There is no crowding out: Evidence from 4 countries

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Motivation

- Income inequality persists globally [Chancel and Piketty, 2021].
- Redistribution policies at the heart political systems since humans transitioned from tribes to chiefdoms [Hirth, 1978, Pennisi, 2014, Adams, 2005].
  - i.e., the social contract.
- Redistribution policies may have a positive [Andreoni and Payne, 2011, Brooks, 2000], negative [Andreoni, 1993, Andreoni and Payne, 2011, Brooks, 2000] or no [Payne, 1998, Eckel et al., 2005] impact on private transfers.
- *Is there a causal impact of redistributive policies on behaviour?*
- *Does this impact differ across policies?*

Motivation

Challenges in addressing this question:

- ♣ Cannot observe exogenous variation in redistribution policies.
- ♣ Realised redistribution policies are likely endogenous.
- ♣ Different countries have different policies
  - ♠ Countries differ along different dimensions, so comparability of the impact of policies on behaviour is difficult.
- ♣ Additionally, it can be difficult to find robust, quantifiable measures of pro and anti-social behaviour.

This Paper

We use experimental methods, to:

- ♣ Introduce several counterfactual policies.
- ♣ Keep institutional (country) environment constant and vary policies.
- ♣ Address how those in any country would behave under different redistributive policies

We causally identify the effect of the redistributive environment on:

- ♣ Pro and Anti social behaviour
- ♣ Inequality aversion

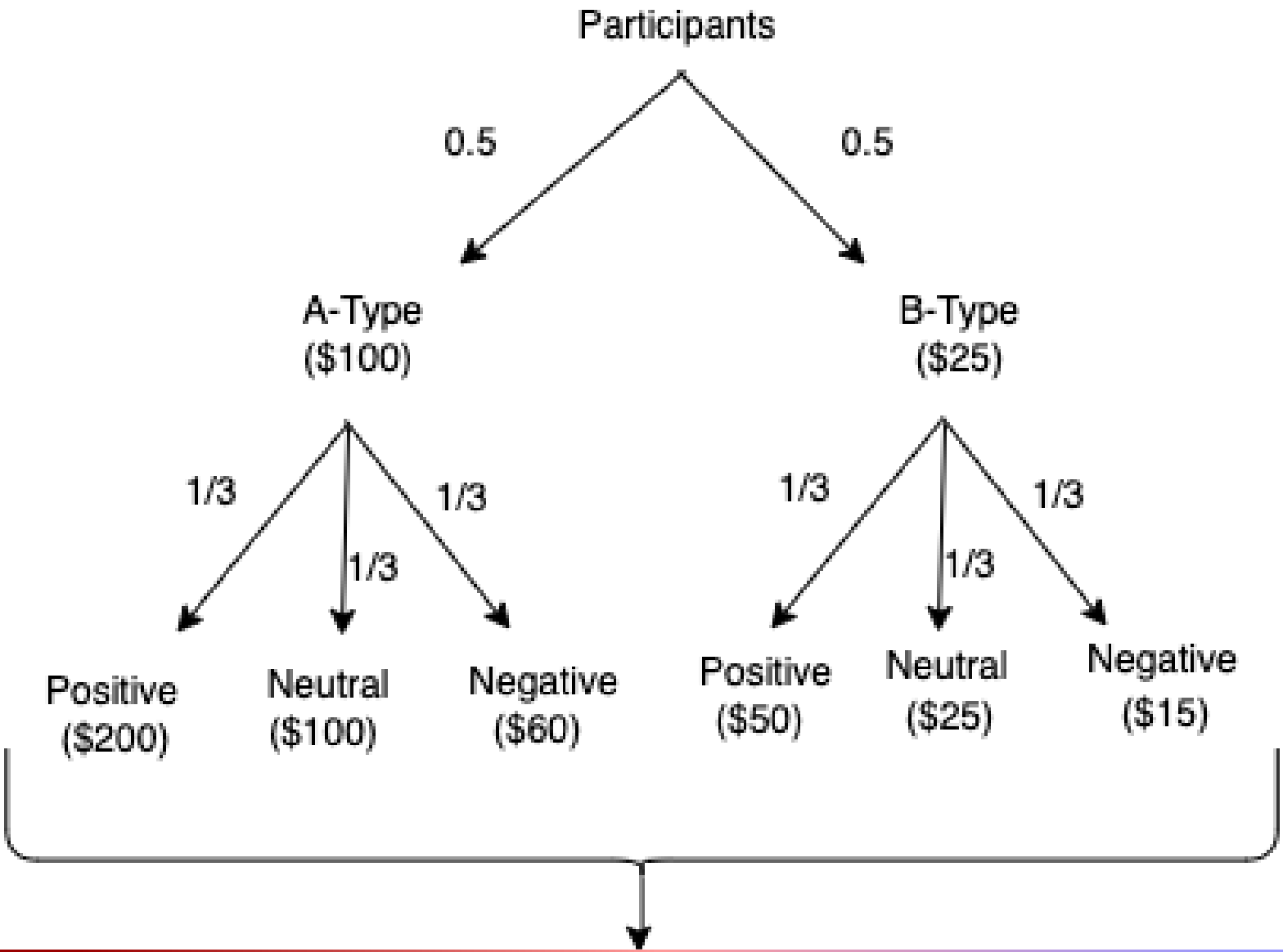
This Paper

- Random assignment of ∼4000 individuals to
  - high and low income types.
- Participants can decide whether to increase or decrease the income of those they are partnered with (at a cost):
  - Gives us a measure of their pro and anti-social behaviour.
  - Their decisions are used to estimate inequality aversion parameters (across treatments and countries).
- 5 treatments: each varies the redistribution policy
- 4 Countries: chosen using World Values Survey data and a machine learning approach. ML details

Experimental Design I

- The experiment has two parts.
- Part 1 is identical across treatments.
- Redistribution policies enacted in Part 2 only.
- Participants told clearly what will happen in Parts 1 & 2 at the outset.
  - Treatment effects in Part 1 are due to policy anticipation.

Income Levels - Part 1



Subject's Decisions

- Subjects matched with another player, told their type & shock.
- Then, given the opportunity to **change** their partner's income.
  - Prosocial payments
    - Good deeds with a personal cost: charitable giving, volunteering etc.
  - Antisocial payments
    - Deeds with a societal and a personal cost: rioting, striking etc.
- Strategy method
  - Make decisions for each possible partner income level
- Incentivised
  - Payments made contingent on decisions you make

Decisions - Slider

Scenario One:

	Type	Shock	Current Income
You	A	neutral	100
Matched Participant	A	negative	60

Income difference is: 40.

You paid 2 units to **increase** their income by 4 units.

Your new income	Their new income	Income difference
98	64	34

N.B. It is costly to change income & there's a 2× multiplicative factor.

Part Two: Control Group

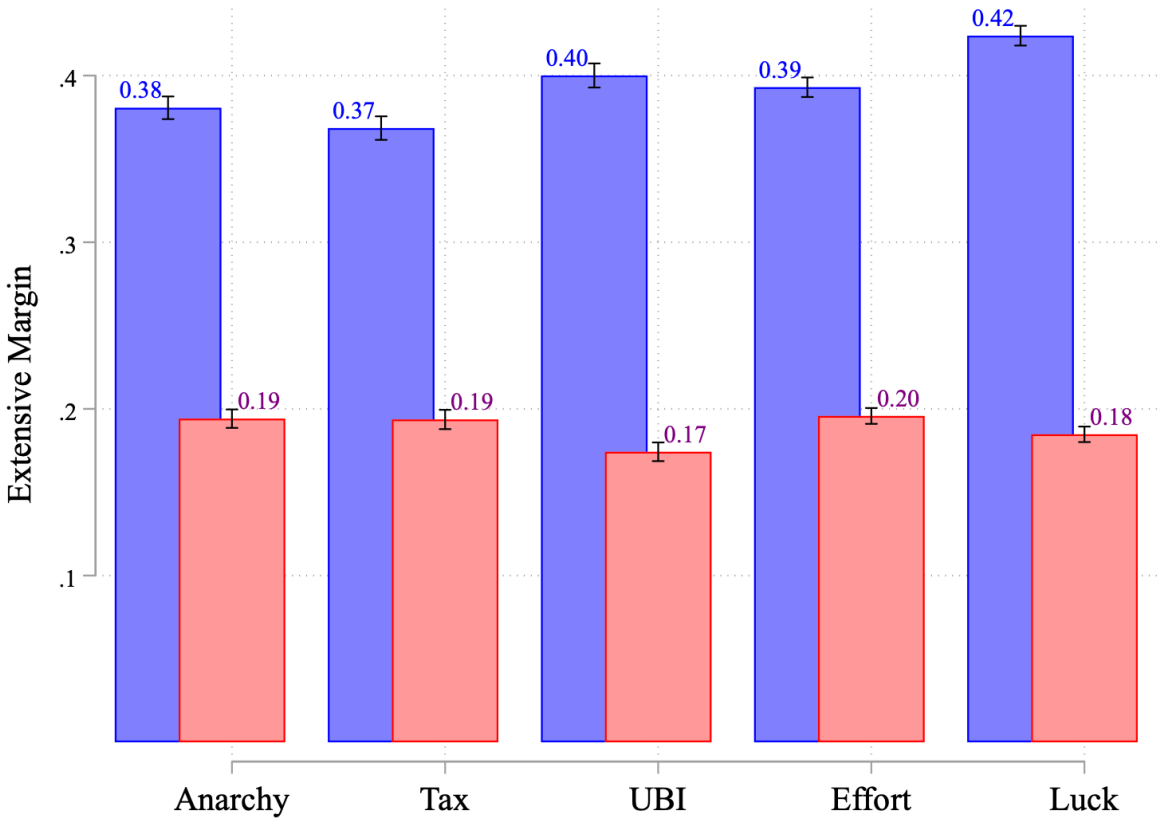
- **Anarchy**
  - No centralised redistribution; a repeat of Part One.

