

## Hypotheses wave 1 short answers

### H1

All policy attributes (policy costs (associated tax increase), time of policy implementation, resulting energy independence and estimated CO2 reduction) significantly predict policy decisions.

After model comparison, a model with random slopes instead of random intercept was chosen since the coefficients remain almost identical and Conditional R<sup>2</sup> significantly improves (R<sup>2</sup> = .788 versus R<sup>2</sup> = .484). Furthermore, random slopes are needed to analyze H1c.

The model chose

The model with random slopes supports Hypothesis 1 (as do all alternative models including the pre-registered one, estimates only minimally change and the order of importance remains the same).

All four attributes: associated tax increase, time of policy implementation, resulting energy independence and estimated CO2 reduction significantly predicted policy decisions.

Controlling for demographics does not change these results. An age effect can be observed with differences between the highest and youngest age groups, with the higher age group being less likely to accept policy decisions than the younger ones. The more people identified with “right” versus “left” politics the less likely they were to accept policies. And the more they trusted in the government the more likely they were to accept policies

<i>Predictors</i>	<b>decision</b>		
	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	4.26	3.64 – 4.99	<b>&lt;0.001</b>
co2-30% CO2	1.71	1.56 – 1.87	<b>&lt;0.001</b>
tax (1% vs 6%): +6%	0.04	0.04 – 0.05	<b>&lt;0.001</b>
energyindependence (10% vs 20%): +20%	1.35	1.24 – 1.47	<b>&lt;0.001</b>
implementation (in 1 vs 7 years): in 7 Jahren	0.24	0.20 – 0.29	<b>&lt;0.001</b>

#### Random Effects

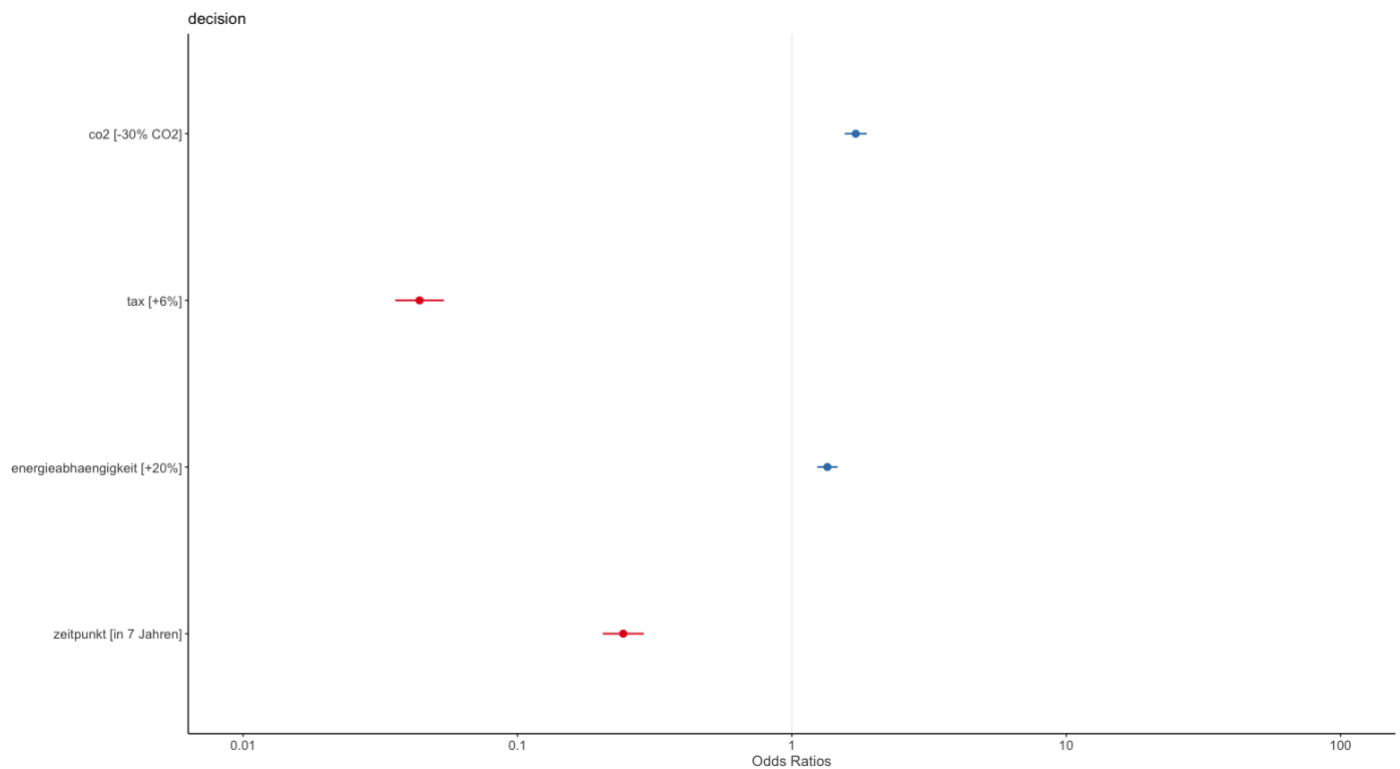
$\sigma^2$	3.29
$\tau_{00 \text{ id}}$	5.66
$\tau_{11 \text{ id.co2-30\% CO2}}$	0.57
$\tau_{11 \text{ id.tax+6\%}}$	9.66
$\tau_{11 \text{ id.energieabhaengigkeit+20\%}}$	0.21
$\tau_{11 \text{ id.zeitpunkt in 7 Jahren}}$	7.79
$\rho_{01}$	-0.03
	-0.30
	-0.08
	-0.33
ICC	0.74
N id	1628
Observations	26048
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.195 / 0.788

Marginal R<sup>2</sup> / Conditional R<sup>2</sup> 0.195 / 0.788

## H1a

The policy attributes costs and CO2 reduction potential will receive most relative importance in participants' policy acceptance decisions

As can be taken from H1: Tax has the highest OR / coefficient followed by time of policy implementation and only then CO2 reduction potential.



## H1b

Climate change concern will significantly predict the number of renewable energy policy choices in that higher climate change concern scores are associated with a higher likelihood to accept renewable energy policies. This effect is assumed to be especially pronounced for policies that will be implemented in the near future (implementation 1 year) compared to policies that will be implemented in the far future (implementation in 7 years).

Results support H1b. Climate change concern was significantly positively associated with support of RE policies. Furthermore, an interaction between climate change concern and time of implementation emerged such that those with high climate change concern were much more likely to accept immediate policies versus distant policies, whereas the opposite pattern could be seen for those with very low cc concern who were more likely to accept distant policies.

Controlling for demographics reveals the same picture.

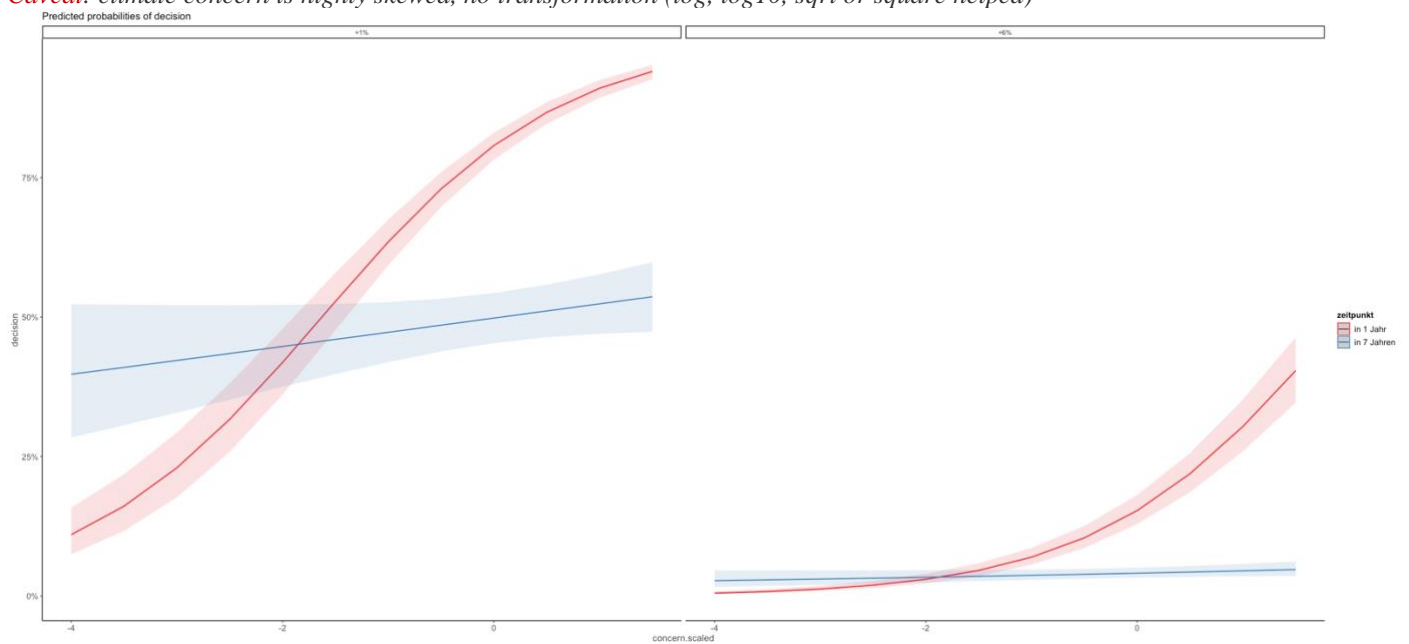
Predictors	decision		
	Odds Ratios	CI	p
(Intercept)	4.19	3.59 – 4.89	<0.001
co2-30% CO2	1.69	1.54 – 1.85	<0.001
tax (1% vs 6%): +6%	0.04	0.04 – 0.05	<0.001
energyindependence (10% vs 20%): +20%	1.39	1.28 – 1.52	<0.001
implementation (in 1 vs 7 years): in 7 Jahren	0.24	0.20 – 0.28	<0.001

