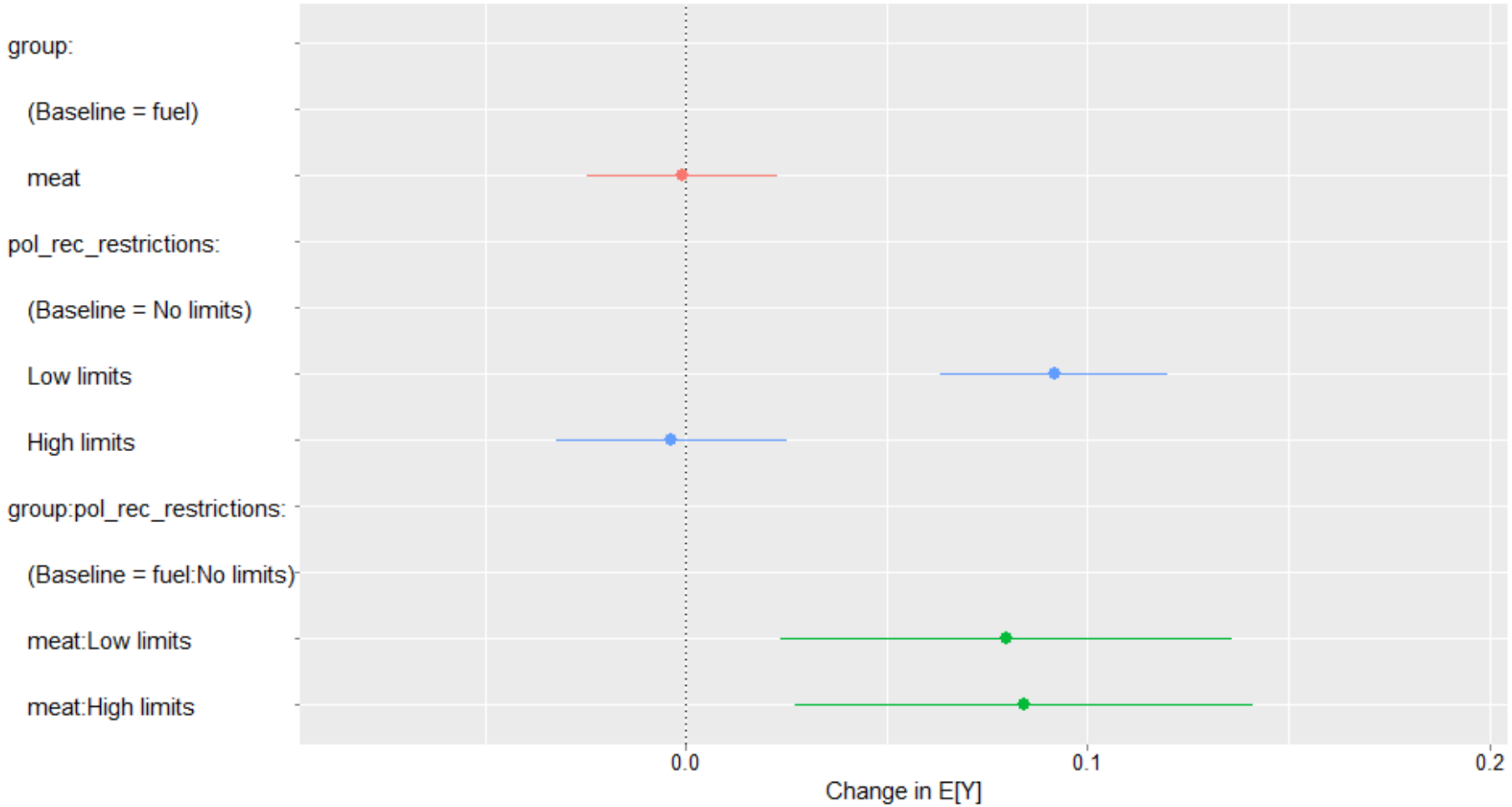

Figure SI-1: Interaction effects between Policy Goal and Restrictions Attribute for Choice Outcome in German Sample

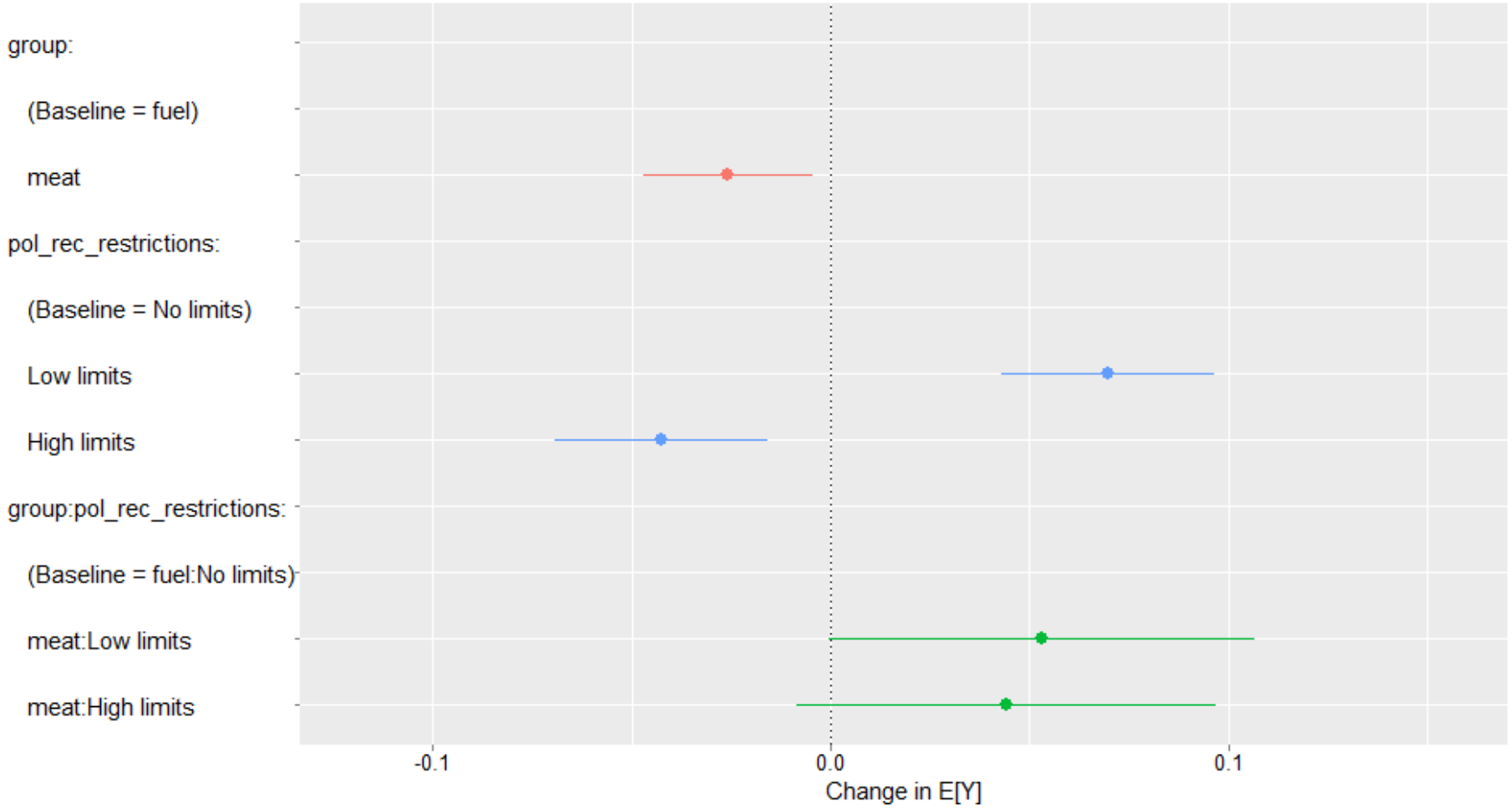

Figure SI-2: Interaction effects between Policy Goal and Restrictions Attribute for Choice Outcome in USA Sample