Part Two: Treatment Groups

- **Progressive Taxation**
  - A-types taxed 10%; redistributed evenly to all B-types
- **Universal Basic Income (UBI)**
  - A-types taxed 10%; redistributed evenly to ALL participants
- **Social Mobility: Effort**
  - A-types taxed 10%; redistributed to high effort B-types
- **Social Mobility: Luck**
  - A-types taxed 10%; redistributed to randomly chosen (lucky) B-types

Results – No Crowding Out

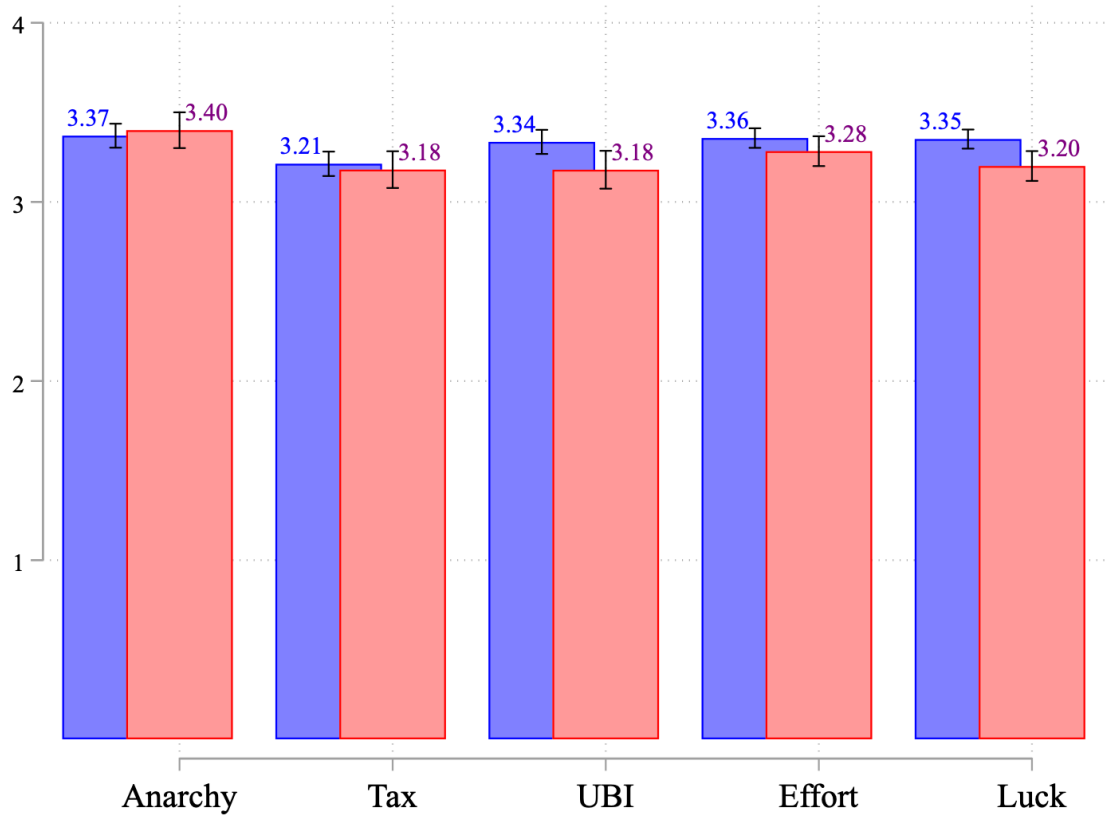
Today: Part 2 data only Part One



Notes: *Blue bars denote the share of prosocial payments, red antisocial payments. Error bars are 1 standard error.* *With Zeros*

No Crowding Out – Intensive Margin

Today: Part 2 data only



Notes: *Blue bars denote the mean payment for prosocial payments and red for antisocial payments. Pooled across countries. Error bars are 1 standard error.*

Primary Specification (pre registered)

$$y_{itce} = \beta_0 + \beta_1 T_t + \beta_2 C_c + \beta_3 E_e + \beta_{4tc} \sum_{tc} (T_t \times C_c) + \beta_{5te} \sum_{te} (T_t \times E_e) + \beta_{6ec} \sum_{ec} (E_e \times C_c) + \beta_{7tce} \sum_{tce} (T_t \times C_c \times E_e) + \gamma \mathbf{Z}_i + \epsilon_{itce}$$

Where:

- y_{itce} is the decision of individual i. A dummy for a pro- or anti-social payment.
- T_t denotes the treatment dummies, C_c the country dummies and E_e the (in)equality fixed effects.
- Z includes a female and income strata fixed effects (as per our sampling frame), and controls for comprehension and question order.

No Private response

	Pro-Social Payments			Anti-Social Payments		
	Equal (1)	Disadvantageous (2)	Advantageous (3)	Equal (4)	Disadvantageous (5)	Advantageous (6)
Germany						
Anarchy	0.29	0.37	0.77	0.01	0.32	0.07
Tax	-0.03	0.00	-0.07	0.03	-0.06	0.02
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
UBI	0.01	0.05	-0.00	0.03	-0.06	-0.02
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
Effort	0.04	-0.03	-0.14***	0.12***	-0.09*	0.04
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
Luck	-0.00	-0.03	0.03	0.04*	-0.04	-0.02
	(0.04)	(0.05)	(0.04)	(0.02)	(0.05)	(0.03)

Notes: Difference estimates. Extensive margin. Significance levels: *** = 0.01; ** = 0.05; * = 0.1.

	Pro-Social Payments			Anti-Social Payments		
	Equal	Disadvantageous	Advantageous	Equal	Disadvantageous	Advantageous
	(1)	(2)	(3)	(4)	(5)	(6)
India						
Anarchy	0.17	0.32	0.35	0.13	0.22	0.17
Tax	-0.03	-0.06	-0.03	0.06*	0.00	0.05
	(0.05)	(0.05)	(0.06)	(0.03)	(0.04)	(0.04)
UBI	-0.02	-0.05	-0.04	0.05	0.03	0.05
	(0.05)	(0.06)	(0.06)	(0.03)	(0.04)	(0.04)
Effort	0.00	-0.06	-0.01	0.08**	0.08**	0.03
	(0.04)	(0.05)	(0.05)	(0.03)	(0.04)	(0.03)
Luck	0.00	-0.07	0.06	0.08**	0.08*	0.04
	(0.04)	(0.06)	(0.05)	(0.03)	(0.05)	(0.03)
Indonesia						
Anarchy	0.18	0.29	0.39	0.19	0.34	0.19
Tax	0.01	-0.05	-0.02	0.03	-0.00	0.09**
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
UBI	0.01	-0.05	-0.01	0.00	-0.04	0.04
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Effort	0.03	0.00	-0.03	0.07*	-0.04	0.05
	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)	(0.03)
Luck	0.03	0.01	-0.04	0.00	-0.01	0.02
	(0.04)	(0.05)	(0.05)	(0.03)	(0.04)	(0.03)
USA						
Anarchy	0.29	0.33	0.63	0.05	0.25	0.1
Tax	-0.03	-0.01	-0.03	0.03	0.01	0.01
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
UBI	0.06	0.08	-0.05	-0.01	-0.03	-0.00
	(0.04)	(0.05)	(0.05)	(0.02)	(0.05)	(0.03)
Effort	0.10**	0.06	-0.03	0.03	0.00	0.00
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
Luck	0.07*	0.09*	0.02	0.02	0.01	0.01
	(0.04)	(0.05)	(0.05)	(0.02)	(0.05)	(0.03)

Notes: Difference estimates. Extensive margin. *** = 0.01; ** = 0.05; * = 0.1.

