

Inequality Aversion and Support for Climate Cooperation

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“We (the UN-IPCC) redistribute de facto the world’s wealth by climate policy...”

Ottmar Endenhofer, IPCC Co-Chair Working Group 3, Nov 2013, 2010.

International and domestic policy choices entail redistribution.

- International and domestic policies entail redistribution
- Re-allocation of income, wealth, resources across individuals and countries
 - Welfare spending
 - Pensions
 - Tax
 - Climate policy
 - Foreign aid
 - ...

Beliefs about what constitutes a fair allocation of wealth may help explain international policy preferences.

- Policy choices affect inequality
- Individuals' aversion to inequality varies
- Individuals assess policies against own redistribution objectives
- Support for policy should depend on inequality aversion
- Lack direct, individual-level measures of inequality aversion

We distinguish aversion to disadvantageous and advantageous inequality.

- Disadvantageous inequality and advantageous inequality
- Formally (Fehr/Schmidt 1999),

$$U_i(x) = x_i$$

$$-\alpha_i \frac{1}{n-1} \sum_{j \neq i} \max\{x_j - x_i, 0\}$$

Aversion to others being richer

$$-\beta_i \frac{1}{n-1} \sum_{j \neq i} \max\{x_i - x_j, 0\},$$

Aversion to others being poorer

with individuals $i \in \{1, \dots, n\}$, payoffs x_1, \dots, x_n .

We explore the importance of inequality aversion using new quasi-behavioral measures.

- 1 Quasi-behavioral, individual-level measures of inequality aversion for large-scale surveys
- 2 Characterize distribution of inequality aversion in industrialized countries
- 3 Evaluate importance of disadvantageous and advantageous inequality aversion for opinion formation about climate policy
- 4 Further probe plausibility by exploring
 - Domestic policies: taxing high earners and reduce inequality
 - International policies: climate change and foreign aid

Inequality aversion should matter differently across policy areas.

- **Domestic Policies** such as taxing high earners affect within-country inequality
- **International Policies** such as climate policy affect between-country inequality

Table 1: Predictions

	Domestic		International	
	Redistribution	Tax Rich	Climate	Aid
Disadvantageous IA	+	++	0	0
Advantageous IA	+	+	+	+

We measure inequality aversion using a give and take experiment.

- Representative samples in the United States ($N=2,500$) and Germany ($N=2,500$)
- Raffle two gift cards $i = 1, 2$
- Value of gift cards $w_i \in \{\$25, \$50, \$75\}$



Respondents can give to or take from the other.

Figure 1: Give and Take Experiment Screenshot

The initial value of your gift card is: \$50

The initial value of the other person's gift card is: \$50

How much do you want to take?

(Please note that even if you do not want to move the slider, you have to touch it to proceed to the next question.)



The final value of your gift card is: \$78

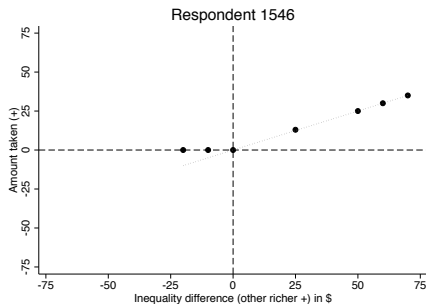
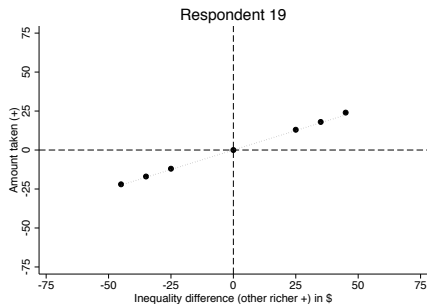
The final value of the other person's gift card is: \$22

We elicit a conditional redistribution schedule for each individual.

- Keep own endowment constant, change value of other person's gift card
- Give or take if value of other gift card changes:
 - Own, 5
 - Own, 15
 - Own, 25
 - Own, 50
 - Own, 75
 - Own, 85
 - Own, 95
- 5,000 individual redistribution schedules