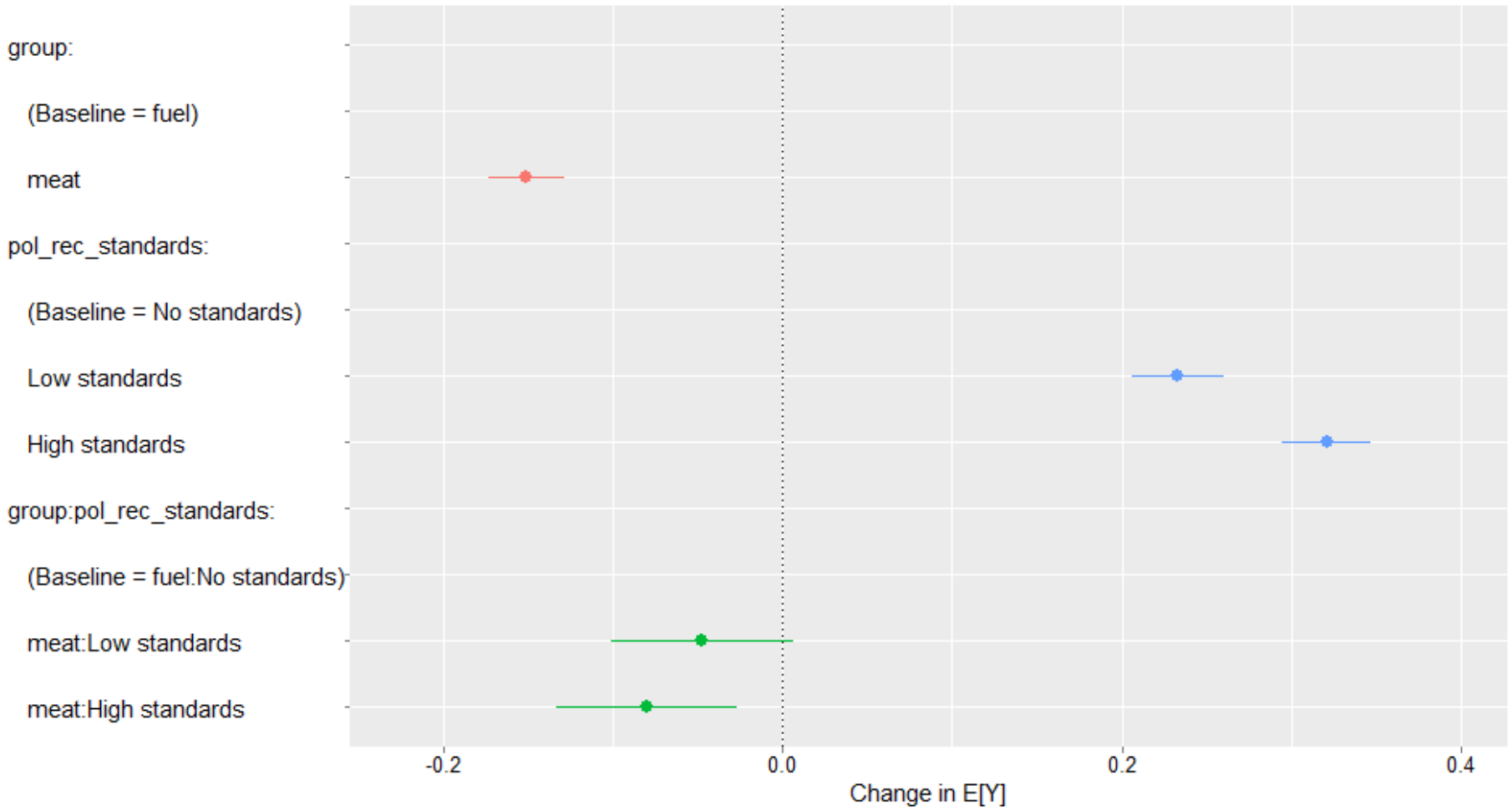

Figure SI-3: Interaction effects between Policy Goal and Standards Attribute for Choice Outcome in German Sample