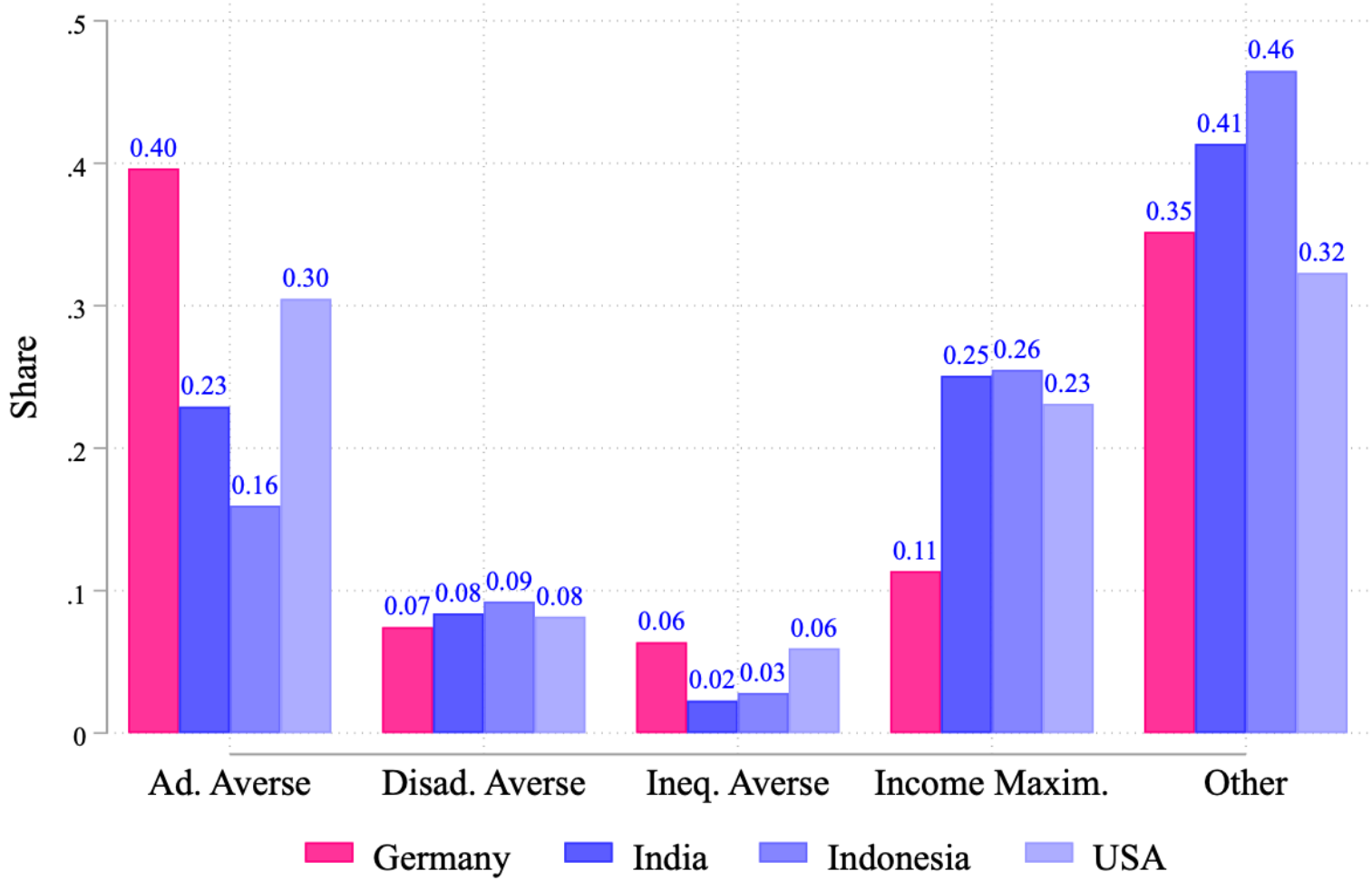
A Precise Null

- Conservative modelling choices (no MHT, pooled data, extensive margin, no IPW...)
- Insignificant results can be...
  - Due to large standard errors and totally uninformative, or
  - Precise, informative estimates
- We follow Haushofer and Shapiro [2016] to estimate a MDE.
  - We are powered to pick up treatment effects of $\leqslant 0.14$ Std Devs. Details
- Randomisation inference p-values are no smaller than standard p-values Details

Robustness Checks

- Alternative definitions of inequality inequality
- Extensive or intensive margin margins
- Social Mobility: Luck vs Effort. social mobility
- So the question remains: **Why no crowding out?**

Mechanisms



Notes: *Advantageous (disadvantageous) inequality averse individuals alway reduce advantageous (disadvantageous) inequality. Inequality averse individuals are both advantageous and disadvantageous inequality averse. Income maximisers never make a private transfer. Other is the residual type.*

Mechanisms

Structural estimates show that:

- ♣ Private transfers are mostly egotistic Andreoni 1990
- ♣ Advantageous and disadvantageous inequality aversion is largely treatment invariant Fehr & Schmidt 1999

There are large country differences

Which can be explained by different distributions of behaviour types (always givers, always takers) country differences

Implications

- ♣ No crowding out of charitable giving & no deterrent of antisocial behaviour.
  - ♠ Independent of redistribution policy.
  - ♠ Independent of country setting.

- ♣ Structural estimates show this is because:
  - ♠ Private payments are mostly egotistic.
    - ♥ Irrespective of redistributive environment.
  - ♠ Social preferences too, but: inequality aversion invariant across policies.

- ♣ Policy implications:
  - ♠ Private prosocial behaviour does not disappear when governments intervene. To fund social programmes, governments have one more degree of freedom when making policy decisions.
  - ♠ Window-dressing of fundamental inequalities is insufficient to prevent anti-social behaviour.

Redistribution & Crowding Out

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August, 2024

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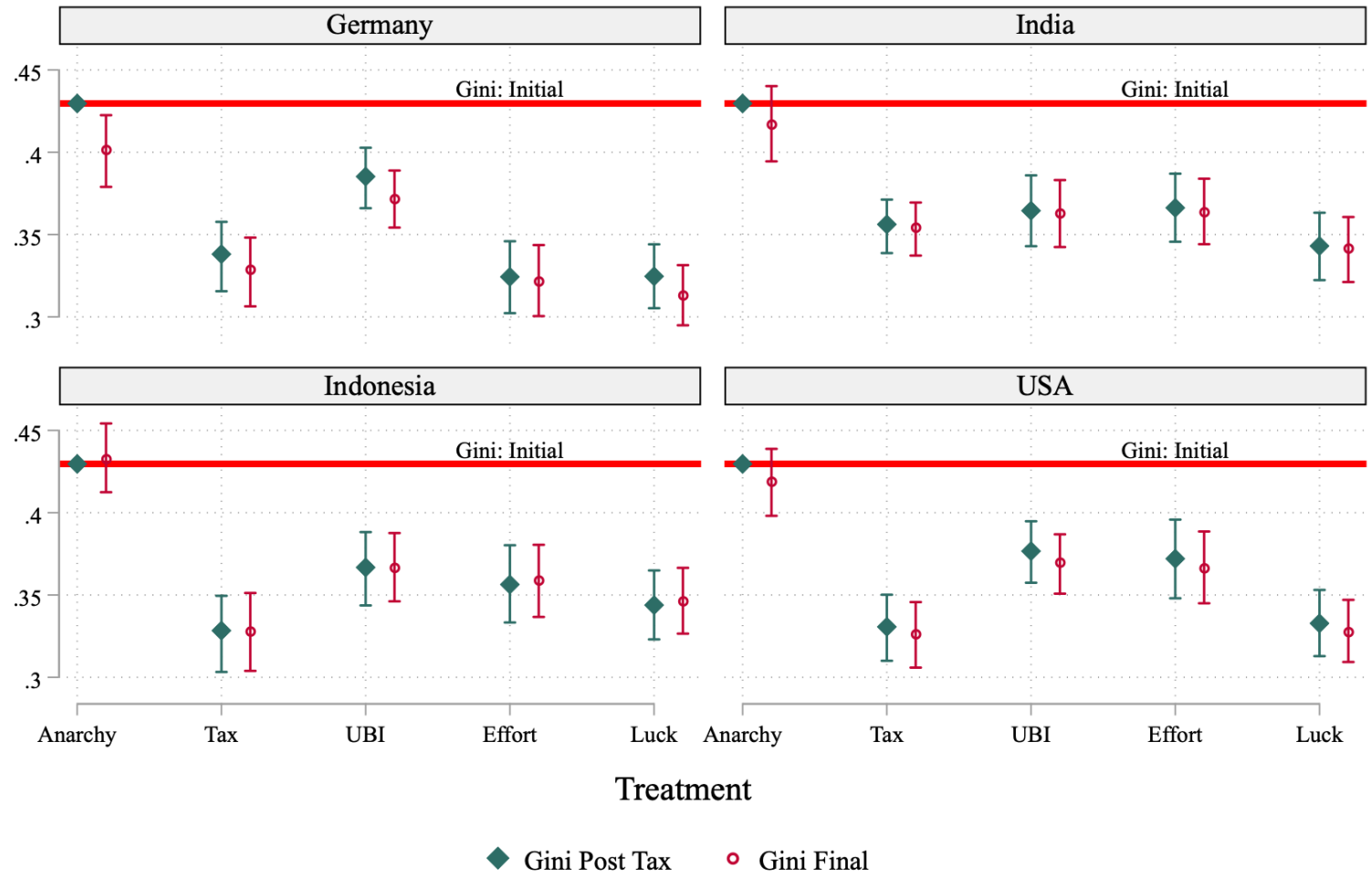
Inequality – Gini