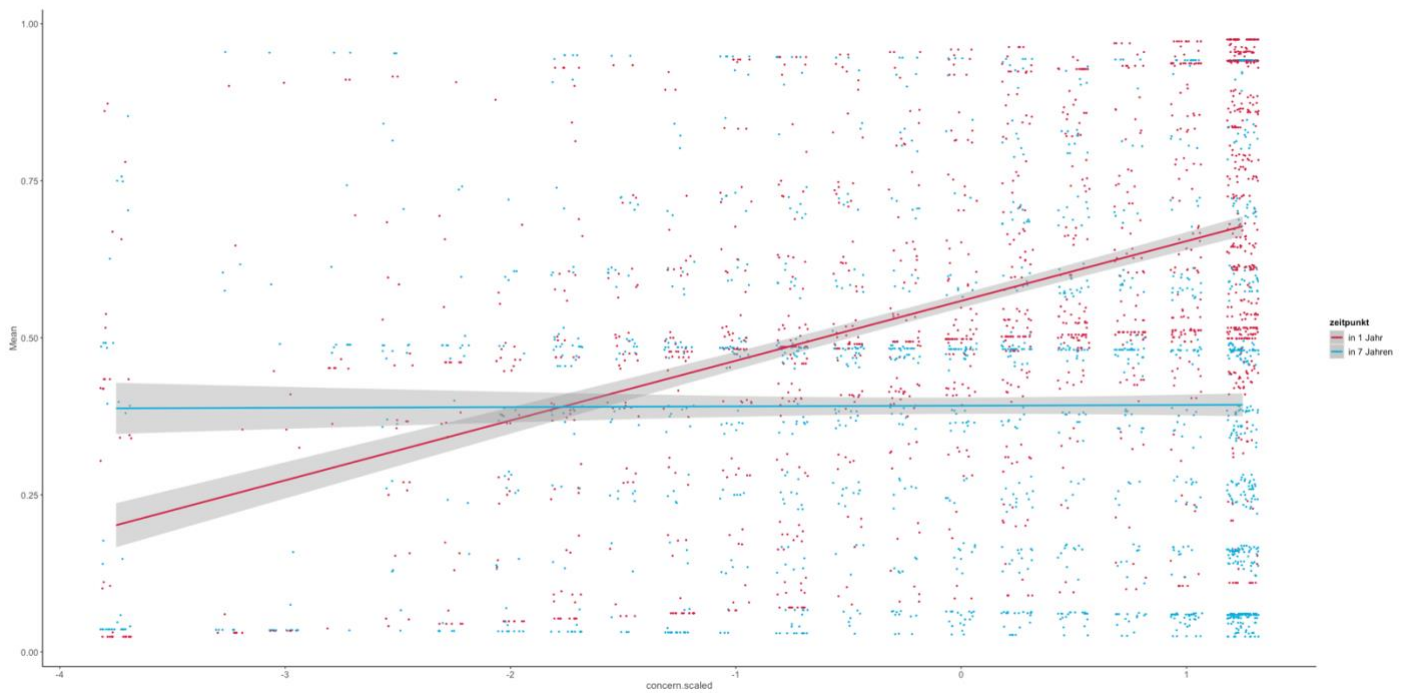
concern.scaled	2.41	2.18 – 2.67	<0.001
zeitpunkt in 7 Jahren:concern.scaled	0.46	0.40 – 0.52	<0.001

#### Random Effects

$\sigma^2$	3.29
$\tau_{00}$ id	5.25
$\tau_{11}$ id.co2-30% CO2	0.59
$\tau_{11}$ id.tax+6%	9.74
$\tau_{11}$ id.energieabhaengigkeit+20%	0.19
$\tau_{11}$ id.zeitpunkt in 7 Jahren	6.83
$\rho_{01}$	-0.26
	-0.33
	-0.25
	-0.23
ICC	0.72
N id	1628
Observations	26048
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.239 / 0.788

*Caveat: climate concern is highly skewed, no transformation (log, log10, sqrt or square helped) –*





### H1c

Climate change concern will significantly predict the importance participants assigned to the policy CO2 emission reduction potential in that higher climate change belief scores are associated with higher relative importance assigned to CO2 emission reduction potential.

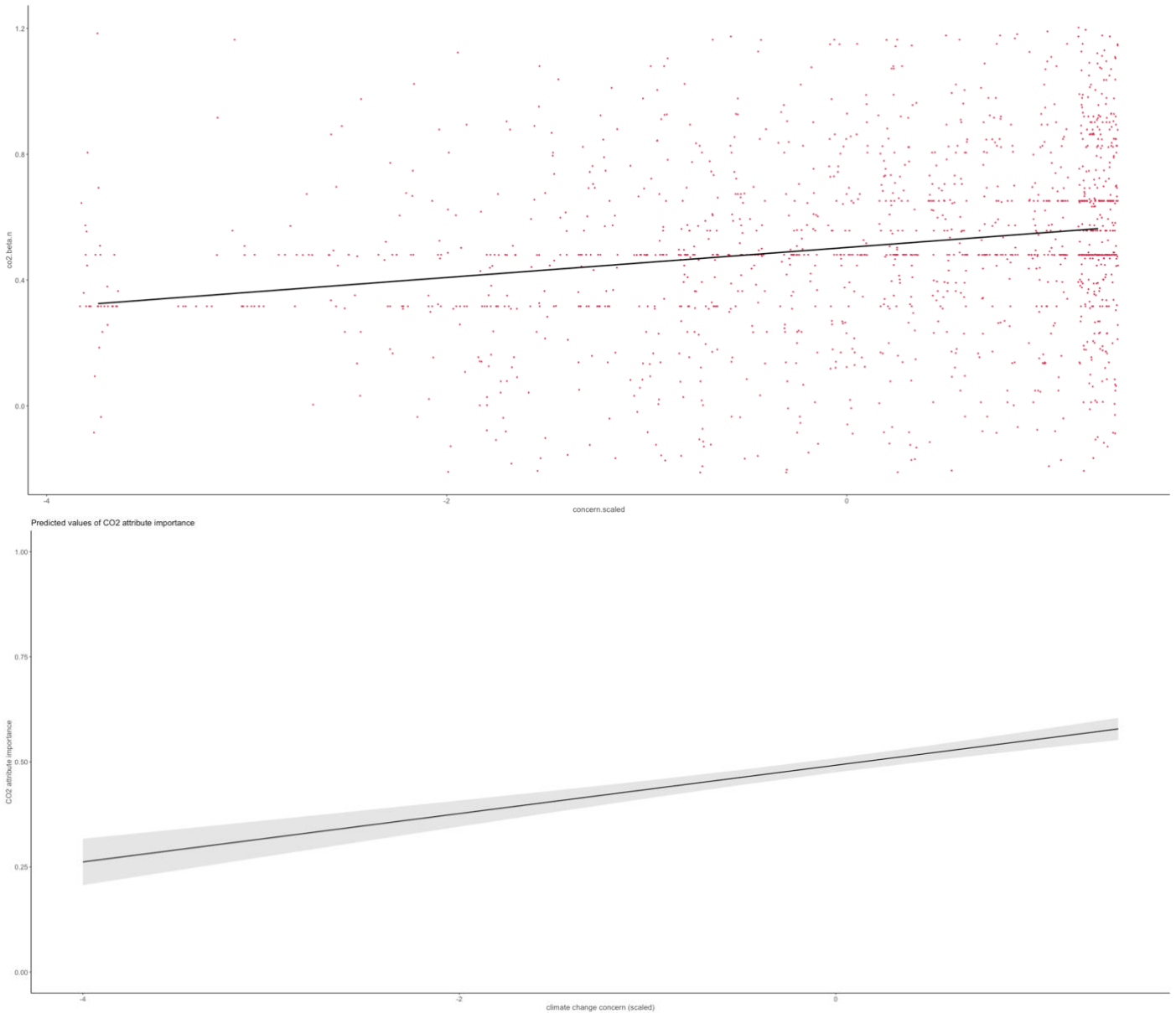
Individual climate change concern predicted the individual importance placed on the Co2 reduction attribute such that higher concern was associated with a higher value for the CO2 coefficient.

With removing outliers (1,5\*interquartile range) this associations stays significant and is slightly smaller (0.044 versus 0.0543)

Political orientation was negatively associated with importance placed on the CO2 attribute, such that those who identified with “right” politics had lower importance values.

CO2 attribute importance			
<i>Predictors</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>
(Intercept)	0.570	0.469 – 0.670	<0.001
climate change concern (scaled)	0.054	0.039 – 0.070	<0.001
gender: male	-0.005	-0.040 – 0.029	0.768
age30-39	-0.015	-0.072 – 0.042	0.610
age40-49	0.004	-0.053 – 0.061	0.885
age50-59	0.036	-0.020 – 0.093	0.202
age60-80	0.013	-0.040 – 0.066	0.634
income: <1'500€ <3'100CHF	-0.049	-0.102 – 0.004	0.070
income: > 4'000€ >5'900 CHF	-0.001	-0.049 – 0.047	0.972
income: 2'500- 4'000€ <4'300- 5'899CHF	-0.033	-0.080 – 0.015	0.175
countrySwitzerland	0.009	-0.025 – 0.044	0.596

education: obligatory school	0.018	-0.038 – 0.075	0.520
education: middle school	0.042	-0.019 – 0.102	0.175
education: degree	0.065	0.006 – 0.124	<b>0.031</b>
politicalorientation_1	-0.021	-0.031 – -0.012	<b>&lt;0.001</b>
trust.gov	0.006	-0.009 – 0.021	0.419
Observations	1628		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.082 / 0.073		



## H2

The complexity of cognitive representations of energy behaviors will be captured with two dimensions, reflecting impact direction (negative vs. positive impact for the climate) and impact strength (low vs. high impact on the climate), with impact direction being the most dominant dimension