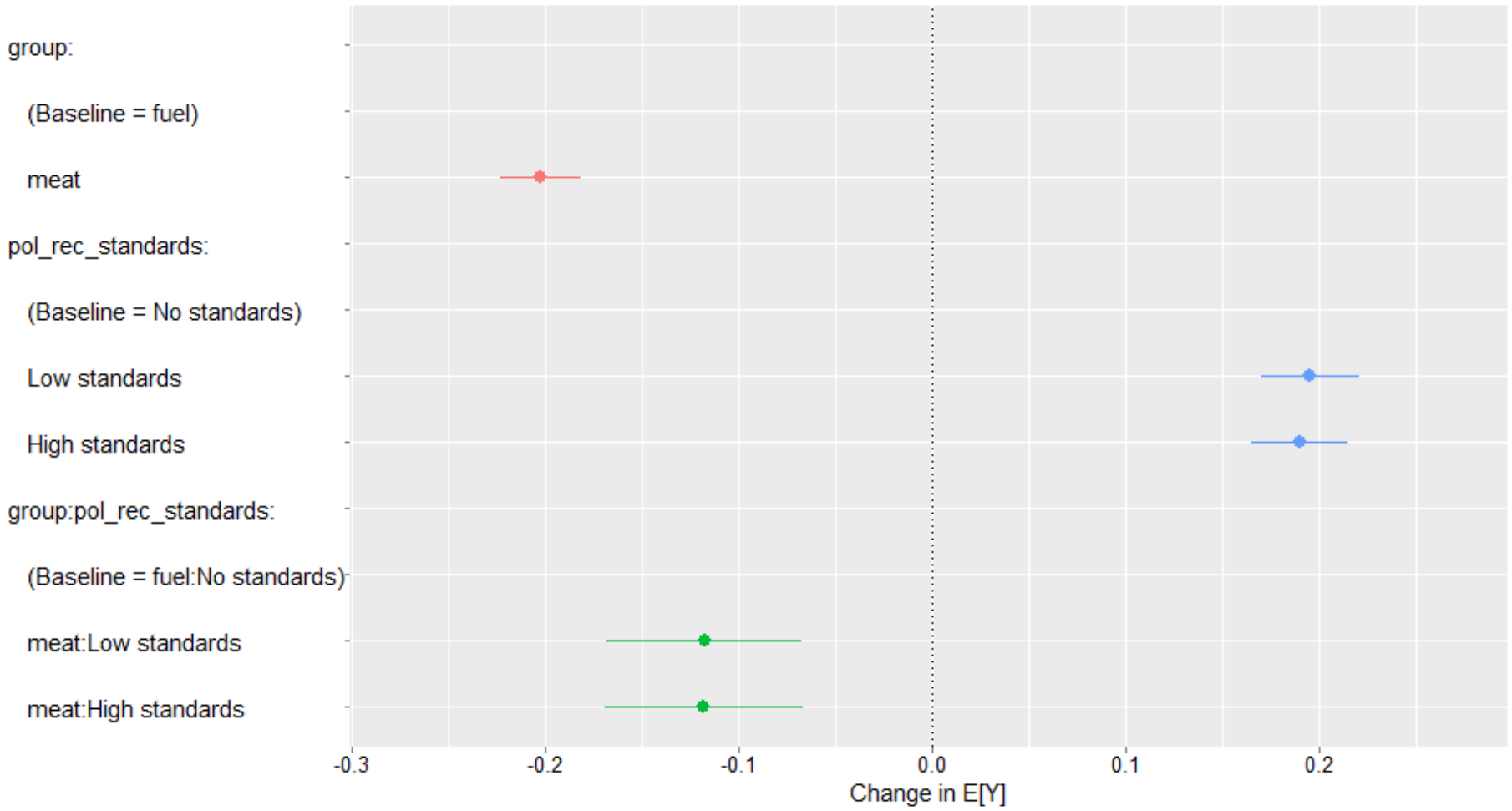

Figure SI-4: Interaction effects between Policy Goal and Standards Attribute for Choice Outcome in USA Sample

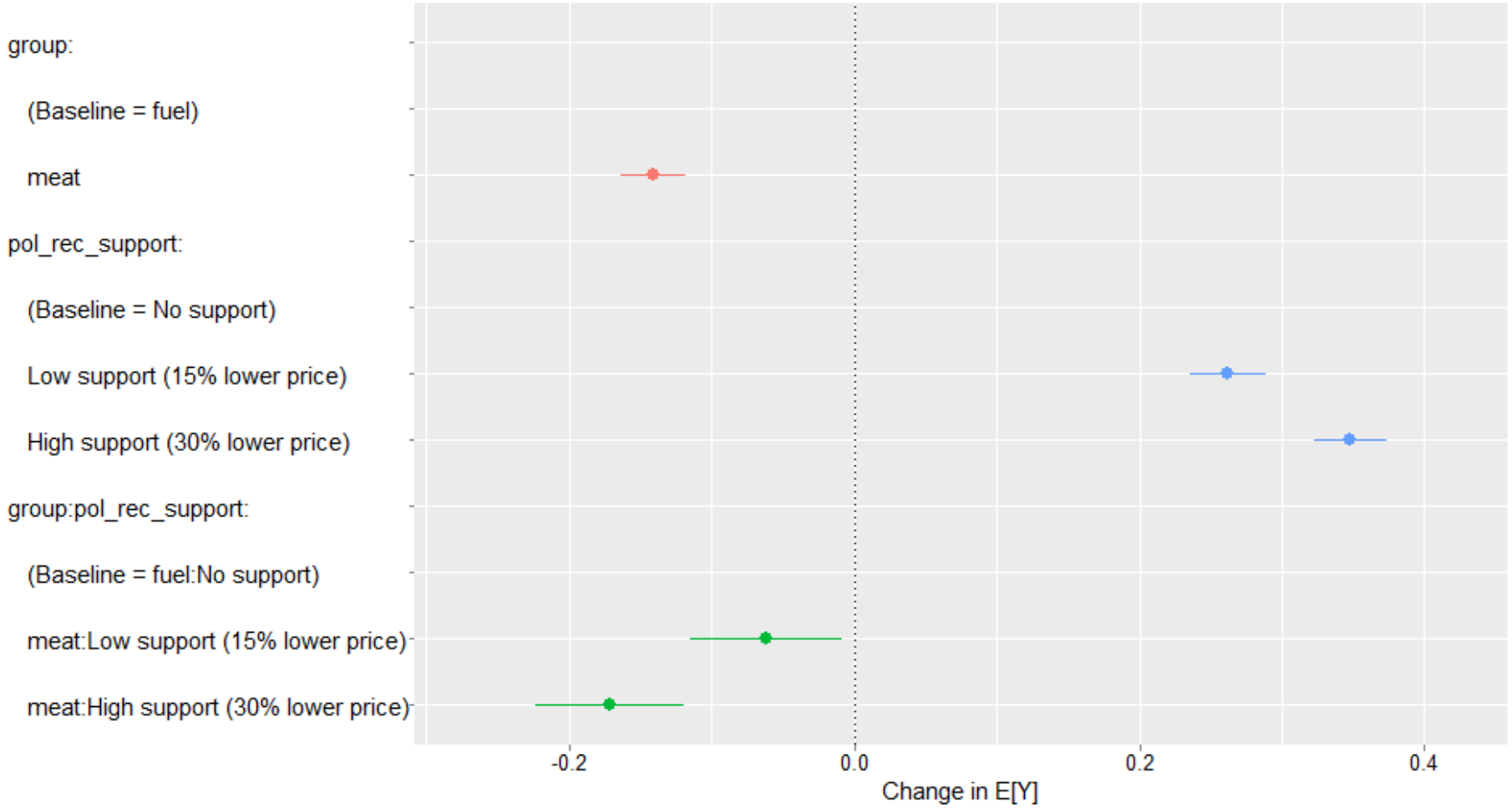

Figure SI-5: Interaction effects between Policy Goal and Support Attribute for Choice Outcome in German Sample