Notes: *The post-tax Gini is the Gini after centralised redistribution; Final Gini is the Gini after both centralised and private transfers. The capped lines denote bootstrapped 90% confidence intervals.*

Selecting Countries

Goal: predict *individuals'* preferences for inequality and government intervention. Select *countries* which are broadly representative.

Dependent variables:

i) whether incomes should be made more equal, or that there should be greater incentive for individual effort.

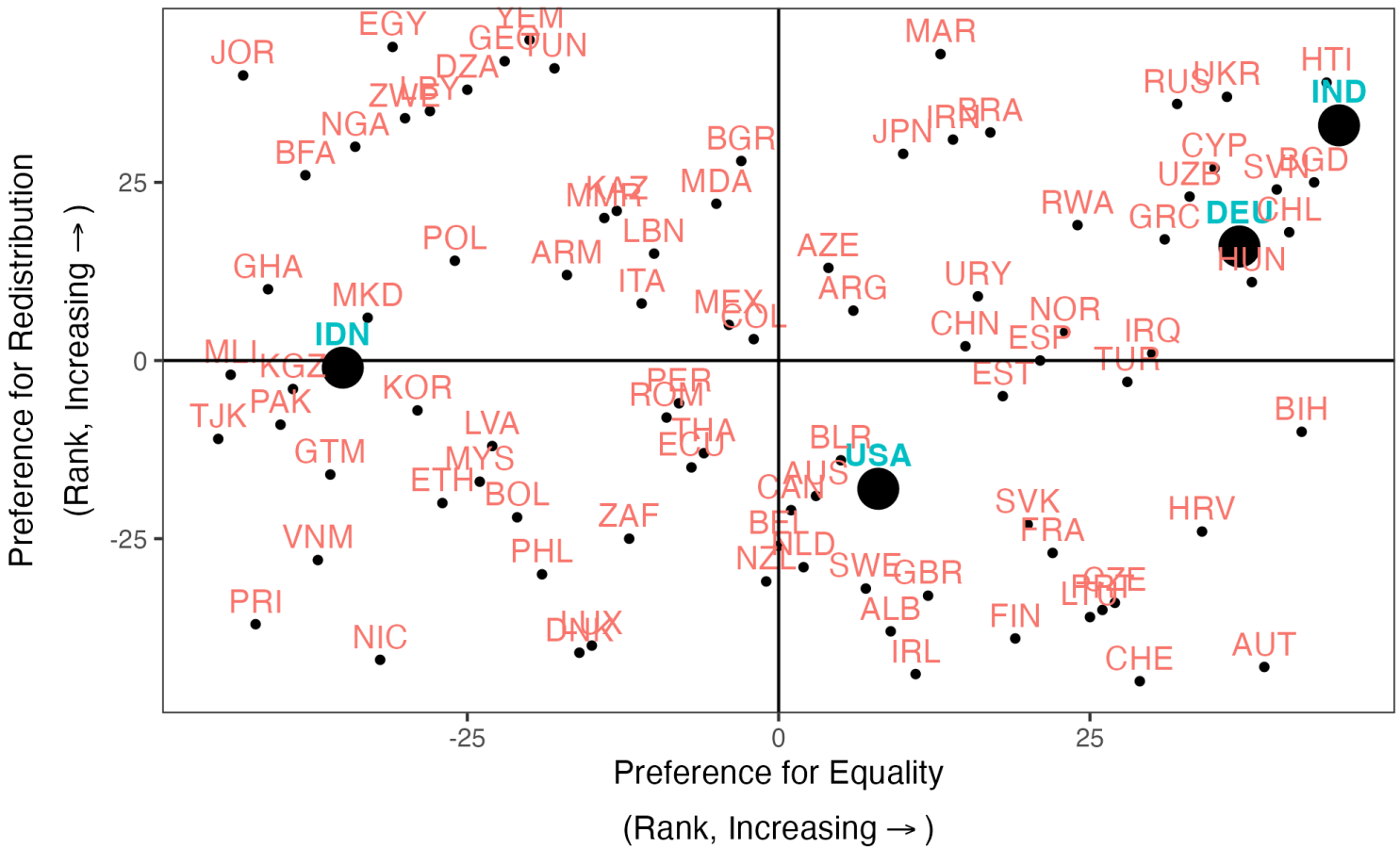
ii) whether governments should ensure everyone is provided for or individuals should provide for themselves.

Independent variables: Historical features of the home country of respondents (measures of culture, geography etc.) and individuals' demographics.

Method: regression trees (specifically, xgboost).

Back

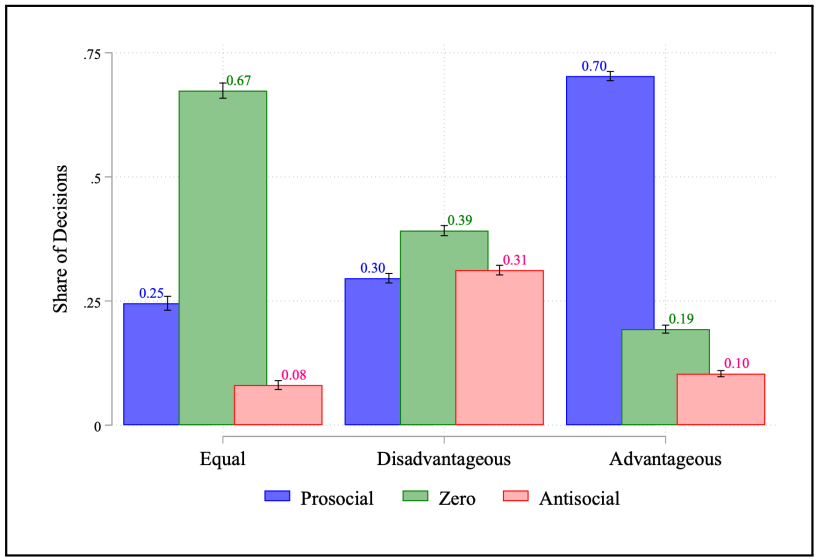
Figure: **Predicted Preferences**



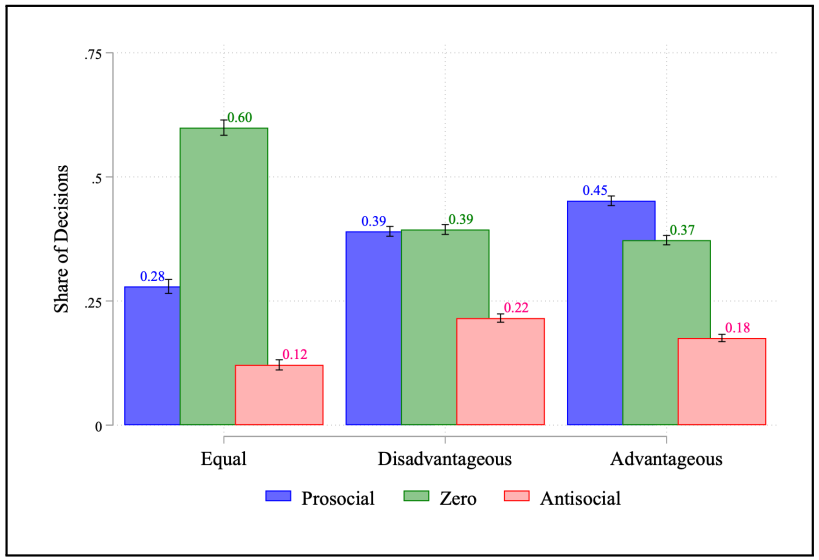
Notes: *A machine learning algorithm took individual-level responses from WVS questions on i) whether incomes should be made more equal, or that there should be greater incentive for individual effort and ii) whether governments should ensure everyone is provided for or individuals should provide for themselves and historical features of the home country of respondents to predict individuals preferences for inequality and government intervention. Countries were then ranked. As an example, Indonesia ranked as a country with relative affinity for inequality and relative aversion to government intervention.*