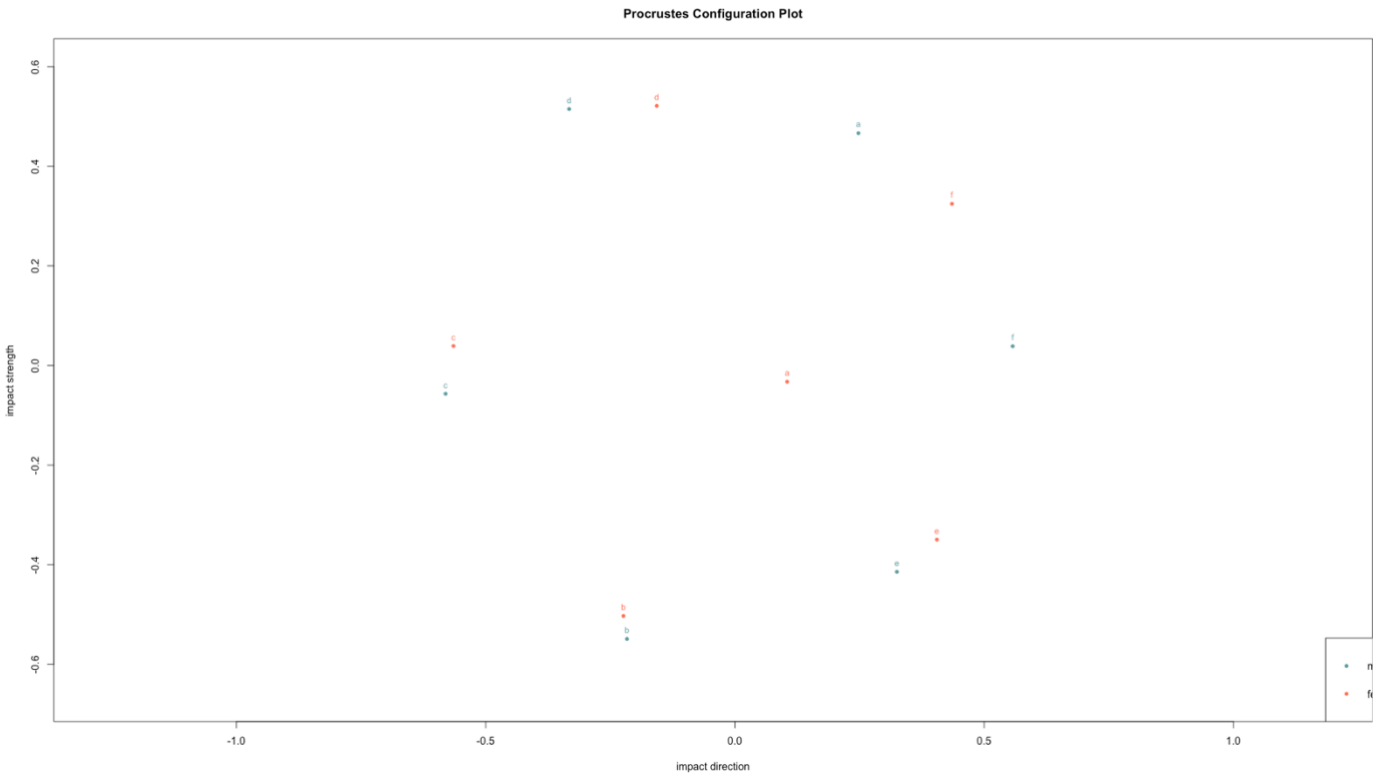
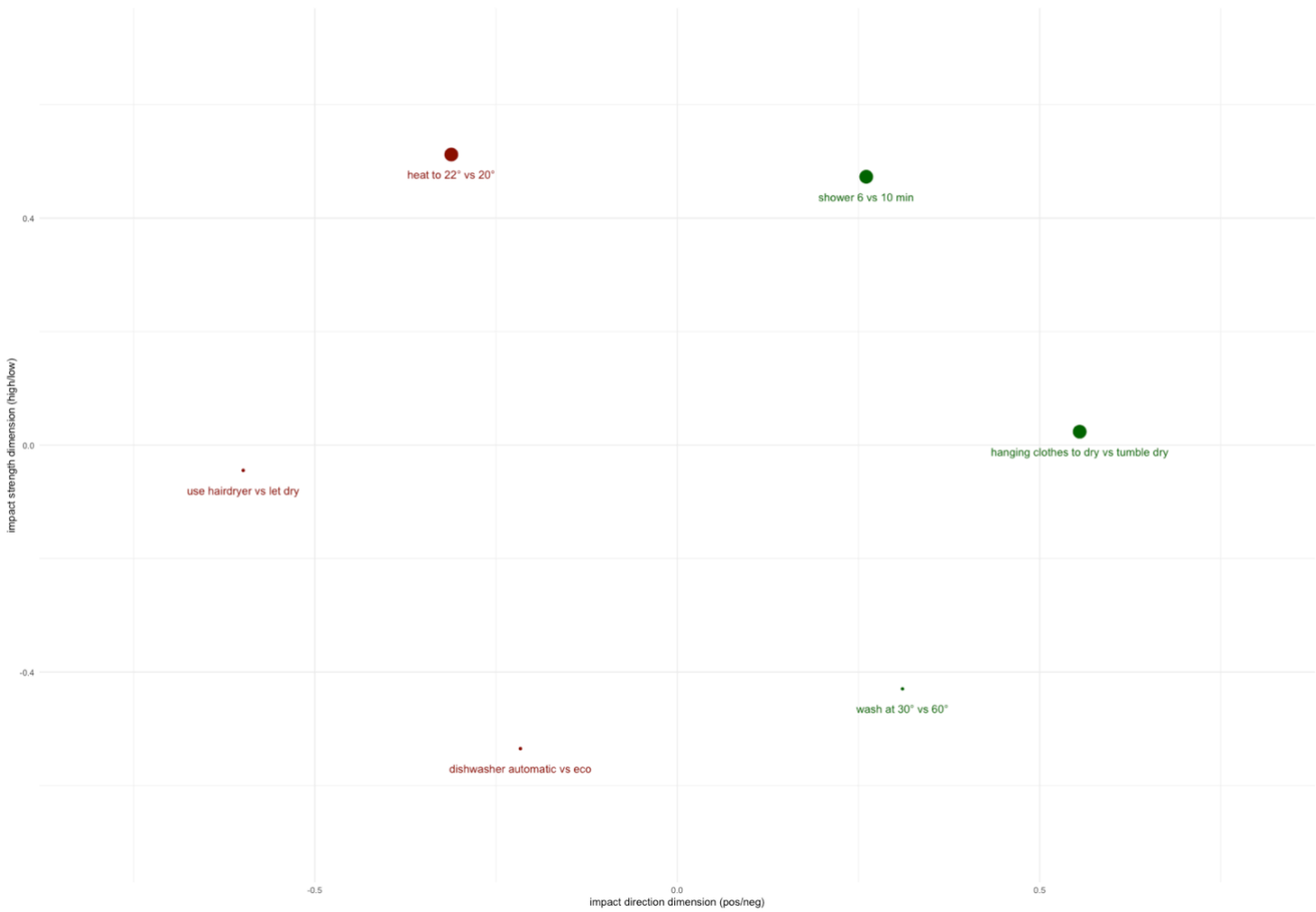
Confirmatory individual difference scaling shows that the judgments did conform to the two dimensions impact direction and impact strength.

Mair, Borg, Rusch (2016) advise to do subsample analysis to check the replicability.

For country, the two MDS models are virtually identical. For education the two MDS models are virtually identical.

For device frequency the two MDS models are virtually identical

For gender, both do conform to the two hypothesized dimensions, however the female MDS model shows some differences.



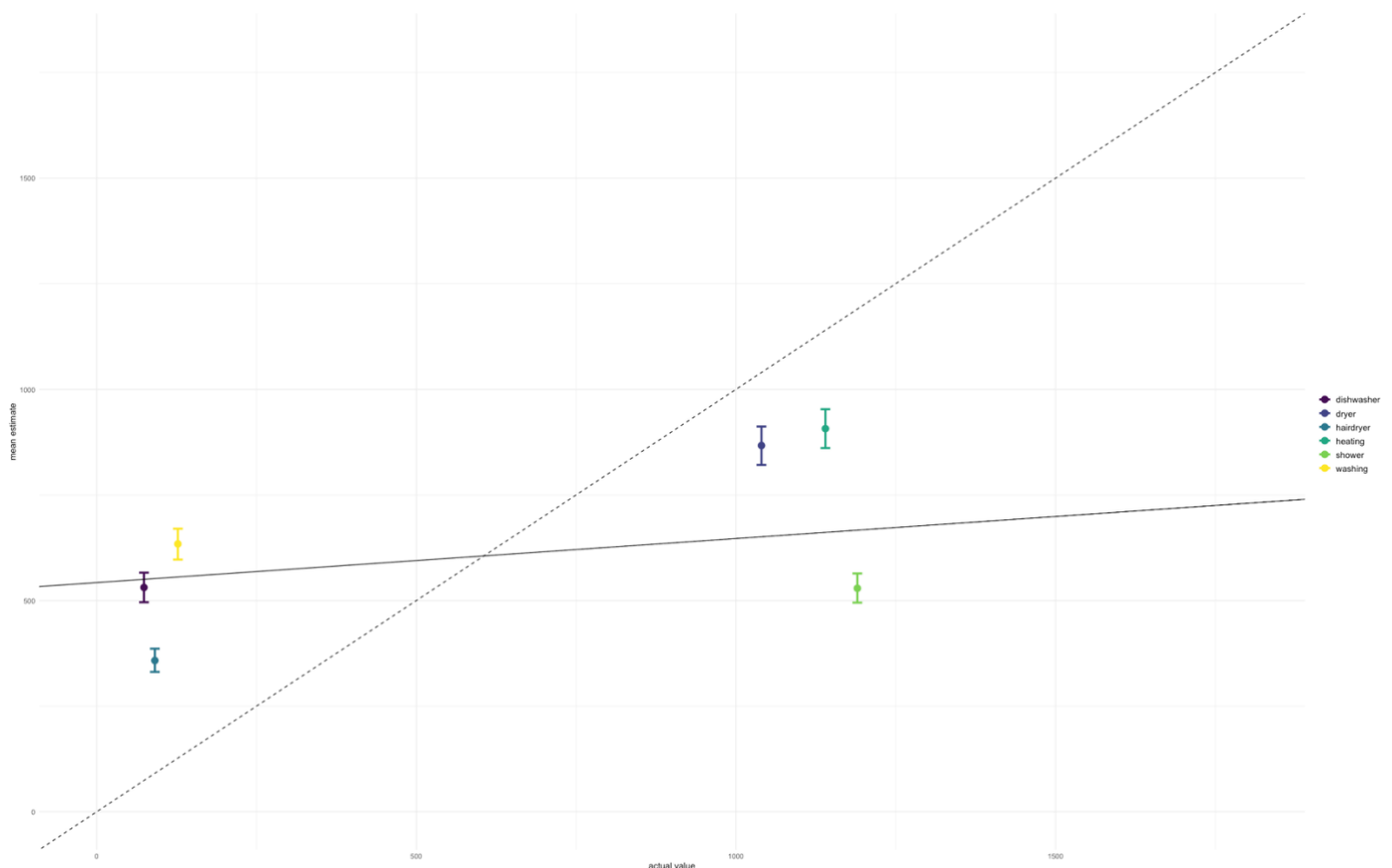
### H3

Participants will underestimate the energy consumption associated with energy saving actions.

Mean estimation bias was slightly negative, indicating that overall, averaged across the 6 curtailment behaviors (of which the 3 high-impact behaviors are underestimated and the three low-impact behaviors are overestimated) people tended underestimate slightly more.

In other words, people tended to underestimate KWh overall by a factor of 1.3.

If this is further divided into the low and high impact behaviors this mean that low impact behaviors were overestimated by a factor of about 2 and high impact behaviors were underestimated by a factor of about 3.5



### H3a

Frequency of use will predict the accuracy of energy action estimates.

Frequency of use was associated with energy action estimates such that higher frequency of use was associated with a larger mean error in estimation. This suggests that higher frequency of use was associated with less accurate estimates.

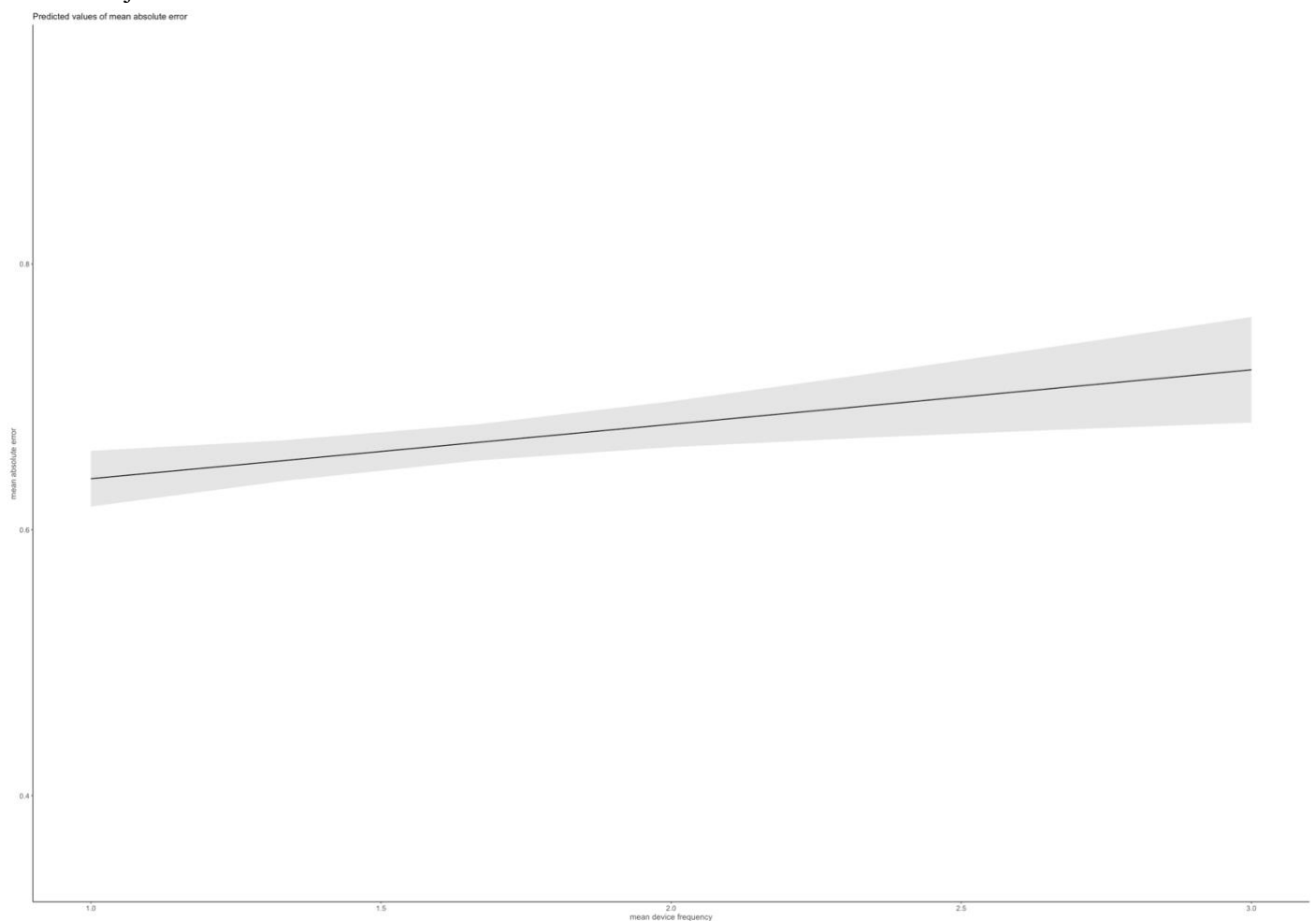
A further posthoc analysis of the mean estimation error (that takes into account the sign of the estimation unlike the mean estimation error), showed that frequency of use was negatively associated with estimation bias, such that higher frequency was related to more underestimation