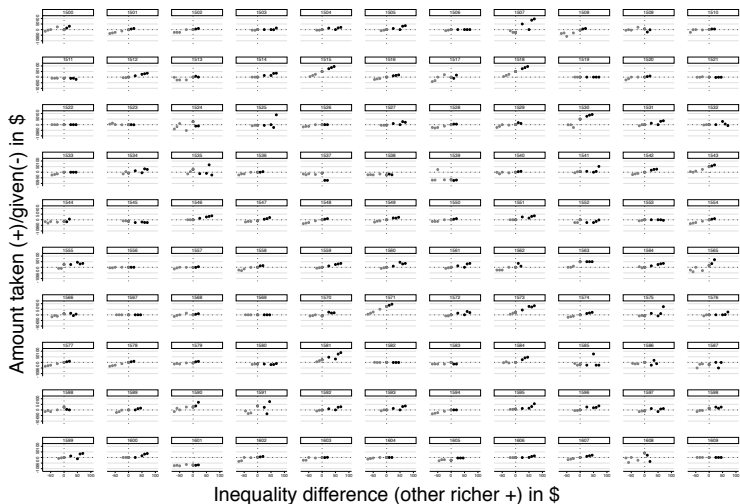
Some individuals are more averse to (dis-)advantageous inequality than others.

Figure 2: Conditional Redistribution Schedules - Two Examples



We code all individual redistribution schedules.

Figure 3: Conditional Redistribution Schedules

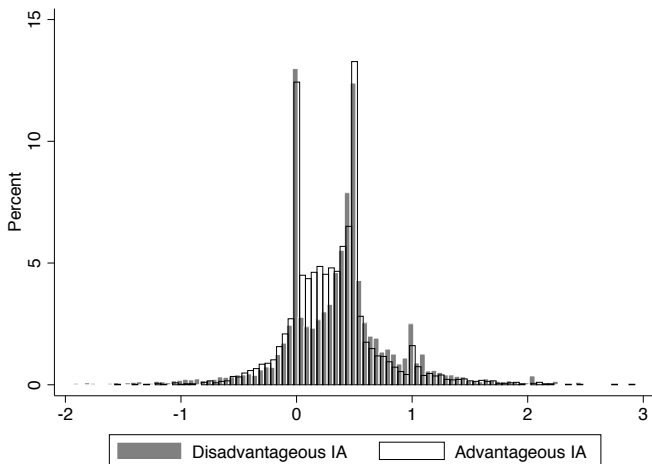


We use the conditional redistribution schedules to estimate inequality aversion parameters.

- For each respondent: Regress amount on variables capturing differences in wealth
- Two coefficients (transformed)
 - Disadvantageous Inequality Aversion (α): Marginal effect of one unit increase in DI on share taken from other
 - Advantageous Inequality Aversion (β): Marginal effect of one unit increase in AI on share given to other

We find that many individuals are averse to inequality.

Figure 4: Figure: Distributions of Inequality Aversion in the United States and Germany (N 5,000)



Inequality averse individuals are more in favor of domestic redistribution.

Table 2: Inequality Aversion and Support for Domestic Redistribution

	Reduce Inequality		High Tax on Rich	
<i>Disadvantageous IA: High</i>	0.18*** (0.04)	0.17*** (0.03)	0.19*** (0.03)	0.18*** (0.03)
<i>Advantageous IA: High</i>	0.12*** (0.04)	0.10*** (0.04)	0.08** (0.03)	0.07** (0.03)
<i>Sociodemographics</i>		✓		✓
<i>Political Controls</i>		✓		✓

Note: OLS regression coefficients with robust standard errors in parentheses.
 *** $p < .01$, ** $p < .05$, * $p < .1$.

Support for climate cooperation and foreign is stronger among advantageous inequality-averse individuals.

Table 3: Inequality Aversion and Support for International Policy

	More Climate Cooperation		Increase Foreign Aid	
<i>Disadvantageous IA: High</i>	0.18*** (0.03)	-0.00 (0.03)	-0.00 (0.03)	-0.07* (0.03)
<i>Advantageous IA: High</i>	0.07** (0.03)	0.13*** (0.03)	0.09*** (0.03)	0.09*** (0.03)
<i>Sociodemographics</i>		✓		✓
<i>Political Controls</i>		✓		✓

Note: OLS regression coefficients with robust standard errors in parentheses.

*** $p < .01$, ** $p < .05$, * $p < .1$.

Aversion to different types of inequality can help understand conflict over international and domestic policy.

- International and domestic policy entails redistribution within and between countries
- Individuals concerned about distribution of wealth
- Inequality aversion important for understanding conflict over policy
- Provide measures of IA: individual-level, quasi-behavioral, suited for large-scale surveys
- Inequality aversion correlates with policy views:
 - Domestic policies: Tool to reduce wealth of rich and increase wealth of poor
 - International policies: Tool to make poor better off