Choices Made – Part One

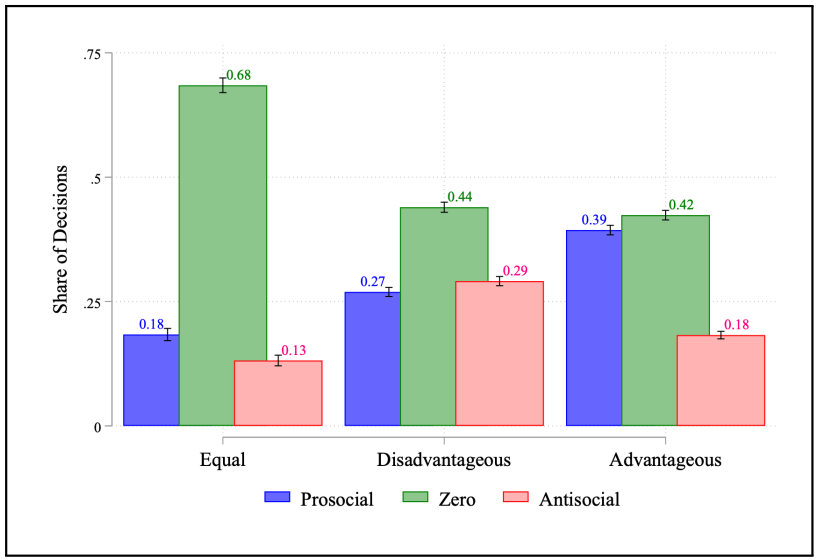
Germany



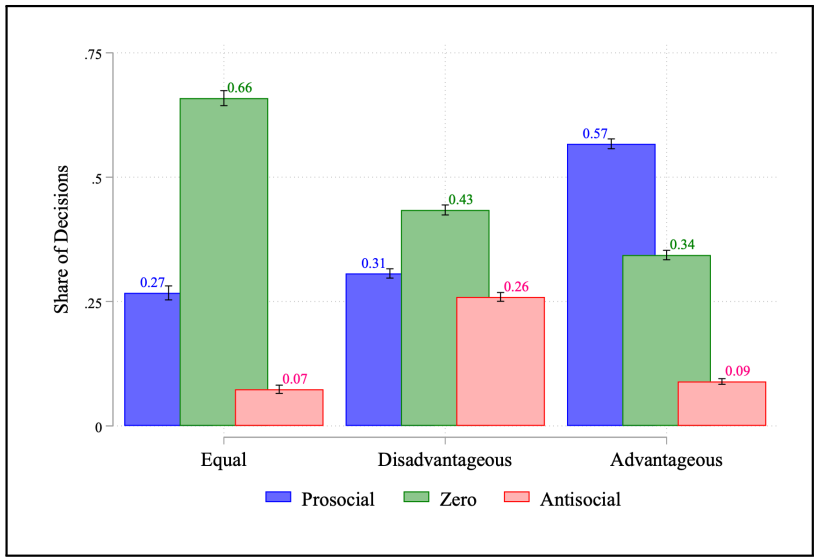
India



Indonesia



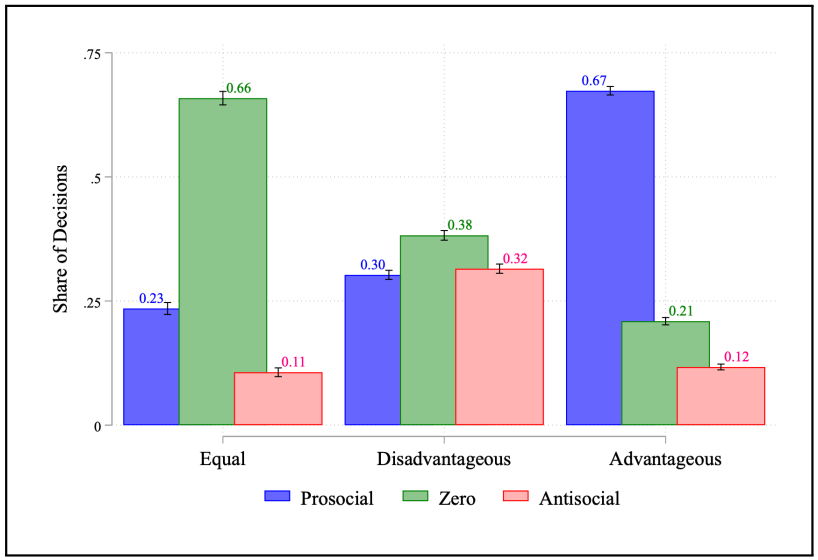
USA



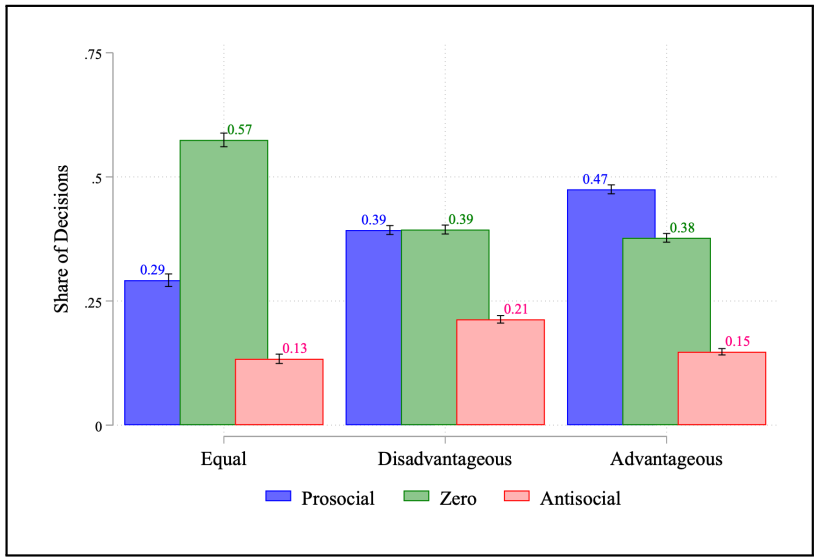
Notes: *Bars represent 1 standard error. Pooled across treatments.*