Predictors	mean absolute error		
	Estimates	CI	p
(Intercept)	0.66	0.60 – 0.73	<0.001

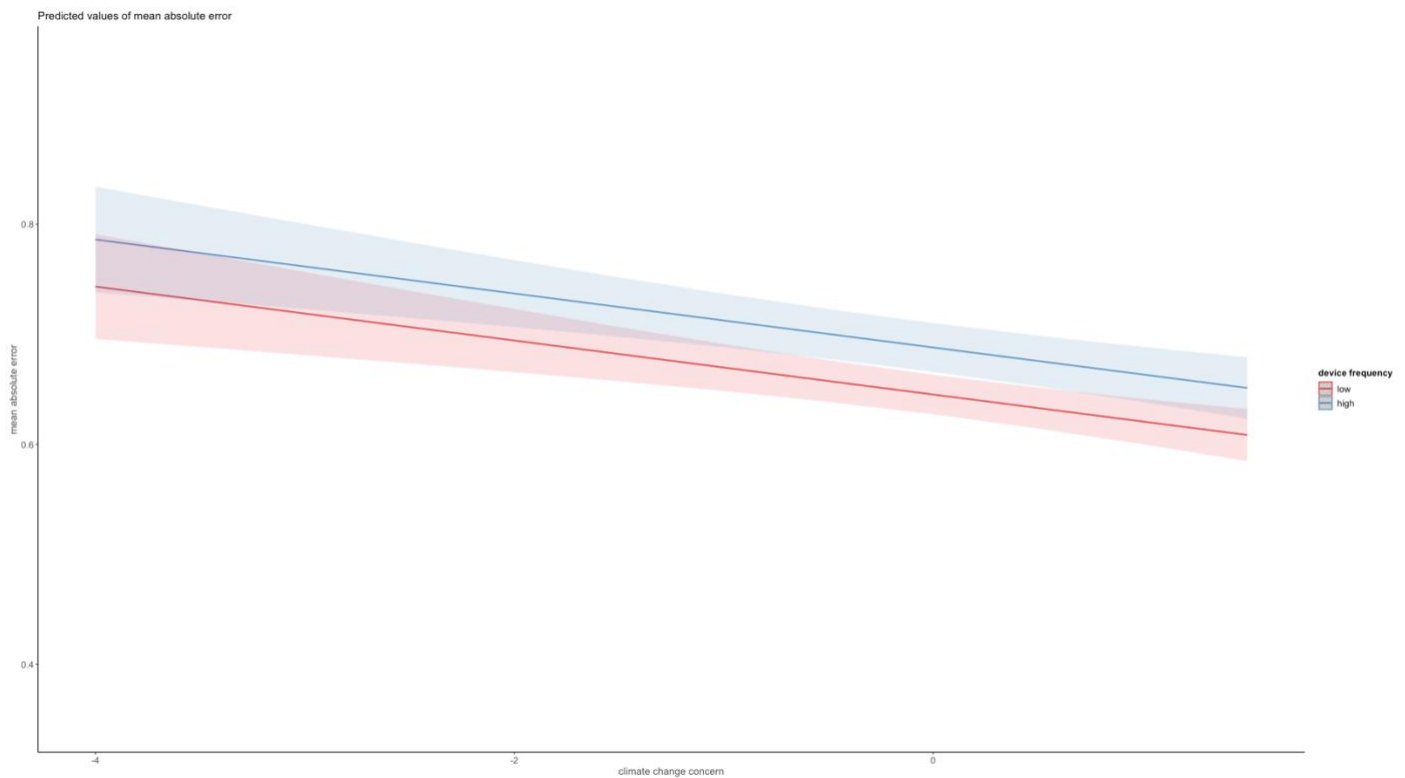
gender: female	0.02	-0.01 – 0.04	0.217
age30-39	0.01	-0.03 – 0.06	0.582
age40-49	-0.04	-0.08 – 0.01	0.083
age50-59	-0.05	-0.10 – -0.01	<b>0.017</b>
age60-80	-0.05	-0.09 – -0.01	<b>0.017</b>
country: Switzerland	0.00	-0.02 – 0.03	0.750
income<1'500- 2'499€ 3'100-4'299CHF	-0.03	-0.08 – 0.01	0.107
income: 2'500- 4'000€ <4'300- 5'899CHF	-0.08	-0.12 – -0.04	<b>&lt;0.001</b>
income: > 4'000€ >5'900 CHF	-0.09	-0.13 – -0.05	<b>&lt;0.001</b>
climate change concern	-0.02	-0.03 – -0.01	<b>&lt;0.001</b>
mean device frequency	0.04	0.01 – 0.07	<b>0.003</b>

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Observations	1522
R <sup>2</sup> / R <sup>2</sup> adjusted	0.049 / 0.042







#### H4a

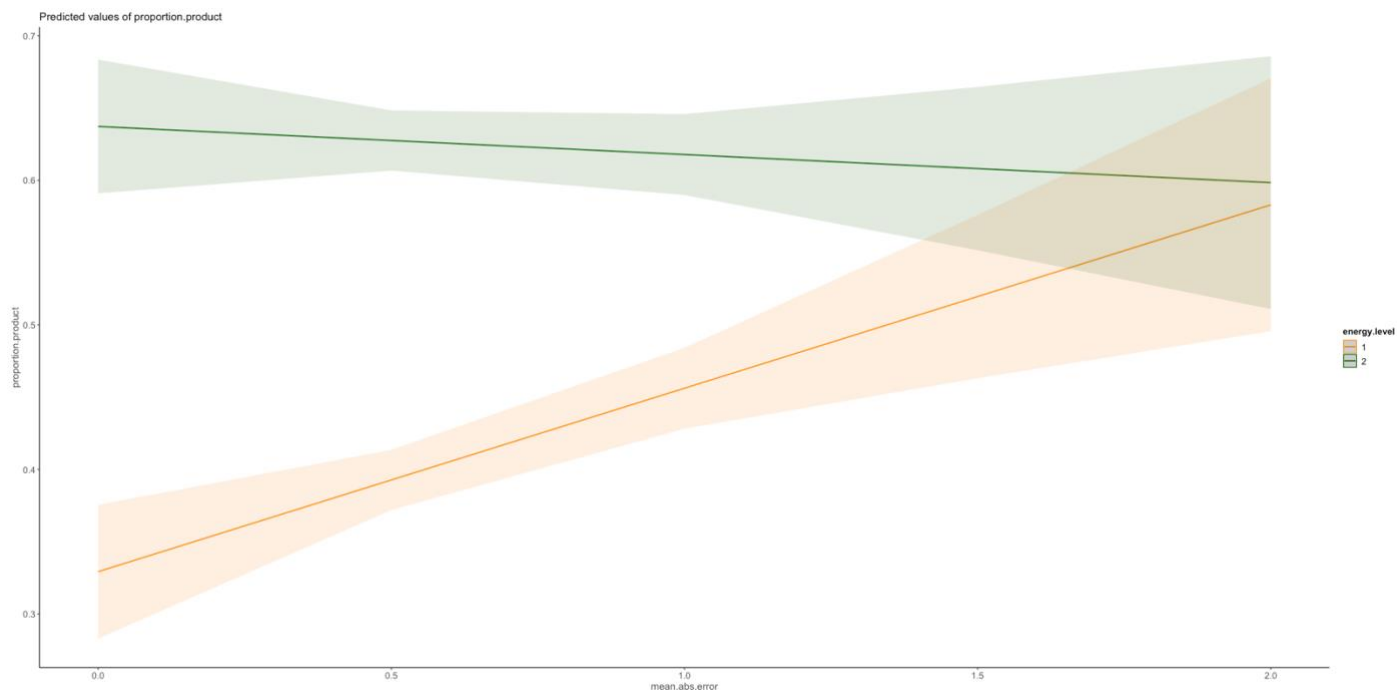
Climate change concern as well as over-versus underestimation in the accuracy task will significantly predict the number of climate-friendly choices in the product choice task in that higher climate change concern scores and overestimation are associated with a higher likelihood to choose the more energy efficient product options.

Climate concern had a significant positive effect on individual product choice, such that higher climate change concern was associated with a higher likelihood to choose the environmentally friendly product. Estimation bias by itself was not significantly associated with product choices, the interaction with the choice context however revealed that those overestimating more had a slightly higher chance of choosing the pro-environmental product when the energy efficiency differences between products in the choice was high. *However, big price differences made it less likely for those overestimating more to choose the pro-environmental product.*

Analyzing judgment error (inaccuracies disregarding the sign of the inaccuracy) revealed that those with a more accurate understanding (low judgment error) reacted strongly to energy efficiency differences such that they were much more likely to choose the pro-environmental product when the choice was between two product differing more in energy efficiency, whereas those displaying less accurate kWh estimates seemed to not to react to these differences, or less strongly.