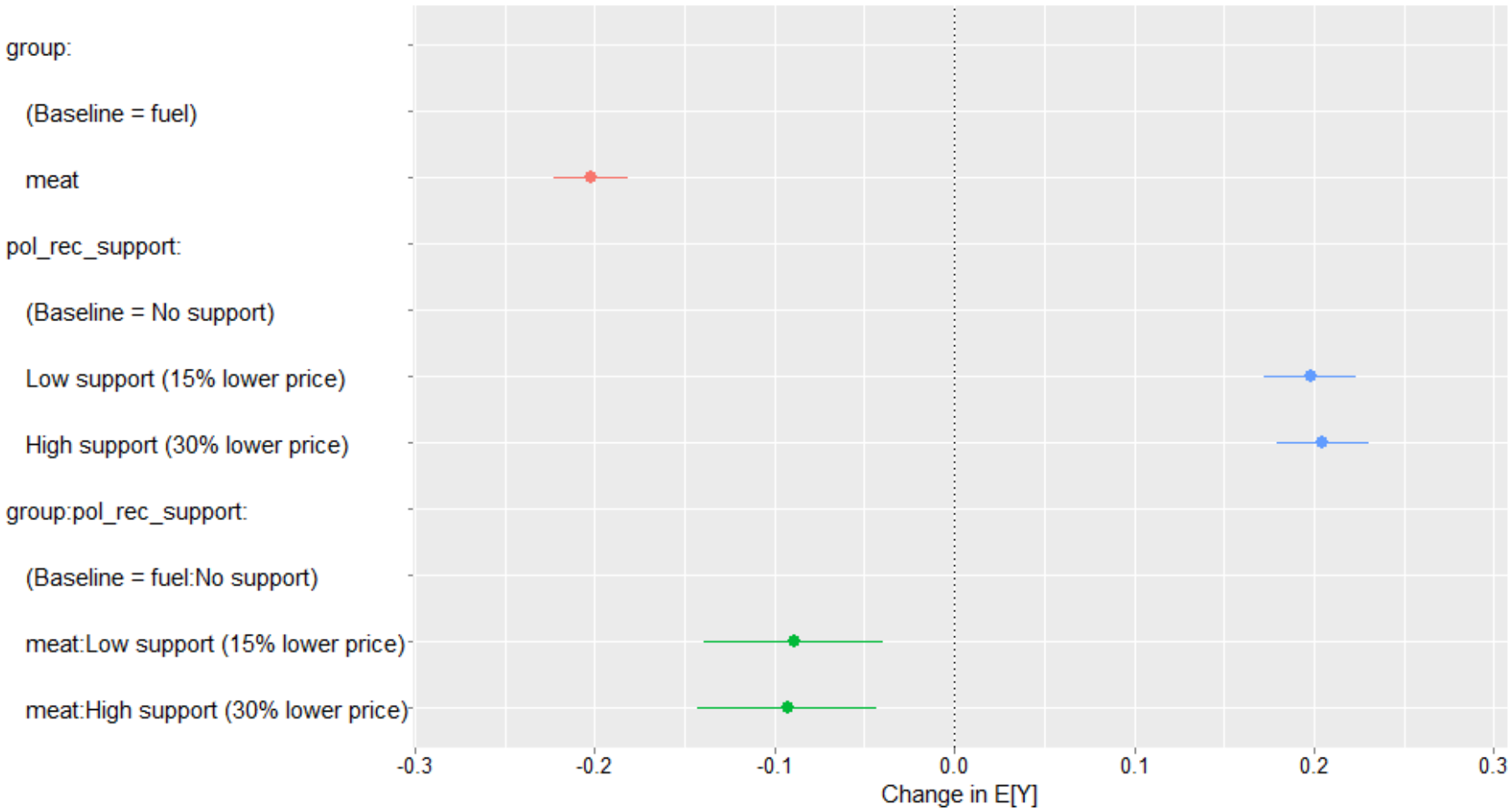

Figure SI-6: Interaction effects between Policy Goal and Support Attribute for Choice Outcome in USA Sample

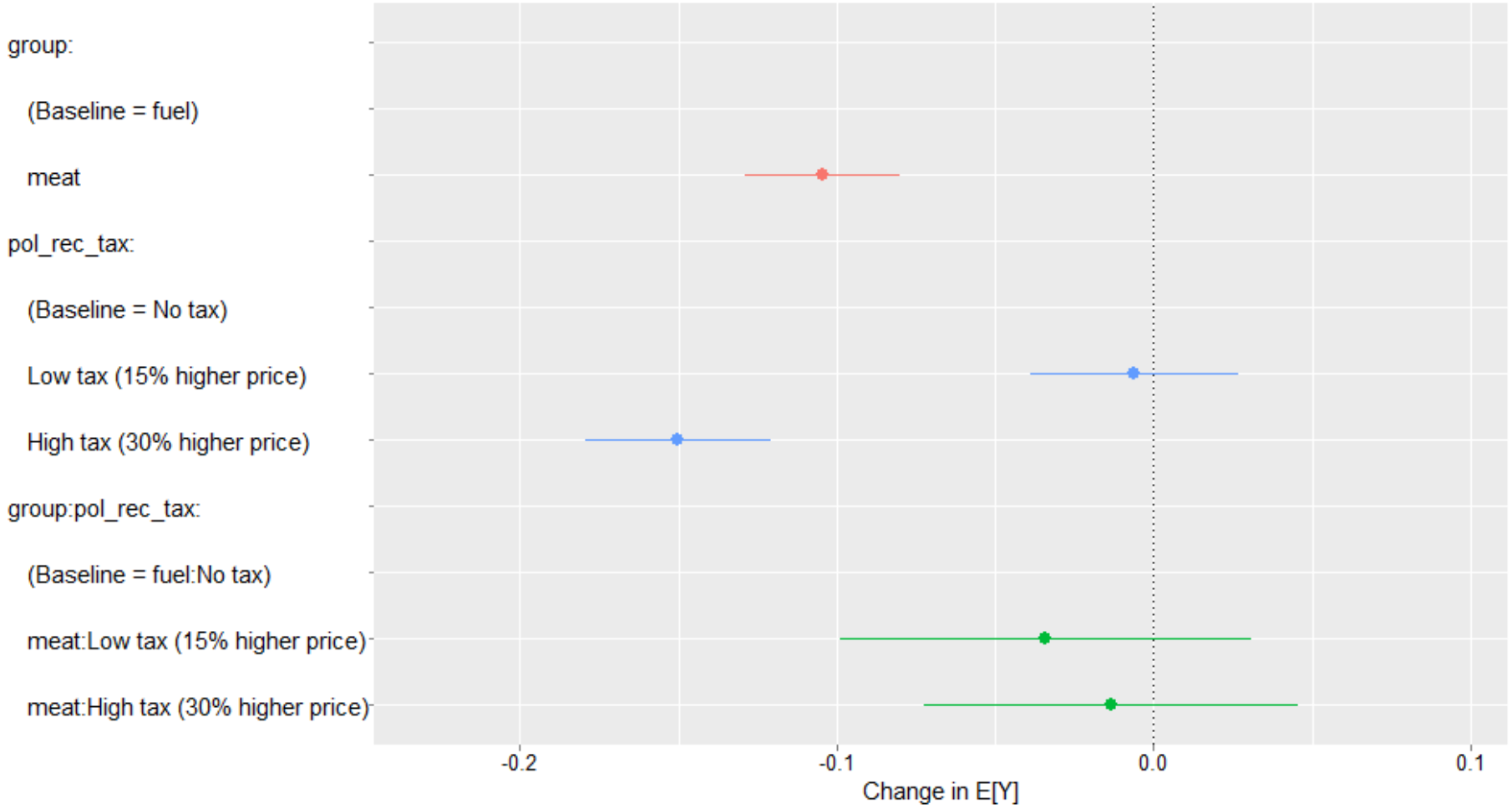

Figure SI-7: Interaction effects between Policy Goal and Tax Attribute for Choice Outcome in German Sample