Choices Made – Part Two

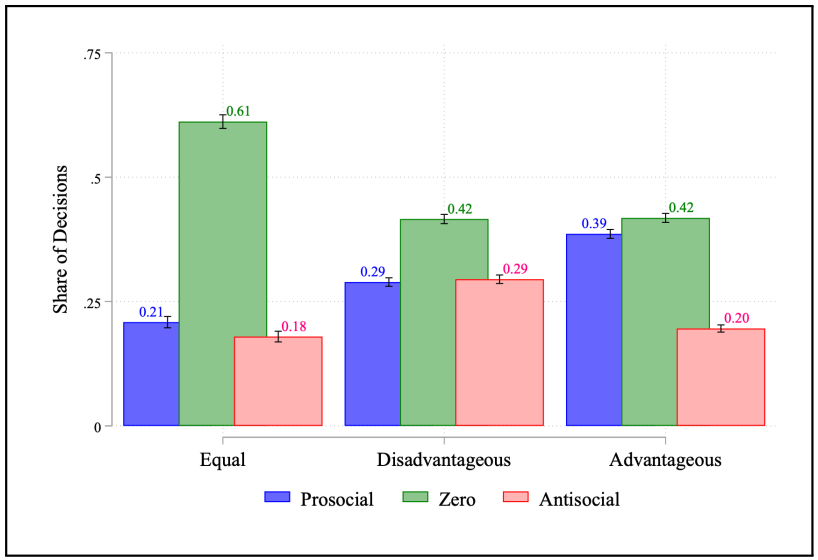
Germany



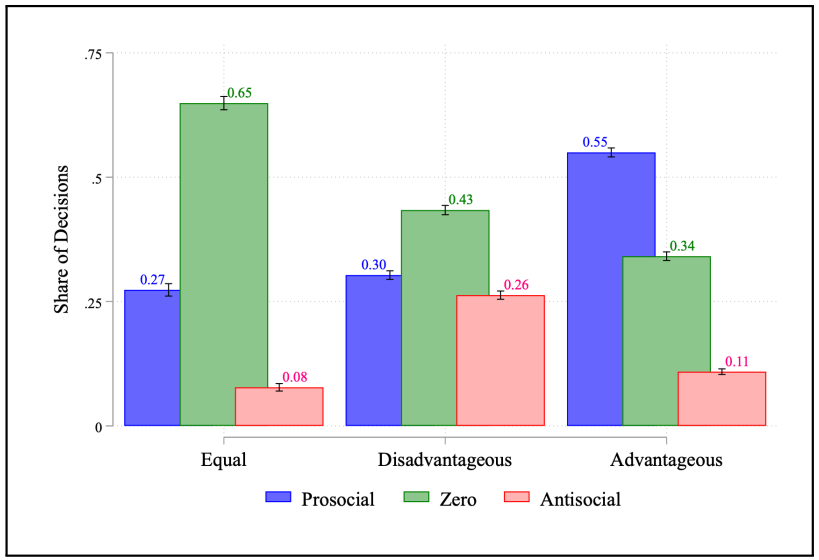
India



Indonesia



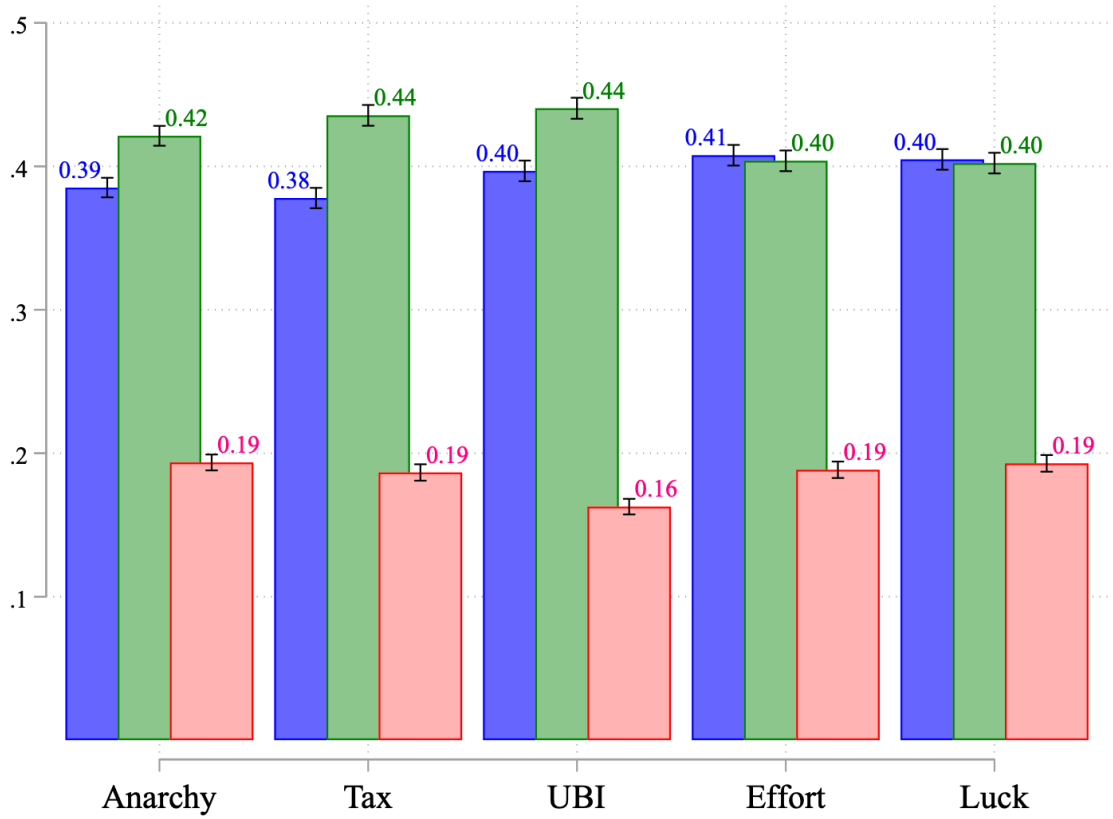
USA



Notes: *Bars represent 1 standard error. Pooled across treatments.*

Results – No Crowding Out

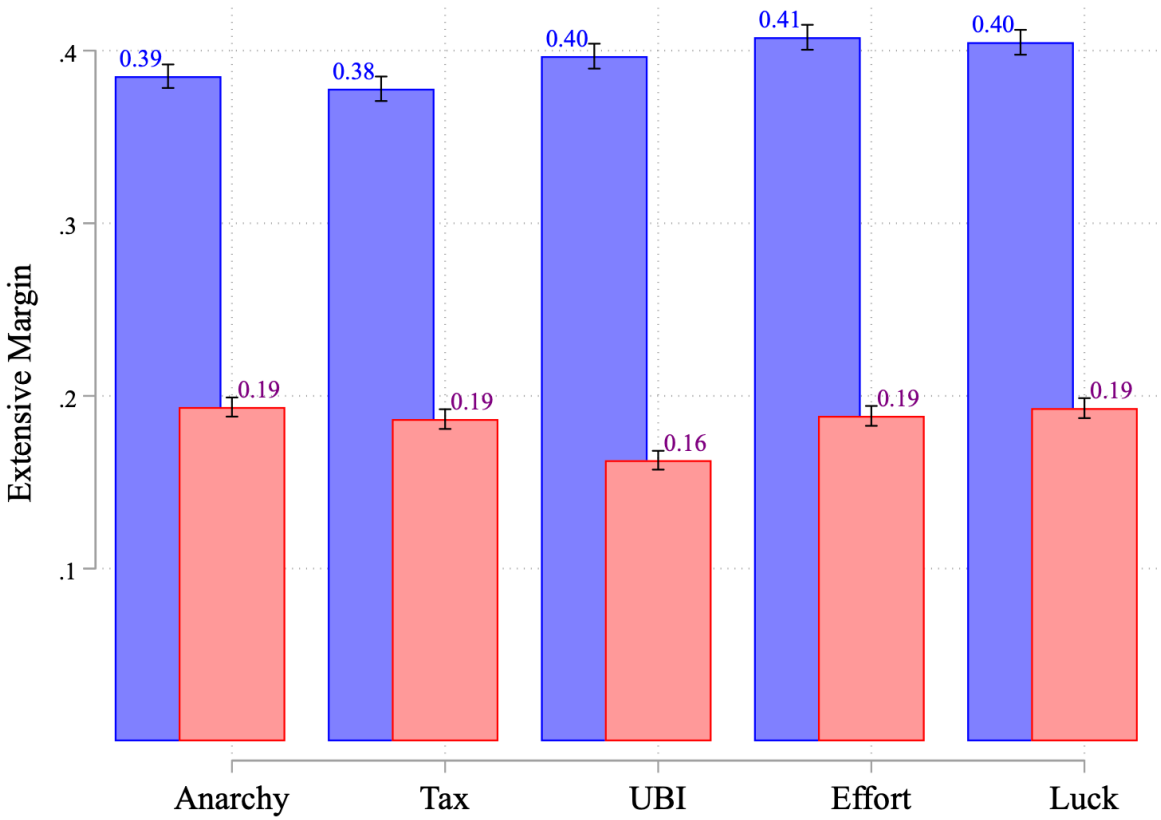
Part 1 data only



Notes: *Blue bars denote the share of prosocial payments, red antisocial payments, and green the share of 0 payments. Pooled across treatments. Error bars: 1 standard error.* *Without Zeros*

Results I – No Crowding Out

Part 1 data only Part Two



Notes: *Blue bars denote the share of prosocial payments, red antisocial payments. Pooled across treatments. Error bars: 1 standard error.*

Minimum Detectable Effect

- We follow Haushofer and Shapiro [2016] to calculate the MDE.
- We calculate the minimum detectable effect (MDE) of our main estimations with 80 percent power at the 5 percent significance level.
- In practice this amounts to just multiplying the standard error of the treatment coefficient by the sum of the value of the t-statistic required to obtain 80% (power) and the critical t-value required to achieve a significance level of 0.05.
- *N.B. We also performed power calculations prior to settling on a sample size.* Back

Randomisation Inference

Generate placebo treatment statuses, rerun the analysis using these instead of true treatment status, save point estimates. Repeat in a Monte Carlo framework.