<i>CHOICE</i>			
<i>Predictors</i>	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	0.11	0.03 – 0.34	<b>&lt;0.001</b>
price level [2]	0.49	0.27 – 0.86	<b>0.013</b>
energy level [2]	2.87	1.67 – 4.93	<b>&lt;0.001</b>
climate concern	1.23	1.07 – 1.41	<b>0.003</b>
mean est bias	1.00	0.75 – 1.35	0.991
country [Switzerland]	2.14	1.57 – 2.93	<b>&lt;0.001</b>
trust gov	1.12	0.99 – 1.26	0.061
V2	1.05	0.51 – 2.12	0.903
gender [male]	1.05	0.81 – 1.38	0.708
age30-39	1.15	0.72 – 1.83	0.549
age40-49	1.31	0.83 – 2.06	0.240
age50-59	1.26	0.81 – 1.95	0.313
age60-80	1.22	0.80 – 1.86	0.346
income [<1'500€ <3'100CHF]	1.16	0.76 – 1.77	0.482
income [> 4'000€ >5'900]	2.06	1.42 – 3.00	<b>&lt;0.001</b>
income [2'500- 4'000€ <4'300- 5'899CHF]	1.49	1.04 – 2.12	<b>0.029</b>
education [middle school]	0.89	0.62 – 1.27	0.516
education [no formal education]	1.61	0.99 – 2.61	0.053
education [obligatory school]	1.26	0.90 – 1.78	0.176
price level [2] × energy level [2]	0.33	0.26 – 0.43	<b>&lt;0.001</b>
price level [2] × climate concern	0.95	0.85 – 1.06	0.326
price level [2] × mean est bias	0.67	0.52 – 0.87	<b>0.002</b>
energy level [2] × mean est bias	1.29	1.00 – 1.64	<b>0.046</b>
energy level [2] × climate concern	1.18	1.07 – 1.31	<b>0.002</b>
price level [2] × country [CH]	0.22	0.16 – 0.28	<b>&lt;0.001</b>
energy level [2] × country [CH]	0.71	0.55 – 0.92	<b>0.010</b>
<b>Random Effects</b>			
$\sigma^2$	3.29		
$\tau_{00}$ ResponseId	3.78		
ICC	0.53		
N ResponseId	1139		
Observations	7973		
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.242 / 0.647		

<b>choice</b>			
<i>Predictors</i>	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	0.07	0.02 – 0.26	<b>&lt;0.001</b>
price level [2]	0.23	0.11 – 0.47	<b>&lt;0.001</b>
energy level [2]	6.66	3.36 – 13.20	<b>&lt;0.001</b>
climate concern	1.22	1.06 – 1.40	<b>0.005</b>
mean abs error	1.31	0.64 – 2.67	0.454
Sum policy	1.03	0.98 – 1.07	0.246
country [Switzerland]	2.12	1.55 – 2.88	<b>&lt;0.001</b>
trust gov	1.12	0.99 – 1.26	0.076
V2	1.09	0.54 – 2.21	0.812
gender [male]	1.07	0.82 – 1.40	0.634
age30-39	1.17	0.74 – 1.86	0.503
age40-49	1.33	0.85 – 2.09	0.218
age50-59	1.31	0.84 – 2.04	0.240
age60-80	1.29	0.84 – 1.97	0.243
income [<1'500€ <3'100CHF]	1.15	0.76 – 1.75	0.511
income [> 4'000€ >5'900 CHF]	2.07	1.42 – 3.01	<b>&lt;0.001</b>
income [2'500- 4'000€ <4'300- 5'899CHF]	1.52	1.06 – 2.17	<b>0.022</b>
education [middle school]	0.87	0.61 – 1.25	0.456
education [no formal education]	1.56	0.96 – 2.53	0.071
education [obligatory school]	1.24	0.88 – 1.74	0.224
price level [2] × energy level [2]	0.33	0.25 – 0.43	<b>&lt;0.001</b>
price level [2] × climate concern	0.94	0.84 – 1.05	0.249
price level [2] × mean abs error	3.61	1.99 – 6.52	<b>&lt;0.001</b>
price level [2] × Sum policy	1.00	0.97 – 1.04	0.856
energy level [2] × mean abs error	0.33	0.18 – 0.59	<b>&lt;0.001</b>



## H4b

Individual weights of the impact strength dimension will predict the number of climate-friendly choices in the product choice task in that higher scores on the impact strength dimension variable are associated with a higher likelihood to choose the more energy efficient product options.

<i>Predictors</i>	<b>choice</b>		
	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	1.16	0.60 – 2.25	0.658
est binary [over]	0.93	0.73 – 1.18	0.534
concern scaled	1.30	1.18 – 1.43	<b>&lt;0.001</b>
V2	0.96	0.52 – 1.77	0.886
country [Switzerland]	0.10	0.08 – 0.13	<b>&lt;0.001</b>

## Random Effects

$\sigma^2$	3.29
$\tau_{00}$ ResponseId	3.75
ICC	0.53
N ResponseId	1522
Observations	10654
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.164    0.609

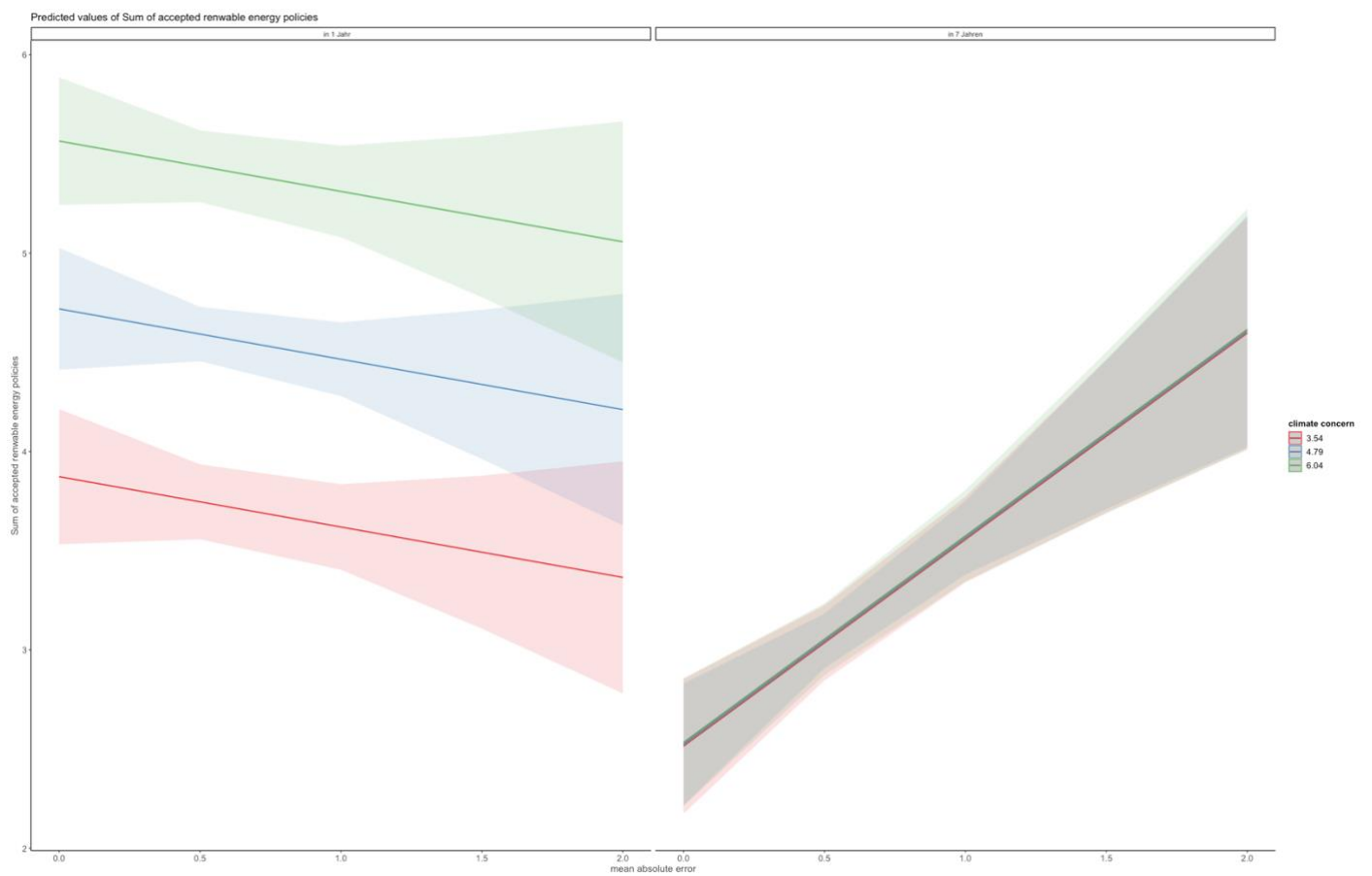
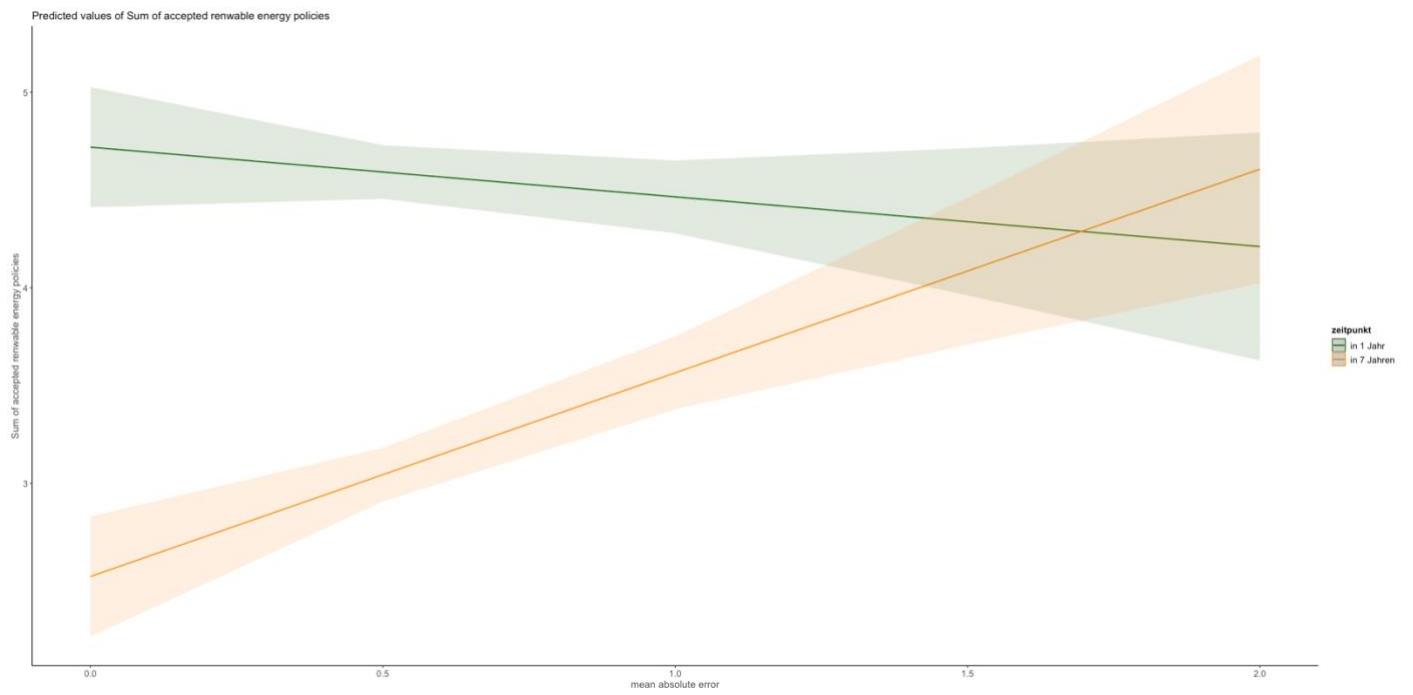
The individual weight placed on the impact strength dimension was not related to pro-environmental product choices