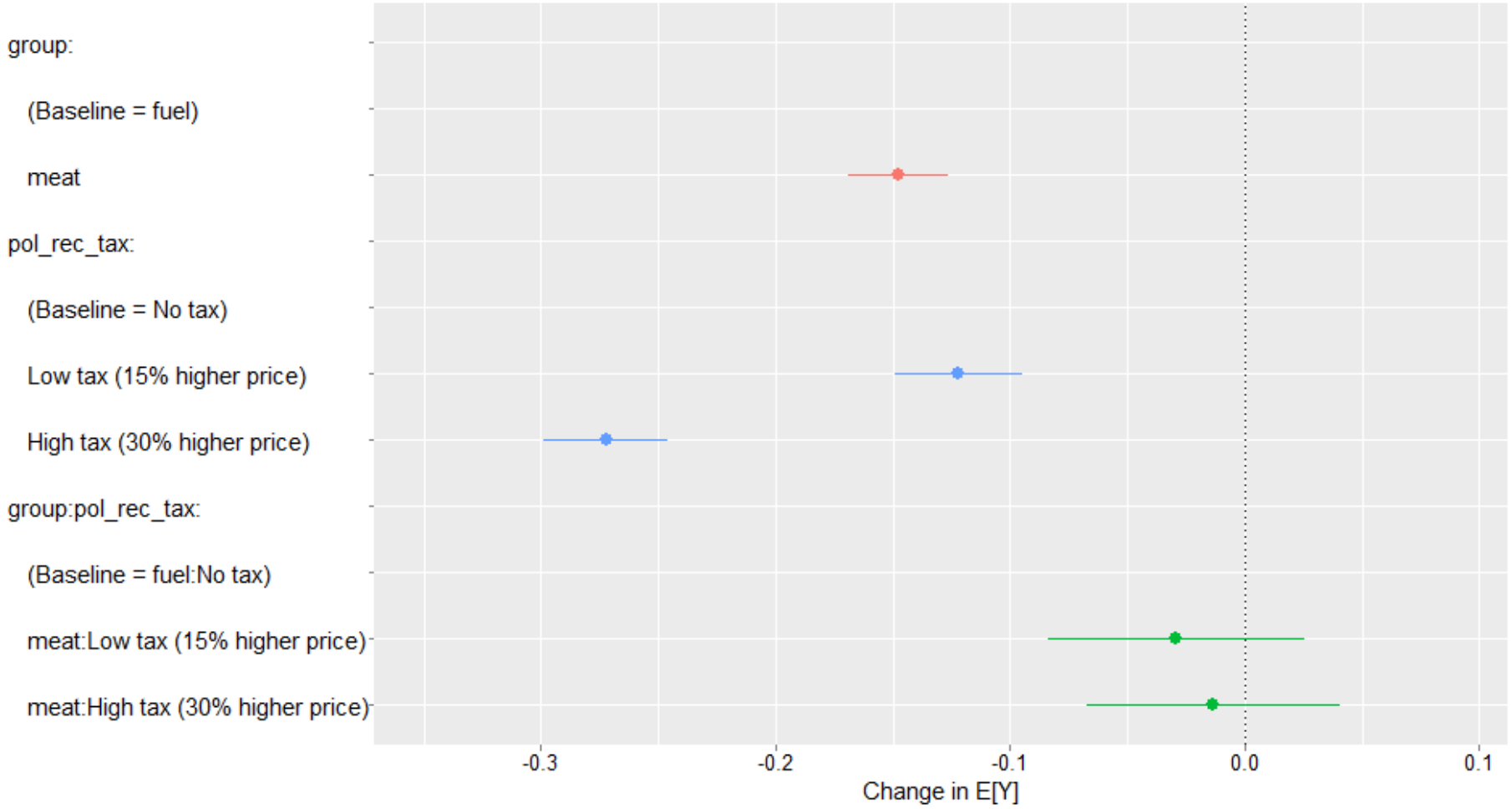

Figure SI-8: Interaction effects between Policy Goal and Tax Attribute for Choice Outcome in USA Sample

Predicted choice probabilities

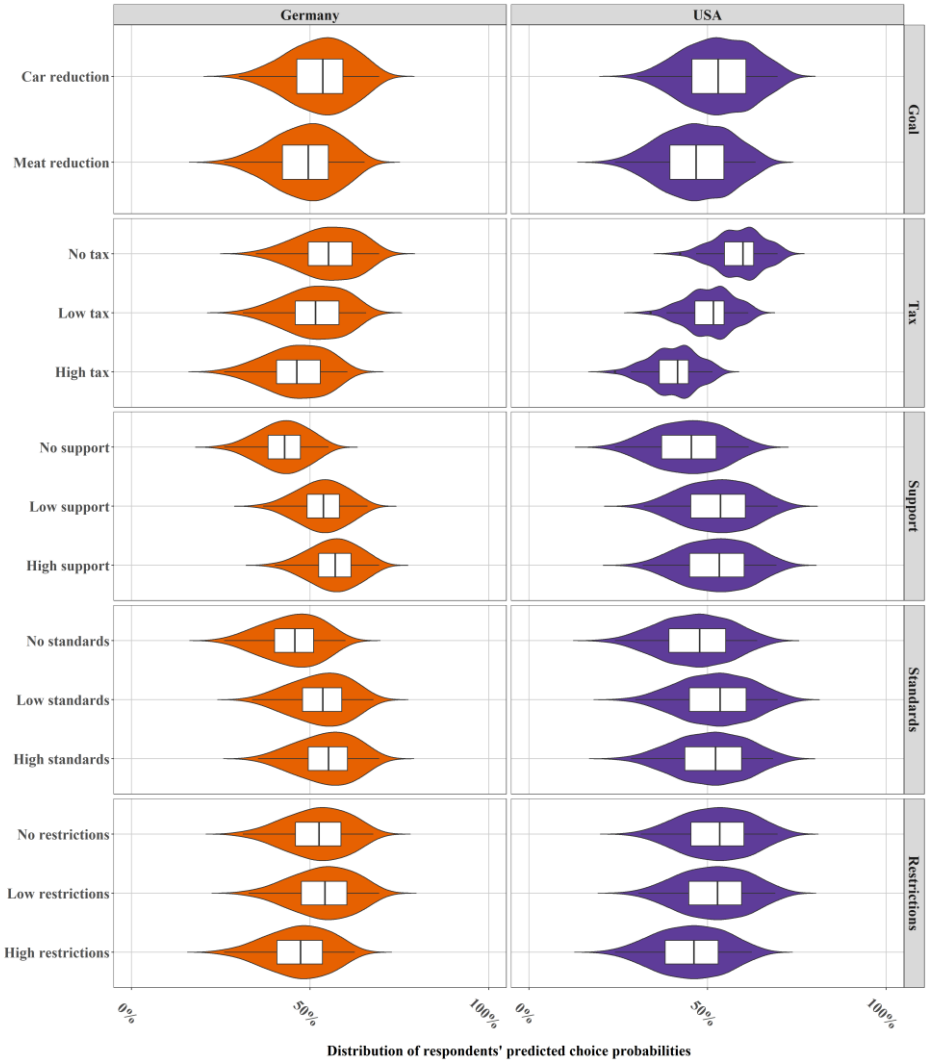

Figure SI-9 clearly shows that the choice probabilities of policy packages depend on the exact combination of instruments included in the package. In both countries, citizens have the lowest predicted choice probability if a package aims at reducing meat consumption and includes a high tax increase on meat, no increase in support for low-emission food, no increase in producer standards, and large increases in restrictions on meat products in public cafeterias. The highest predicted choice probability is associated with a package that aims at reducing the use of cars that run on fossil fuels, includes no increase in tax, strong support for low-emission means of transport, high producer standards, and weak limits on the use of fossil-fueled cars in central areas.

The examination of the distribution of predicted choice probabilities is also useful for understanding to what degree support for particular policy instruments depends on their combination with other instruments. For example, in the United States the range of predicted choice probabilities is narrower for the tax instrument than for other instruments like producer standards and consumption restrictions. This implies that US citizens have somewhat firmer and clearer preferences with regard to taxes than with regard to these other instruments. In essence, Figure SI-9 shows that the potential for substantially shifting support through packaging is greater for those instruments with larger ranges in the predicted choice probabilities.

Figure SI-9: Distribution of predicted choice probabilities. Results show the predicted choice probabilities for policy packages that include a particular policy instrument depending on which other policies are also present in the package. The predicted choice probabilities are estimated based on the average marginal component effects presented in Figure 4a. The box-plots within the violin-plots present the median predicted choice probabilities for a policy package that includes a specific policy instrument.

Carryover assumption test

An assumption of conjoint analyses is that the results do not display over-time carryover effects, thereby enabling us to pool results across multiple rounds. The carryover assumption test indicates that results are stable over the four different rounds and that the assumption of no carryover effects holds.