Randomisation inference p-value is the share of times the placebo point estimates are larger than the true point estimates.

In sum: randomly reallocating treatment status gives results very similar to ours $\hookrightarrow$ there are no treatment effects. Back

Table: **Treatment Effects - I**

	Pro-social Payments			Anti-social Payments		
Equality Level	**Equal**	**Disadvantageous**	**Advantageous**	**Equal**	**Disadvantageous**	**Advantageous**
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Germany						
Anarchy	0.0	0.0	0.0	0.0	0.0	0.0
	(0.07)	(0.07)	(0.07)	(0.04)	(0.05)	(0.05)
	[–]	[–]	[–]	[–]	[–]	[–]
Tax	-0.03	0.00	-0.07	0.03	-0.06	0.02
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
	[0.47]	[0.98]	[0.17]	[0.36]	[0.13]	[0.46]
UBI	0.01	0.00	-0.05	0.04	-0.06	-0.01
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
	[0.82]	[0.96]	[0.33]	[0.16]	[0.16]	[0.62]
Effort	0.00	-0.03	0.03	0.04*	-0.04	-0.02
	(0.04)	(0.05)	(0.04)	(0.02)	(0.05)	(0.03)
	[0.99]	[0.53]	[0.52]	[0.16]	[0.45]	[0.41]
Luck	0.01	0.06	0.00	0.03	-0.06	-0.02
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
	[0.84]	[0.3]	[0.95]	[0.2]	[0.29]	[0.48]
Panel B: India						
Anarchy	0.0	0.0	0.0	0.0	0.0	0.0
	(0.04)	(0.05)	(0.05)	(0.03)	(0.03)	(0.03)
	[–]	[–]	[–]	[–]	[–]	[–]
Tax	-0.03	-0.06	-0.03	0.06*	0.00	0.05
	(0.05)	(0.05)	(0.06)	(0.03)	(0.04)	(0.04)
	[0.48]	[0.23]	[0.53]	[0.04]**	[1.0]	[0.18]
UBI	-0.00	-0.06	0.02	0.09***	0.06	0.03
	(0.04)	(0.05)	(0.06)	(0.03)	(0.04)	(0.04)
	[0.9]	[0.23]	[0.76]	[0.0]***	[0.09]*	[0.4]
Effort	0.00	-0.07	0.06	0.08**	0.08*	0.04
	(0.04)	(0.06)	(0.05)	(0.03)	(0.05)	(0.03)
	[0.97]	[0.19]	[0.28]	[0.02]**	[0.06]*	[0.18]
Luck	-0.02	-0.05	-0.04	0.05	0.03	0.05
	(0.05)	(0.06)	(0.06)	(0.03)	(0.04)	(0.04)
	[0.67]	[0.31]	[0.54]	[0.19]	[0.36]	[0.08]*

Notes: Randomisation inference p-values in square brackets. Back

Table: **Treatment Effects - II**

Equality Level	Pro-social Payments			Anti-social Payments		
	Equal	Disadvantageous	Advantageous	Equal	Disadvantageous	Advantageous
	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Indonesia						
Anarchy	0.0	0.0	0.0	0.0	0.0	0.0
	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)
	[–]	[–]	[–]	[–]	[–]	[–]
Tax	0.01	-0.05	-0.02	0.02	-0.00	0.09**
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
	[0.79]	[0.33]	[0.74]	[0.6]	[1.0]	[0.01]***
UBI	0.02	0.00	-0.01	0.03	-0.03	0.04
	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)	(0.03)
	[0.59]	[0.95]	[0.77]	[0.44]	[0.46]	[0.28]
Effort	0.03	0.01	-0.03	0.00	-0.01	0.02
	(0.04)	(0.05)	(0.05)	(0.03)	(0.04)	(0.03)
	[0.47]	[0.75]	[0.56]	[1.0]	[0.93]	[0.62]
Luck	0.01	-0.05	-0.00	0.00	-0.04	0.04
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
	[0.87]	[0.25]	[0.94]	[0.97]	[0.3]	[0.15]
Panel D: USA						
Anarchy	0.0	0.0	0.0	0.0	0.0	0.0
	(0.04)	(0.04)	(0.04)	(0.02)	(0.04)	(0.03)
	[–]	[–]	[–]	[–]	[–]	[–]
Tax	-0.03	-0.01	-0.03	0.03	0.01	0.01
	(0.04)	(0.05)	(0.05)	(0.03)	(0.05)	(0.03)
	[0.5]	[0.88]	[0.64]	[0.15]	[0.8]	[0.68]
UBI	0.07	0.06	0.02	0.03	-0.02	-0.00
	(0.04)	(0.05)	(0.05)	(0.03)	(0.04)	(0.03)
	[0.15]	[0.28]	[0.69]	[0.11]	[0.67]	[0.99]
Effort	0.07*	0.09*	0.02	0.02	0.01	0.01
	(0.04)	(0.05)	(0.05)	(0.02)	(0.05)	(0.03)
	[0.15]	[0.07]*	[0.65]	[0.49]	[0.84]	[0.84]
Luck	0.06	0.07	-0.05	-0.01	-0.03	-0.00
	(0.04)	(0.05)	(0.05)	(0.02)	(0.05)	(0.03)
	[0.16]	[0.12]	[0.38]	[0.58]	[0.46]	[1.0]

Notes: Randomisation inference p-values in square brackets. Back

Social Mobility Treatments

- **Luck & Effort** treatments previously thought to impact prosocial giving differentially (e.g. Almås et al. [2020]).
- We find no differences in POUM.
- Also no differences in payments made across luck/effort treatments when **partner** is mobile
- Underpowered, but some evidence that treatment effects come through **own realised mobility**.

Social Mobility

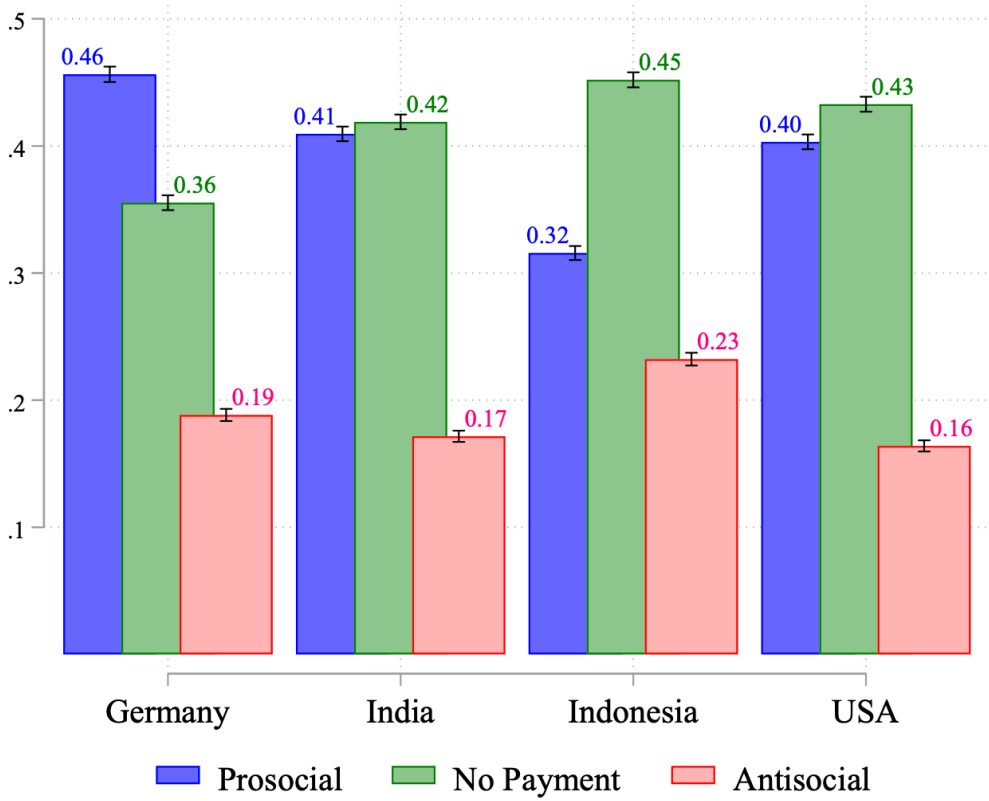
Inequality		Pro-social Payments						Anti-social Payments					
		Equal		Disadvantageous		Advantageous		Equal		Disadvantageous		Advantageous	
		Immobile (1)	Mobile (2)	Immobile (3)	Mobile (4)	Immobile (5)	Mobile (6)	Immobile (7)	Mobile (8)	Immobile (9)	Mobile (10)	Immobile (11)	Mobile (12)
Germany	Effort	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		(0.16)	(0.15)	(0.16)	(0.15)	(0.18)	(0.15)	(0.12)	(0.11)	(0.12)	(0.12)	(0.12)	(0.11)
	Luck	0.05	-0.15*	0.02	-0.03	0.17	0.04	0.08	-0.03	0.05	0.12	0.13	-0.02
		(0.10)	(0.08)	(0.08)	(0.09)	(0.13)	(0.10)	(0.09)	(0.05)	(0.07)	(0.10)	(0.08)	(0.05)
India	Effort	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		(0.10)	(0.14)	(0.09)	(0.11)	(0.10)	(0.16)	(0.07)	(0.11)	(0.07)	(0.07)	(0.08)	(0.06)
	Luck	0.02	-0.17	-0.00	-0.10	0.02	-0.11	-0.01	-0.06	0.00	0.26**	-0.01	0.16***
		(0.09)	(0.13)	(0.08)	(0.11)	(0.10)	(0.15)	(0.06)	(0.10)	(0.06)	(0.10)	(0.08)	(0.04)
Indonesia	Effort	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		(0.08)	(0.09)	(0.07)	(0.09)	(0.09)	(0.10)	(0.07)	(0.08)	(0.06)	(0.08)	(0.08)	(0.10)
	Luck	-0.01	0.11	-0.01	0.08	-0.02	0.28**	-0.06	-0.02	-0.01	-0.03	-0.04	-0.16
		(0.08)	(0.09)	(0.07)	(0.11)	(0.11)	(0.12)	(0.07)	(0.09)	(0.06)	(0.10)	(0.10)	(0.10)
USA	Effort	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		(0.08)	(0.12)	(0.08)	(0.12)	(0.09)	(0.13)	(0.06)	(0.07)	(0.05)	(0.06)	(0.07)	(0.08)
	Luck	0.12	0.03	0.04	0.02	0.05	0.08	-0.10*	-0.01	0.02	0.24**	-0.03	-0.04
		(0.09)	(0.12)	(0.08)	(0.13)	(0.13)	(0.12)	(0.06)	(0.07)	(0.07)	(0.10)	(0.08)	(0.07)