**Not pre-registered**

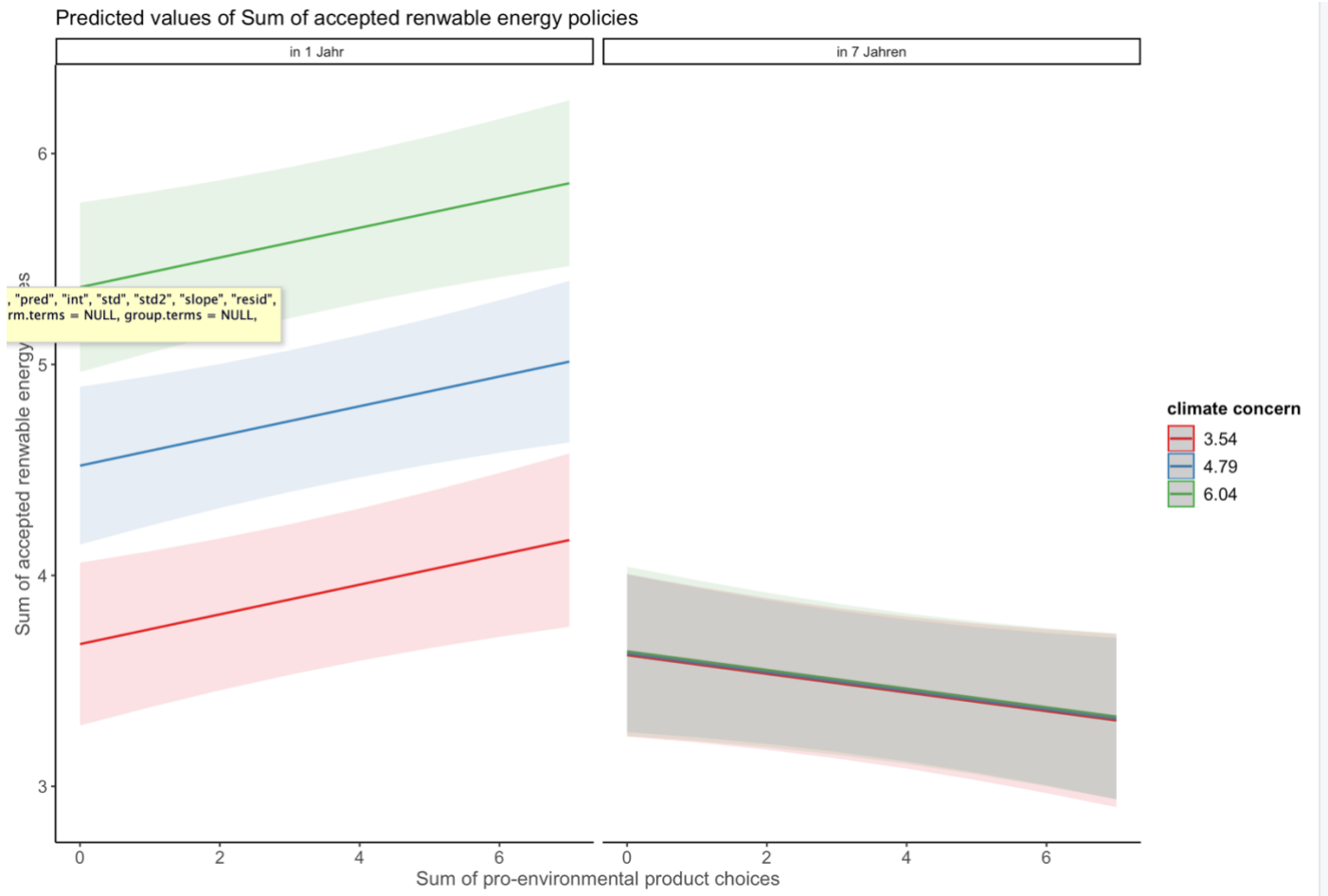
# Predicting energy policy support

Connection judgment and policy decision with interaction time\* concern; time\*sum.product & time\*judgment error

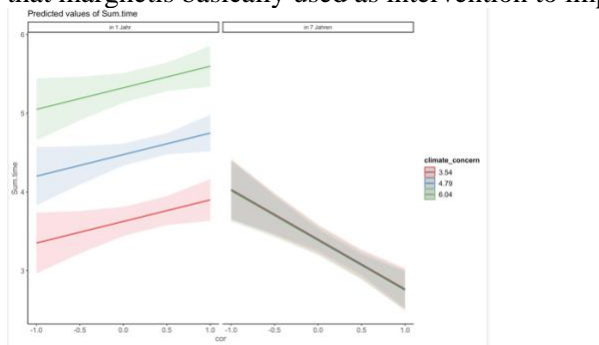
Sum of accepted renewable energy policies			
Predictors	Estimates	CI	p
(Intercept)	1.02	0.17 – 1.87	<b>0.018</b>
gender: male	0.13	-0.05 – 0.30	0.156
age30-39	-0.13	-0.43 – 0.16	0.370
age40-49	-0.41	-0.70 – -0.12	<b>0.006</b>
age50-59	-0.59	-0.88 – -0.31	<b>&lt;0.001</b>
age60-80	-0.79	-1.07 – -0.52	<b>&lt;0.001</b>
income: <1'500€ <3'100CHF	0.24	-0.03 – 0.51	0.086
income: > 4'000€ >5'900 CHF	0.03	-0.21 – 0.28	0.784
income: 2'500- 4'000€ <4'300- 5'899CHF	-0.11	-0.34 – 0.13	0.379
country: Switzerland	-0.03	-0.21 – 0.15	0.760
politicalorientation_1	-0.03	-0.08 – 0.02	0.251
education: middle school	0.00	-0.24 – 0.24	0.989
education: no formal education	0.09	-0.21 – 0.40	0.539
education: obligatory school	0.09	-0.13 – 0.32	0.430
emotions.crisis.neg.tot	-0.07	-0.16 – 0.03	0.158
trust.gov	0.23	0.15 – 0.31	<b>&lt;0.001</b>
mean absolute error	-0.25	-0.68 – 0.17	0.244
climate concern	0.68	0.58 – 0.78	<b>&lt;0.001</b>
Sum of pro-environmental product choices	0.07	0.02 – 0.12	<b>0.006</b>
zeitpunkt: in 7 Jahren	1.47	0.76 – 2.18	<b>&lt;0.001</b>
mean.abs.error:zeitpunktin 7 Jahren	1.30	0.76 – 1.83	<b>&lt;0.001</b>
climate_concern:zeitpunktin 7 Jahren	-0.67	-0.78 – -0.55	<b>&lt;0.001</b>
Sum.product:zeitpunktin 7 Jahren	-0.11	-0.18 – -0.05	<b>&lt;0.001</b>
<b>Random Effects</b>			
$\sigma^2$	3.91		
$\tau_{00}$ ResponseId	0.93		
ICC	0.19		
N ResponseId	1522		
Observations	3044		
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.194 / 0.348		



*Decisions and decisions*  
(in the interaction model)



By the way also for decomposed error into cor (=relative understanding) and sd -> cor almost main effect ( $p=0.051$ ) and significant interaction with time -> such that for immediate more knowledge = more policies  
 Sd so scale use neither main effect nor interaction with time -> so scale use no effect (because we also used this range that marghetis basically used as intervention to improve scale use)



Sum.time			
Predictors	Estimates	CI	p
(Intercept)	0.64	-0.17 – 1.45	0.123
cor	0.27	-0.00 – 0.55	0.051
sd	0.21	-0.11 – 0.53	0.201
Sum product	0.07	0.02 – 0.12	<b>0.005</b>
climate concern	0.68	0.58 – 0.78	<b>&lt;0.001</b>
zeitpunkt [in 7 Jahren]	2.70	2.06 – 3.33	<b>&lt;0.001</b>
cor × zeitpunkt [in 7 Jahren]	-0.91	-1.25 – -0.56	<b>&lt;0.001</b>
sd × zeitpunkt [in 7 Jahren]	-0.09	-0.50 – 0.32	0.672

Sum product × zeitpunkt [in 7 Jahren]	-0.11	-0.17 – -0.05	<b>0.001</b>
climate concern × zeitpunkt [in 7 Jahren]	-0.69	-0.80 – -0.57	<b>&lt;0.001</b>
Observations	3044		
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.194 / 0.350		

*Is also controlled for gender, age, income, education, pol.orientation etc, just not shown here*

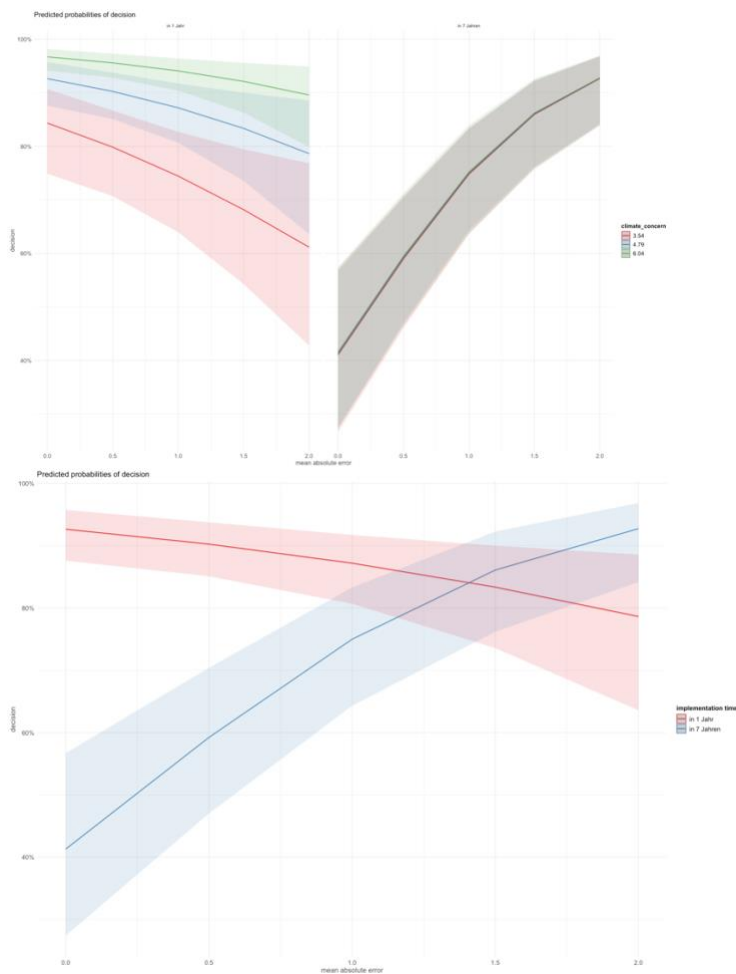
For predicting each decision in the logistic regression:

<i>Predictors</i>	<b>decision</b>		
	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	0.17	0.07 – 0.41	<b>&lt;0.001</b>
co2-30% CO2	1.73	1.57 – 1.91	<b>&lt;0.001</b>
tax: +6%	0.04	0.03 – 0.05	<b>&lt;0.001</b>
energieabhaengigkeit: +20%	1.39	1.27 – 1.52	<b>&lt;0.001</b>
gender: female	0.95	0.77 – 1.17	0.640
age30-39	0.86	0.61 – 1.21	0.380
age40-49	0.69	0.49 – 0.97	<b>0.033</b>
age50-59	0.57	0.40 – 0.80	<b>0.001</b>
age60-80	0.43	0.31 – 0.60	<b>&lt;0.001</b>
income<1'500- 2'499€ 3'100-4'299CHF	0.75	0.54 – 1.03	0.072
income: 2'500- 4'000€ <4'300- 5'899CHF	0.65	0.47 – 0.89	<b>0.008</b>
income: > 4'000€ >5'900 CHF	0.79	0.57 – 1.10	0.160
country: Switzerland	1.11	0.90 – 1.37	0.335
education: obligatory school	1.13	0.80 – 1.58	0.490
education: middle school	1.03	0.71 – 1.48	0.876
education: degree	1.07	0.75 – 1.53	0.715
trust.gov	1.32	1.20 – 1.45	<b>&lt;0.001</b>
politicalorientation_1	0.91	0.85 – 0.96	<b>0.001</b>
emotions.re.pos	1.07	0.96 – 1.19	0.239
mean absolute error	0.54	0.34 – 0.85	<b>0.008</b>
climate_concern	1.97	1.75 – 2.22	<b>&lt;0.001</b>
Sum of proenvironmental product choices	1.07	1.01 – 1.13	<b>0.015</b>
implementation time: in 7 Jahren	2.31	0.99 – 5.42	0.053

mean.abs.error:zeitpunktin 7 Jahren	7.88	4.22 – 14.72	< <b>0.001</b>
climate_concern:zeitpunktin 7 Jahren	0.51	0.44 – 0.59	< <b>0.001</b>
Sum.product:zeitpunktin 7 Jahren	0.88	0.82 – 0.95	<b>0.001</b>