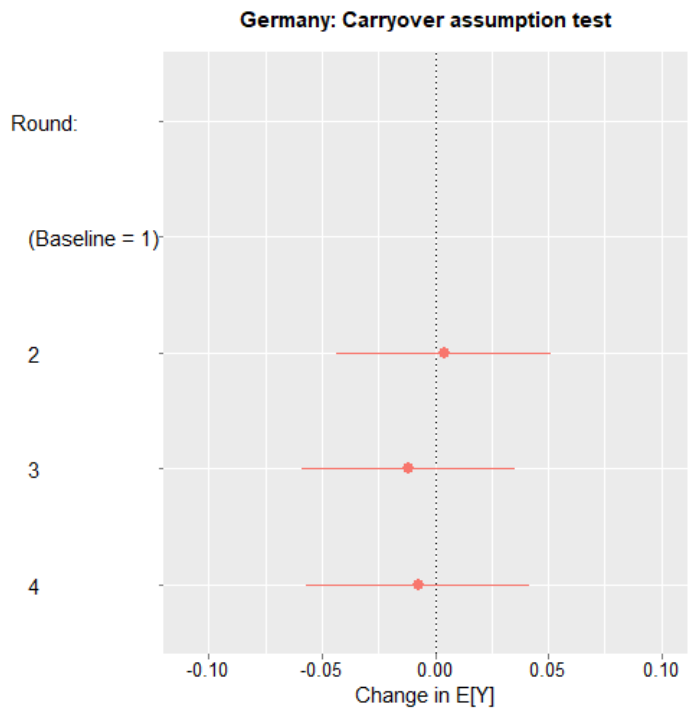

Figure SI-10a: Carryover assumption test for high complexity tasks in German Sample

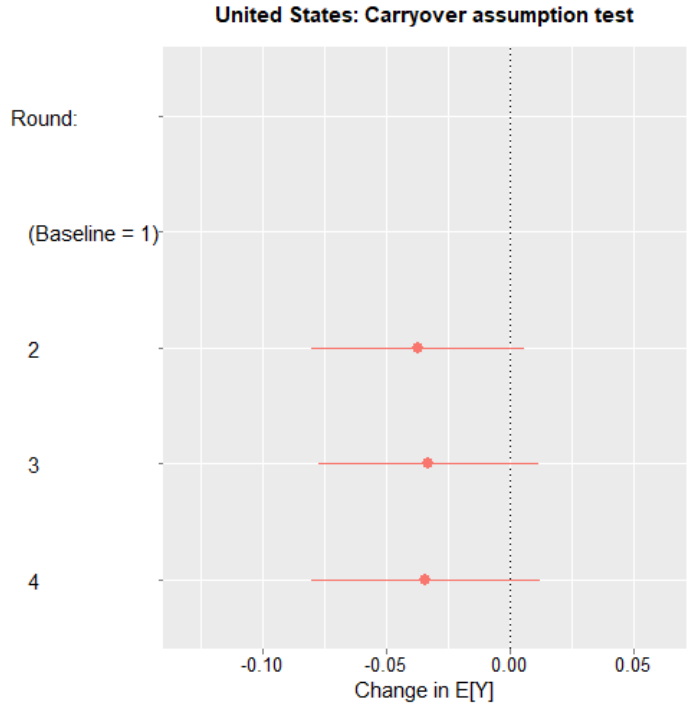

Figure SI-10b: Carryover assumption test for high complexity tasks in US Sample

Design and wording of conjoint experiment

Note: *As outlined in the method section of the manuscript, in the first stage of the experiment, each participant (N = 4,228 in Germany; N = 4,876 in US) conducted one low conjoint task per policy instrument before moving on to the high complexity task. In the second stage (see Figure 2), a subsample of randomly selected respondents (N = 1,409 in Germany; N = 1,624 in US) was assigned to a high complexity conjoint task with five conjoint attributes, including a policy goal and packaging all of the four policy measures. Again, the design of the pairs of policy proposals varied randomly. Respondents received four pairs of such randomly policy-packages and were asked to decide which proposal they prefer within each pair in a forced-choice question and in addition rate their support for each proposal on a seven-point Likert scale.*

*[*Introductory page to first stage of conjoint experiment*]*

Let us look at a few policy proposals that are currently being discussed in the US to reduce greenhouse gas emissions. Please read the following instructions carefully.

We will first describe the different climate policies. We will then invite you to a small **thought experiment** on the following pages. Two policy proposals will then be presented side-by-side. The policies are intended to reduce meat consumption or the use of cars that run on fossil fuels. Manufacturing and driving cars that run on fossil fuels, such as gasoline and diesel, emits a large amount of greenhouse gases, such as CO2. Raising cattle, pigs and other livestock also emits a large amount of greenhouse gases, such as methane. Please compare the policies carefully and tell us which one you prefer more. Even if you don't really support either of the two proposals, please choose the one you oppose less. After this task, we will ask you to tell us how much you support or oppose each of the two policies. Let us start the thought experiment. We are very interested in your opinions!

[Each of the following instruments was introduced on a separate page in random order to prevent ordering effects. Each instrument description was followed by a low complexity conjoint task including a randomly chosen value for the policy goal and respective policy instrument as outlined in Figure 2]

<u>Governmental financial support for low-emission products</u>

Consuming more environmentally friendly vegetarian alternatives to meat, such as tofu or vegetables, would reduce emissions of greenhouse gases and help to protect the climate. **Governmental financial support for low-emission food alternatives to meat** would reduce the prices of these environmentally friendly food products. This would motivate consumers to buy more food linked to lower CO2 emissions.

Using more environmentally friendly alternatives to cars that run on fossil fuels, such as public transport or bikes, would reduce emissions of greenhouse gases and help to protect the climate. **Governmental financial support for low-emission transport alternatives to cars that run on fossil fuels** would reduce the prices of these environmentally friendly mobility options. This would motivate consumers to buy and use more means of transport linked to lower CO2 emissions.

Different levels of governmental support, leading to a 30% or a 15% price reduction for environmentally friendly products, are being discussed. Some politicians also argue that new governmental support is not necessary, and that consumers should be responsible for deciding what they consume.

Emission standards and environmental regulations for producers

Decreasing the emissions of greenhouse gases during the production of meat would help to protect the climate. **Emission standards and environmental regulations for meat producers** would require them to reduce environmental pollution, such as less emissions and pesticides. Enforcing standards for the production of meat would increase prices and motivate consumers to buy less meat.

Decreasing the emissions of greenhouse gases during the production and usage of cars would help to protect the climate. **Emission standards and environmental regulations for car producers** would require them to reduce environmental pollution, such as less emissions and exhaust. Enforcing standards for car emissions would increase prices and motivate consumers to use less cars that run on fossil fuels.

Different emission standards, such as requiring 30% or a 15% less emissions, are being discussed. Some politicians also argue that higher emission standards are not necessary, and that producers should be responsible for deciding how much they emit.

Taxes

Consuming less meat would reduce emissions of greenhouse gases and help to protect the climate. Different types of taxes are being discussed to motivate consumers to eat less food products which contribute to global warming: **An additional tax on meat**, such as a new sales tax, would increase the price of meat and motivate consumers to consume less of it.

Using less fossil fuels would reduce emissions of greenhouse gases and help to protect the climate. Different types of taxes are being discussed to motivate consumers to use less means of transport which contribute to global warming: **Additional taxes on fossil fuels** would increase the prices of fossil fuels and thus motivate consumers to use less of it.

Different taxation levels, such as a 30% tax or a 15% tax, are being discussed. Some politicians also argue that new taxes are not necessary, and that citizens should be responsible for deciding how much they want to consume.

Restrictions

Consuming less meat would reduce emissions of greenhouse gases and help to protect the climate. **Meat-free days in public cafeterias,** such as schools, universities, hospitals or ministries, would limit the number of days that meat is offered. This would motivate consumers to eat less meat.

Using less cars that run on fossil fuels would reduce emissions of greenhouse gases and help to protect the climate. **Banning cars that run on fossil fuels from city centers** would limit the number of days that consumers can use these cars. This would motivate consumers to use less cars that run on fossil fuels.

Different restriction levels are being discussed, such as limiting usage to one or three days per week. Some politicians also argue that limits are not necessary, and that citizens should be responsible for deciding how much they want to use each week.

[Introductory page to second stage of conjoint experiment. After reading the introduction respondents received four pairs of randomly designed policy-packages including a combination of the policy goals and instruments introduced in the first stage of the experiment.]

We will now continue the thought-experiment:
We will ask you to compare different policy packages, which are collections of individual policy options. These policy packages are intended to reduce greenhouse gas emissions. You will see two different policy packages side-by-side. Each package consists of different policies. Please compare the policies packages carefully and tell us which one you prefer more. Even if you do not really support either of the two policy packages, please choose the one that you oppose less. After this choice, we will ask you to tell us how much you support or oppose each of the two policy packages.

Please read the following policy packages carefully. Some of the policy packages will look very similar to each other. This part of the thought-experiment will repeat four times. We are very interested in your opinions!

Explorative expert interviews

Table SI-19: Overview expert interviews

No.	Interviewee's identity	Date	Via
1	US and international sustainable food policy expert (thinktank)	March 2017	Skype
2	Sustainable food policy expert (professor) in Germany	April 2017	Skype
3	Sustainable food policy expert (thinktank) in Germany	April 2017	Skype
4	Sustainable food policy expert (thinktank) in Germany	April 2017	Skype
5	Sustainable food policy expert (thinktank) in Germany	April 2017	Skype
6	US and international sustainable food policy expert (University professor)	July 2017	Skype

A note on information satisficing and masking in conjoint experiments

Recent methodological advances in survey-embedded choice experiments (Bansak et al., 2019; Jenke et al., 2021) have used similar empirical approaches to the one described in this study and randomly varied the number of conjoint attributes. In contrast to the present study, Bansak et al. (2018, 2019) focused on the potential risk of respondents engaging in information satisficing in complex survey-embedded experimental settings. Bansak et al. (2019)'s study aimed at disentangling the effects of information satisficing and masking. Masking in conjoint experiments implies that respondents' perceptions of a choice attribute of interest (e.g., political candidates' party affiliation on candidate choice) are linked with their perceptions about other attributes that are not part of the conjoint task (e.g., issue position of candidates). The estimation of average marginal component effects may depend on such other, non-included attributes, and due to masking the estimated effects do not represent the isolated effect of the attribute of interest (Bansak et al., 2019; Dafoe et al., 2018; Hainmueller et al., 2014)

As Bansak et al. (2019) outlined, researchers are often interested in including a greater number of attributes into the conjoint design to avoid masking, but thereby risk higher information satisficing. To empirically distinguish masking from information satisficing, Bansak et al. (2019) used the examples of candidate and hotel room choice and first identified so-called filler attributes that are uncorrelated with the core attributes of interest. Then Bansak et al. (2019) included those filler attributes into the conjoint design and found that the estimated average marginal component effects are invariant in relation to a reasonable number of additional attributes. However, it is questionable if these findings are also applicable to the present study.

First, there is no convincing reason to believe that masking occurs in respect to the policy proposals studied here. In essence, while it is plausible that respondents link certain attributes of interest in the case of candidate choice (e.g., party affiliation) to other non-presented attributes (e.g., issue positions), in respect to policy proposals it seems implausible that individuals make such inferences themselves. For example, respondents' perception of a policy proposal including a high tax should be independent from respondents' perceptions of other instruments without any further information about those measures. Only once respondents face a choice between multiple instruments, the perceptions of those other instruments should become relevant in the decision-making process.

Second, Bansak et al. (2019) did not consider the compound effects of increasing both the information complexity (i.e., increasing the risks of information satisficing) and choice bracketing (i.e., changes in the relative reference point for decision-makers). As noted below, it is necessary to account for the fact that, in reality, adding new policy instruments to a policy proposal simultaneously increases the level of information complexity and changes the relative reference point for decision-makers. The following section, I thus outline how to potentially disentangle these two processes (information complexity and choice bracketing) and design future experimental studies going beyond the study described in the main main manuscript.

Disentangling information-complexity and choice bracketing

In addition to the information-complexity process (Bansak et al., 2018, 2019; Krosnick, 1999) outlined in the main manuscript also choice bracketing (Milkman et al., 2012; Read et al., 1999) could affect public support differences between more and less complex policy proposals.

In line with prospect theory (Kahneman & Tversky, 1979) and framing theory (Chong & Druckman, 2007; Druckman, 2004), choice bracketing implies that a shift in the relative reference point at the time of decision-making influences citizens' policy evaluations by altering the decision-making context (Milkman et al., 2012; Read et al., 1999). Adding new instruments to a policy package alters this relative reference point by changing the salience and accessibility of underlying considerations at the time of decision-making (Chong & Druckman, 2007). This can alter preferences across joint and separate evaluations of alternatives (Bazerman et al., 1999; Hsee, 1998; Milkman et al., 2012; Ritov & Baron, 2011). It is also in line with the model of non-separable policy preferences (Lacy, 2001b, 2001a), which suggests that individuals often form their preferences about specific issues in connection with preferences and information about other issues.

The following schematic example illustrates the choice bracketing logic and is used to derive testable hypotheses for future experimental research. Below, I also describe a potential experimental follow-up design to empirically distinguish the choice bracketing and information complexity processes.
For the purpose of this illustration, please imagine two different sets of respondents: a) Respondents generally in favor of more ambitious and effective climate mitigation policies, even if this would involve costs and restrictions for their personal lives. b) Respondents generally against more ambitious and effective climate mitigation policies, especially because these policies are assumed to involve higher costs and restrictions for their personal lives.

Please then imagine that these respondents have the choice between two types of policies instruments to mitigate climate change: a) Taxes on climate pollutant goods and b) Producer regulations to reduce emissions. I now derive expectations how choice bracketing could affect respondents' policy choices when assessing these two instruments either in isolation or as part of a package.

First, assessing instruments in isolation, one can derive the expectation that on average respondents in favor of more ambitious and effective climate mitigation policies prefer high taxes on climate pollutant goods to low taxes. Similarly, on average these respondents would also prefer high producer regulation to low producer regulation. This rests on the premise that respondents perceive high carbon taxes and high producer emission regulations as more effective instruments to mitigate climate change.

In contrast, we would expect respondents that are generally against climate mitigation to prefer low to high taxes and low to high producer regulation. This rests on the premise that these respondents prefer instruments that induce lower costs and are less intrusive.