## Random Effects

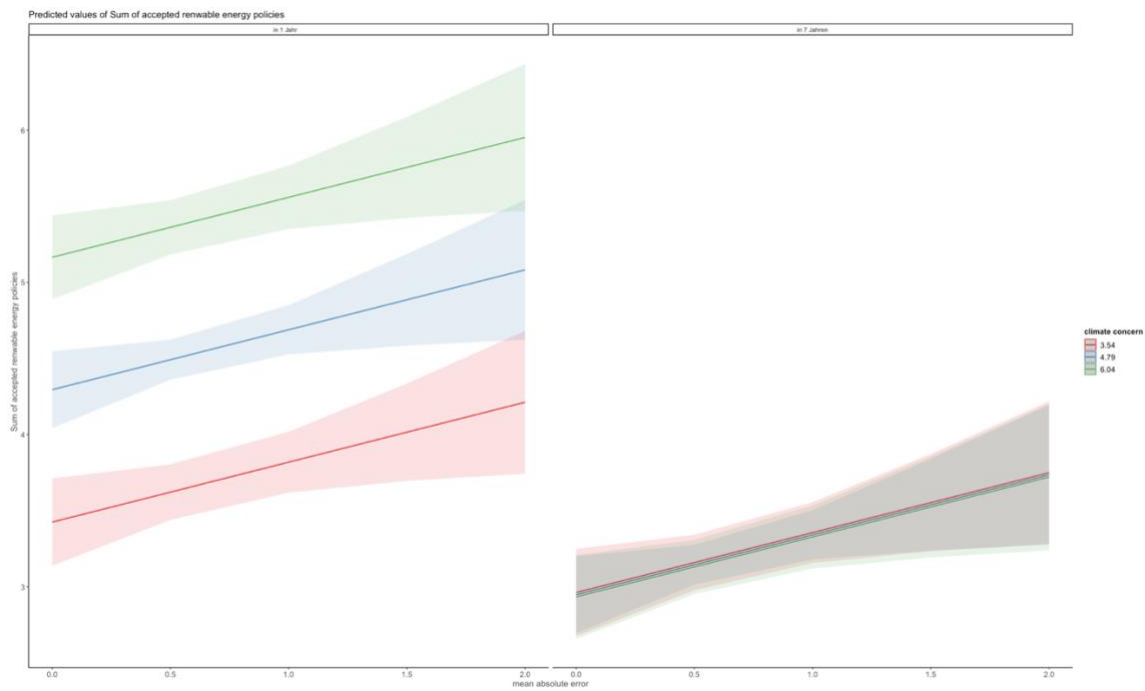
$\sigma^2$	3.29
$\tau_{00}$ Responseld	4.79
$\tau_{11}$ Responseld.tax+6%	10.06
$\tau_{11}$ Responseld.co2-30% CO2	0.64
$\tau_{11}$ Responseld.energieabhaengigkeit+20%	0.21
$\tau_{11}$ Responseld.zeitpunktin 7 Jahren	7.05
$\rho_{01}$	-0.37
	-0.29
	-0.27
	-0.25
ICC	0.71
N Responseld	1522
Observations	24352
Marginal $R^2$ / Conditional $R^2$	0.277 / 0.788





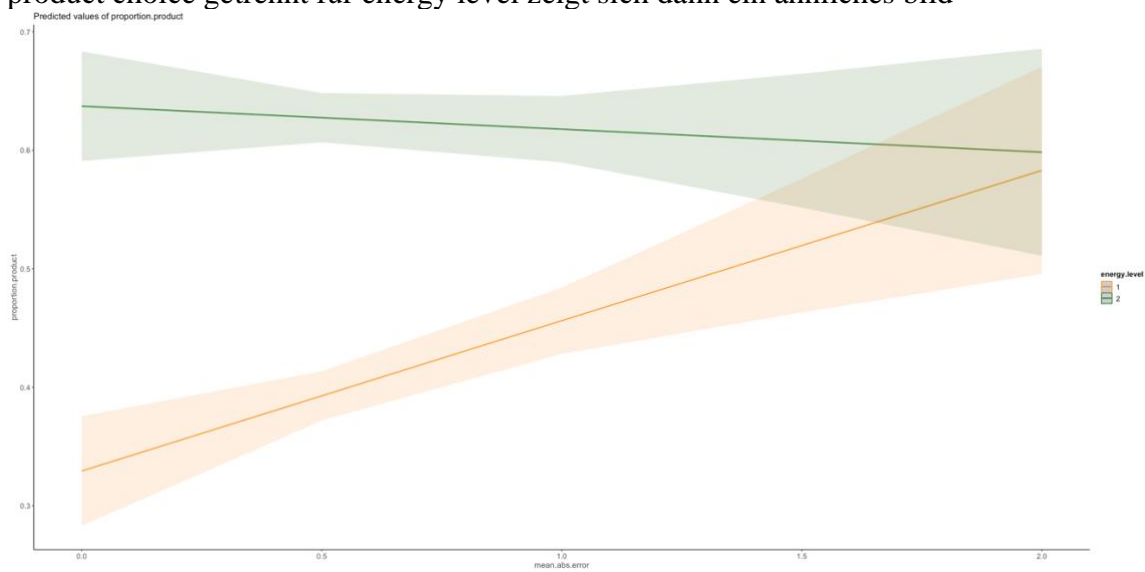
only interaction time\*concern & time\*Sum.product – where association error and sum policies makes less sense

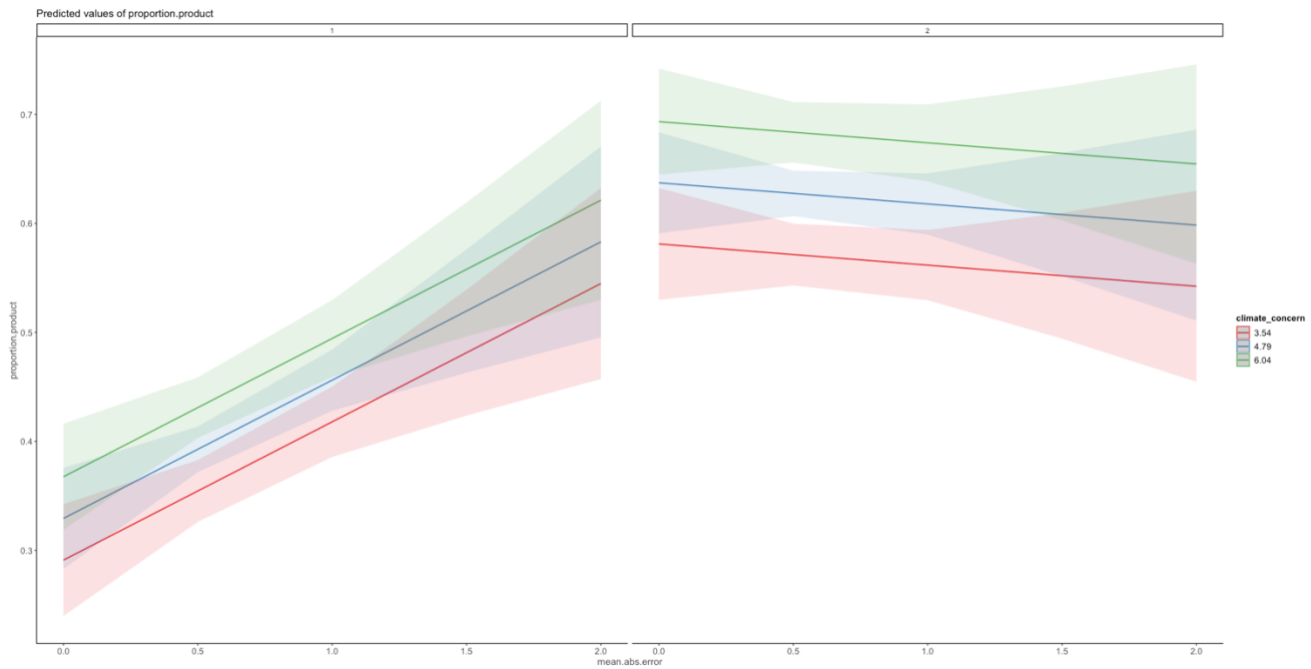
<i>Predictors</i>	Sum of accepted renewable energy policies		
	<i>Estimates</i>	<i>CI</i>	<i>p</i>
(Intercept)	0.52	-0.30 – 1.35	0.213
gender: male	0.13	-0.05 – 0.30	0.156
age30-39	-0.13	-0.43 – 0.16	0.370
age40-49	-0.41	-0.70 – -0.12	<b>0.006</b>
age50-59	-0.59	-0.88 – -0.31	<b>&lt;0.001</b>
age60-80	-0.79	-1.07 – -0.52	<b>&lt;0.001</b>
income: <1'500€ <3'100CHF	0.24	-0.03 – 0.51	0.086
income: > 4'000€ >5'900 CHF	0.03	-0.21 – 0.28	0.784
income: 2'500- 4'000€ <4'300- 5'899CHF	-0.11	-0.34 – 0.13	0.379
country: Switzerland	-0.03	-0.21 – 0.15	0.760
politicalorientation_1	-0.03	-0.08 – 0.02	0.251
education: middle school	0.00	-0.24 – 0.24	0.989
education: no formal education	0.09	-0.21 – 0.40	0.539
education: obligatory school	0.09	-0.13 – 0.32	0.430
emotions.crisis.neg.tot	-0.07	-0.16 – 0.03	0.158
trust.gov	0.23	0.15 – 0.31	<b>&lt;0.001</b>
mean absolute error	0.39	0.06 – 0.73	<b>0.021</b>
climate concern	0.70	0.60 – 0.79	<b>&lt;0.001</b>
Sum of pro-environmental product choices	0.07	0.02 – 0.12	<b>0.010</b>
zeitpunkt: in 7 Jahren	2.47	1.89 – 3.05	<b>&lt;0.001</b>
climate_concern:zeitpunktin 7 Jahren	-0.71	-0.82 – -0.59	<b>&lt;0.001</b>
Sum.product:zeitpunktin 7 Jahren	-0.11	-0.17 – -0.04	<b>0.001</b>
<b>Random Effects</b>			
$\sigma^2$	3.97		
$\tau_{00}$ Responseld	0.90		
ICC	0.18		
N Responseld	1522		
Observations	3044		
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.189 / 0.339		



## Predicting product choice

product choice getrennt für energy level zeigt sich dann ein ähnliches bild



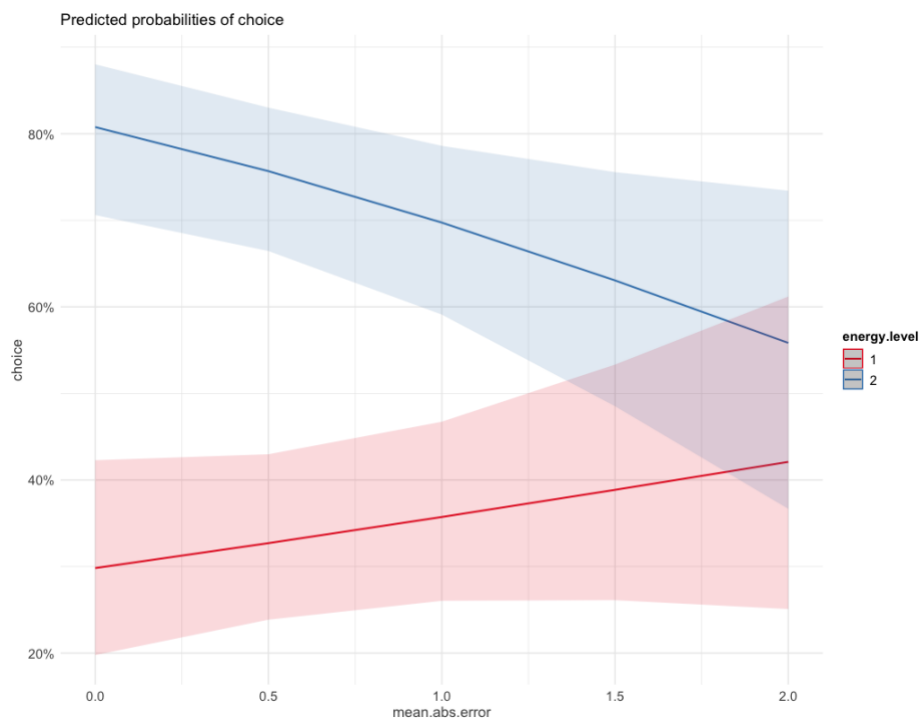


## Auch für einzelne choices

```
model.choice.error.s <- glmer(choice ~ price.level * energy.level + price.level*(climate_concern+mean.abs.error) +
  (mean.abs.error+ climate_concern)* energy.level +
  country*price.level + country*energy.level + trust.gov +
  mean.abs.error + V2+ gender + age + income + education +
  (1 + price.level + energy.level| ResponseId),
  data=data.everything, family="binomial")
```

Predictors	choice		
	Odds Ratios	CI	p
(Intercept)	0.12	0.04 – 0.33	<0.001
price level [2]	0.26	0.14 – 0.49	<0.001
energy level [2]	4.98	2.87 – 8.66	<0.001
climate concern	1.27	1.13 – 1.42	<0.001
mean abs error	1.31	0.80 – 2.13	0.283
country [Switzerland]	2.17	1.68 – 2.81	<0.001
trust gov	1.08	0.97 – 1.19	0.152
V2	0.88	0.48 – 1.59	0.669
gender [male]	1.10	0.88 – 1.38	0.407
age30-39	1.09	0.75 – 1.58	0.666
age40-49	1.32	0.91 – 1.92	0.142
age50-59	1.16	0.80 – 1.67	0.441
age60-80	1.49	1.05 – 2.13	0.026
income [<1'500€ <3'100CHF]	0.99	0.70 – 1.41	0.968
income [> 4'000€ >5'900 CHF]	1.85	1.35 – 2.53	<0.001

income [2'500- 4'000€ <4'300- 5'899CHF]	1.41	1.04 – 1.91	<b>0.028</b>
education [middle school]	0.90	0.66 – 1.23	0.496
education [no formal education]	1.07	0.72 – 1.58	0.744
education [obligatory school]	1.03	0.77 – 1.37	0.858
price level [2] × energy level [2]	0.38	0.29 – 0.50	<b>&lt;0.001</b>
price level [2] × climate concern	0.92	0.84 – 1.02	0.114
price level [2] × mean abs error	3.69	2.37 – 5.75	<b>&lt;0.001</b>
energy level [2] × mean abs error	0.42	0.28 – 0.63	<b>&lt;0.001</b>
energy level [2] × climate concern	1.15	1.05 – 1.26	<b>0.002</b>
price level [2] × country [Switzerland]	0.19	0.15 – 0.25	<b>&lt;0.001</b>
energy level [2] × country [Switzerland]	0.75	0.60 – 0.93	<b>0.009</b>
<b>Random Effects</b>			
$\sigma^2$	3.29		
$\tau_{00}$ Responseld	3.38		
$\tau_{11}$ Responseld.price.level2	0.43		
$\tau_{11}$ Responseld.energy.level2	0.01		
$\rho_{01}$	0.33		
	-0.63		
ICC	0.53		
$N_{\text{Responseld}}$	1522		
Observations	10654		
Marginal $R^2$ / Conditional $R^2$	0.233 / 0.643		



## Models for H1

*As pre-registered:*

*controlled for age, gender, country of origin and income and with random intercept*

*model.H1 <- glmer(decision~ co2 + tax + energieabhaengigkeit + zeitpunkt + gender + age + income + country + (1/id), data=data.decision, family="binomial")*

Predictors	decision		
	Odds Ratios	CI	p
(Intercept)	3.62	2.83 – 4.63	<0.001
co2-30% CO2	1.36	1.27 – 1.44	<0.001
tax [+6%]	0.15	0.14 – 0.16	<0.001
energieabhaengigkeit [+20%]	1.19	1.12 – 1.26	<0.001
zeitpunkt [in 7 Jahren]	0.39	0.37 – 0.42	<0.001
gender [male]	0.98	0.84 – 1.14	0.824
age30-39	0.78	0.61 – 1.00	0.054
age40-49	0.64	0.50 – 0.83	0.001
age50-59	0.58	0.45 – 0.74	<0.001
age60-80	0.56	0.45 – 0.71	<0.001
income [<1'500€ <3'100CHF]	1.23	0.97 – 1.56	0.085

income [> 4'000€ >5'900 CHF]	1.14	0.92 – 1.40	0.236
income [2'500- 4'000€ <4'300- 5'899CHF]	0.97	0.79 – 1.20	0.797
country [Switzerland]	1.10	0.94 – 1.28	0.232

#### Random Effects

$\sigma^2$	3.29
$\tau_{00 \text{ id}}$	1.96
ICC	0.37
N id	1577
Observations	25232
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.184 / 0.488

#### *Random slopes with demographics*

<i>Predictors</i>	<b>decision</b>		
	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	6.11	4.12 – 9.07	<b>&lt;0.001</b>
co2-30% CO2	1.71	1.56 – 1.88	<b>&lt;0.001</b>
tax [+6%]	0.04	0.04 – 0.05	<b>&lt;0.001</b>
energieabhaengigkeit [+20%]	1.37	1.26 – 1.50	<b>&lt;0.001</b>
zeitpunkt [in 7 Jahren]	0.24	0.20 – 0.28	<b>&lt;0.001</b>
income<1'500- 2'499€ 3'100-4'299CHF	0.81	0.58 – 1.13	0.222
income [2'500- 4'000€ <4'300- 5'899CHF]	0.67	0.48 – 0.93	<b>0.017</b>
income [> 4'000€ >5'900 CHF]	0.85	0.61 – 1.18	0.331
gender [female]	1.05	0.85 – 1.30	0.651
age30-39	0.97	0.68 – 1.39	0.877
age40-49	0.79	0.55 – 1.13	0.196
age50-59	0.66	0.47 – 0.94	<b>0.021</b>
age60-80	0.60	0.43 – 0.83	<b>0.002</b>
country [Switzerland]	1.13	0.91 – 1.41	0.266
politicalorientation scaled	0.76	0.68 – 0.85	<b>&lt;0.001</b>
trust gov scaled	1.60	1.46 – 1.75	<b>&lt;0.001</b>

#### Random Effects

$\sigma^2$	3.29
$\tau_{00 \text{ id}}$	5.43
$\tau_{11 \text{ id.co2-30\% CO2}}$	0.61
$\tau_{11 \text{ id.tax+6\%}}$	9.63
$\tau_{11 \text{ id.energieabhaengigkeit+20\%}}$	0.19

$\tau_{11}$ id.zeitpunktin 7 Jahren	7.84
$\rho_{01}$	-0.16
	-0.32
	-0.16
	-0.29
ICC	0.73
N <sub>id</sub>	1628
Observations	26048
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.231 / 0.788

- ⇒ According to contrasts with emmeans, lowest age group (18-29) versus oldest two significant differences and 30-39 age group also to both oldest age groups
- ⇒ Income only lowest to third group significant everything else not, so negligible
- ⇒ Political orientation: the more “right” identify, the less likely to support policies
- ⇒ Trust in gov: higher trust , more likelihood to support policies

Trust and political orientation correlated by -0.098

### No demographics, random slopes and random intercept

<i>Predictors</i>	<b>decision</b>		
	<i>Odds Ratios</i>	<i>CI</i>	<i>p</i>
(Intercept)	4.08	3.49 – 4.77	<0.001
co2-30% CO2	1.70	1.55 – 1.87	<0.001
tax (1% vs 6%): +6%	0.04	0.04 – 0.05	<0.001
energyindependence (10% vs 20%): +20%	1.38	1.27 – 1.51	<0.001
implementation (in 1 vs 7 years): in 7 Jahren	0.24	0.20 – 0.28	<0.001

### Random Effects

$\sigma^2$	3.29
$\tau_{00}$ id	5.54
$\tau_{00}$ ResponseId	0.05
$\tau_{11}$ id.co2-30% CO2	0.55
$\tau_{11}$ id.tax+6%	9.36
$\tau_{11}$ id.energieabhaengigkeit+20%	0.18
$\tau_{11}$ id.zeitpunktin 7 Jahren	7.79
$\rho_{01}$ id.co2-30% CO2	-0.04
$\rho_{01}$ id.tax+6%	-0.27
$\rho_{01}$ id.energieabhaengigkeit+20%	-0.09
$\rho_{01}$ id.zeitpunktin 7 Jahren	-0.35
ICC	0.73
N <sub>id</sub>	1628
N <sub>ResponseId</sub>	1628
Observations	26048
Marginal R <sup>2</sup> / Conditional R <sup>2</sup>	0.201 / 0.784

### Models for H1b

## With demographics

Predictors	decision		
	Odds Ratios	CI	p
(Intercept)	7.66	5.22 – 11.26	<0.001
co2-30% CO2	1.69	1.54 – 1.85	<0.001
tax (1% vs 6%): +6%	0.04	0.04 – 0.05	<0.001
energyindependence (10% vs 20%): +20%	1.38	1.27 – 1.51	<0.001
implementation (in 1 vs 7 years): in 7 Jahren	0.24	0.21 – 0.28	<0.001
concern.scaled	2.19	1.96 – 2.45	<0.001
income<1'500- 2'499€ 3'100-4'299CHF	0.81	0.59 – 1.12	0.211
income: 2'500- 4'000€ <4'300- 5'899CHF	0.68	0.50 – 0.94	0.018
income: > 4'000€ >5'900 CHF	0.82	0.60 – 1.13	0.225
gender: female	0.96	0.78 – 1.18	0.673
age30-39	0.85	0.60 – 1.19	0.338
age40-49	0.66	0.47 – 0.93	0.018
age50-59	0.55	0.39 – 0.77	<0.001
age60-80	0.44	0.32 – 0.61	<0.001
country: Switzerland	1.14	0.92 – 1.40	0.229
politicalorientation.scaled	0.86	0.77 – 0.96	0.009
trust.gov.scaled	1.35	1.23 – 1.48	<0.001
zeitpunkt in 7 Jahren:concern.scaled	0.45	0.40 – 0.52	<0.001
<b>Random Effects</b>			
$\sigma^2$	3.29		
$\tau_{00 \text{ id}}$	5.35		
$\tau_{11 \text{ id.co2-30\% CO2}}$	0.61		
$\tau_{11 \text{ id.tax+6\%}}$	9.72		
$\tau_{11 \text{ id.energieabhaengigkeit+20\%}}$	0.20		
$\tau_{11 \text{ id.zeitpunkt in 7 Jahren}}$	6.71		
$\rho_{01}$	-0.28		
	-0.36		
	-0.27		
	-0.25		
ICC	0.71		
$N_{\text{id}}$	1628		
Observations	26048		
Marginal $R^2$ / Conditional $R^2$	0.258 / 0.787		