Second, assessing instruments in combination, however, the expectation would change and become dependent on respondents' relative reference point of decision-making. One can expect that respondents

in favor of more ambitious climate policies would prefer a package with high taxes and high producer regulation to a package with low taxes and low producer regulation. Again, this rests on the assumption that these respondents perceive a package with high taxes and high regulation as more effective to mitigate climate change. Similarly, respondents against more ambitious climate policies would prefer a package with low taxes and low producer regulation to a package with high taxes and high producer regulation. Here, the premise is that these respondents prefer less costly and less intrusive policy packages.

Yet, the situation becomes more ambiguous if respondents have the choice between a package with high taxes but low producer regulation or a package with low taxes but high producer regulation. In such a situation, the relative reference point of the decision-maker changes because respondents do not engage anymore in a simple within instrument comparison (i.e., between low/high taxes or between low/high producer regulation) but trade-off high taxes versus low producer regulation and high producer regulation versus low taxes. In such realistic cross-instrument-trade-off situations, people presumably make their decisions based on the policy instrument, which is relatively more important to them.

Based on prospect theory and loss aversion (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992), perceived policy costs can be expected to be the more decisive factor for the subset of respondents generally against climate change mitigation. For example, these respondents might perceive high taxes as the more costly climate policy compared to high producer regulation. Thus, when having to choose between the two, respondents that are generally against ambitious climate policies might thus prefer the package including high taxes and low producer regulation to a package including high producer regulation and low taxes.

Arguably, for respondents generally in favor of more ambitious climate mitigation besides perceived policy costs also the perceived effectiveness of reducing climate pollutants is a decisive factor for making decisions in difficult trade-off situations. Thus, we expect the following when respondents in favor of climate change mitigation face such trade-off situations: On average, these respondents prefer the package including high producer regulation to the one including the high tax because they perceive the regulation as more effective to mitigate climate change *and* also as personally less costly.

From this would follow that, for respondents that are generally against climate change mitigation, on average the effect size of high taxes on public support for policy proposals would not differ much if assessed in isolation or as part of a package. The high tax would be the decisive factor independent of the level of policy complexity. Yet, the negative support effect of the high producer regulation would be smaller if assessed in combination than in isolation. In the package evaluation, the high regulation is not anymore the decisive factor but due to the comparison to a package including a high tax, the tax becomes the decisive factor. For the group of respondents that generally prefer more ambitious climate change mitigation, we would expect the opposite result. In essence, when comparing the two packages to each other for this group the decisive factor would be the high producer regulation. For the regulation instrument, we would thus expect no effect size differences between assessments in isolation versus combination but we expect the positive support effect of the tax instrument to be smaller if assessed in combination than in isolation. Please see SI-Table 20 for an overview of the expectations.

This is, the relative reference point of decision-making shifts when policy proposals are assessed as packages rather than in isolation – this is the so-called choice bracketing mechanism. In addition, to simple information satisficing and respective heuristic-based choices (see main paper), this choice bracketing mechanism might thus be an additional process through which increased policy design complexity could affect public support.

SI-Table 20: Expected effect differences in support effects for tax/regulation instruments evaluated in isolation/combination

	Evaluation in isolation	**Evaluation in combination**	**Expected effect difference between evaluation in isolation and combination**
Respondents generally in favor of ambitious climate change mitigation	Prefer high to low tax Prefer high to low producer regulation	Prefer package of high tax and high producer regulation to all other combinations	No expected difference between positive support effects of high producer regulation in combined and isolated evaluation.
		Prefer package of low tax and high producer regulation to package of high tax and low producer regulation	Expected smaller positive support effects of high tax in combined evaluation compared to isolated evaluation
Respondents generally against ambitious climate change mitigation	Prefer low to high tax Prefer low to high producer regulation	Prefer package of low tax and low producer regulation to all other combinations	No expected difference between negative support effects of high tax in combined and isolated evaluation.
		Prefer package of low tax and high producer regulation to package of high tax and low producer regulation	Expected smaller negative support effects of high producer regulation in combined evaluation compared to isolated evaluation

However, empirically, the choice bracketing and information complexity processes are difficult to disentangle. As described in the main paper, adding new instruments to a policy package always changes the relative reference point for the decision-maker and at the same time increases information complexity. Both these processes can thus lead respondents to change their focus of attention at the time of decision-making. This makes it difficult to empirically distinguish information complexity and choice

bracketing from each other. Recent eye-tracking and conjoint experiments (Jenke et al., 2021) might offer a basis for empirically disentangling the two processes. For example, a future multi-stage experiment could be designed as follows:

In the first step (Step 1), researchers could use similar conjoint experiments as presented in the low-complexity conjoint tasks in main manuscript to study the perceived policy-induced costs, perceived effectiveness to mitigate climate change, and the rating of different climate policy instruments assessed in isolation. In addition, eye-tracking methods could be used to objectively measure if respondents truly focus more attention on instruments that they assess as more costly and effective.

In a second conjoint experimental step (Step 2), respondents would then rate different policy proposals composed of a random number of these previously assessed individual policy instruments. Randomly varying the number, type and stringency of policy instruments included in a package allows increasing the information complexity independent of the type and stringency of instruments added. Again using eye-tracking, randomly varying the number, stringency and type of instruments allows assessing how different degrees of information complexity affect respondents' eye movements. This would thus enable to test if increased information complexity leads to heuristic-based decision-making (see main manuscript for further details) and focuses citizens' attention on those instruments previously assessed as more costly and effective (see Step 1). Moreover, heuristic-based decision-making would imply that respondents do not process the full information they receive but focus their attention on a smaller fraction of total conjoint cells displayed (Jenke et al., 2021). Eye-tracking methods allows to test this.

Third, to distinguish the information complexity and choice bracketing mechanisms from each other, I propose to design a third conjoint experimental step (Step 3) based on the prior assessments from the first step in addition to information gathered about respondents' general preferences regarding climate change mitigation. In the third step, respondents that are generally against and in favor of ambitious climate change mitigation evaluate packages combining low/high tax and low/high producer regulations. This setting allows the researchers to test the choice bracketing hypotheses outlined above and distinguish it from the information complexity effects estimated in the main manuscript and Step 2. In contrast to the experiment described in the main manuscript, here we leverage the expected differences in the relative reference points between the two sets of respondents and objectively validate these assumptions using eye-tracking.

In sum, because the two different sets of respondents both receive the same conjoint tasks, namely assessing the tax and regulation instruments in isolation (Step 1) and in combination (Step 3), the substantive policy content (i.e., instrument type and stringency) and level of information complexity for the two sets of respondents do not vary. Thus, the expected differences in the support effects (AMCEs) for polices assessed in isolation (see Step 1) and combination (Step 3) between the two groups of respondents should result from differences in the relative reference points for the two sets of respondents. Using eye-tracking one could verify this expectation by showing that one set of respondents focuses more on the tax instrument when evaluating the two policies combined while the other set of respondents focuses more on the producer regulation instrument. Moreover, eye-tracking also allows to empirically showing that respondents do not simply engage in information satisficing and heuristic-based decision-

making as predicted by the information complexity process (see Step 2 and main manuscript). If respondents would engage in heuristic-based decision-making they should view a smaller fraction of conjoint cells in the assessment of the two policies in combination (Step 3) than in isolation (Step 1). However, I expect this not to take place because overall information complexity in a package composed of two policies is relatively low. Thus, changes in effect differences between the evaluation of the two policies in isolation and combination should result from choice bracketing. Overall, I hope that this further discussion on choice bracketing is useful for the development of future experiments that seek to disentangle choice bracketing and information complexity effects.

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