Notes: Difference estimates, the effort condition is the baseline group. Significance levels $^{***}p < 0.01$,$^{**}p < 0.05$,$^{*}p < 0.1$ refer to the test of equality between the effort and luck treatments for a given country and inequality level. Regression run on 6,651 observations with 739 clusters.

robustness checks

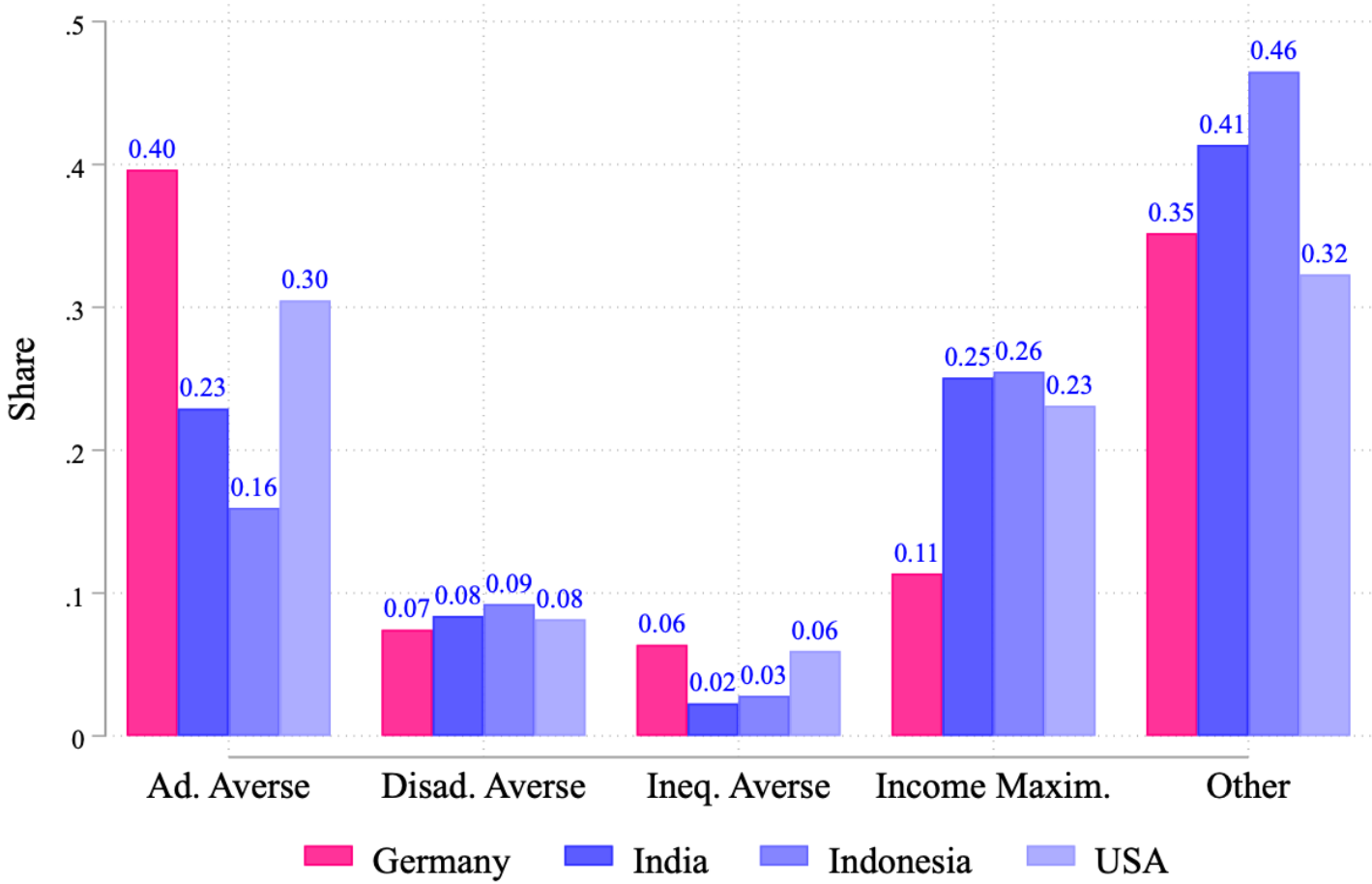
Large Country Differences return

Today: Part 2 data only



Notes: *Blue bars denote the share of prosocial payments, red antisocial payments, and green the share of 0 payments. Pooled across treatments. Error bars: 1 standard error.*

Figure: **Inequality Aversion: Types by Country**



Notes: *Advantageous inequality averse individuals always pay to reduce advantageous ineq. Disadvantageous inequality averse individuals always reduce disadvantageous ineq. Inequality averse individuals are both advantageous and disadvantageous inequality averse. Error bars denote one standard error.* return

Table: **Country Differences in Payments, Anarchy Treatment** return

	(1)	(2)	(3)	(4)	(5)
Pro-social					
India	-0.10***	-0.02	-0.10***	-0.08**	-0.03
	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)
Indonesia	-0.16***	-0.07**	-0.15***	-0.14***	-0.07**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
USA	-0.07**	-0.05	-0.07**	-0.07**	-0.05
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Ad. Averse		0.35***			0.38***
		(0.02)			(0.02)
Disad. Averse			0.03		0.10***
			(0.03)		(0.03)
Ineq. Averse				0.16***	-0.12***
				(0.04)	(0.05)
R-squared	0.01	0.14	0.02	0.02	0.14
Anti-social					
India	0.00	-0.01	-0.00	0.01	-0.01
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Indonesia	0.04*	0.03	0.05**	0.05**	0.04
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
USA	-0.01	-0.02	-0.01	-0.01	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Ad. Averse		-0.06***			-0.06***
		(0.02)			(0.02)
Disad. Averse			0.12***		0.09***
			(0.02)		(0.03)
Ineq. Averse				0.11***	0.07*
				(0.03)	(0.04)
R-squared	0.00	0.01	0.02	0.01	0.03
Observations	5,094	5,094	5,094	5,094	5,094

Notes: Germany is the omitted country. Anarchy treatment only. Results are qualitatively similar, i.e., the magnitude and significance of the country dummies decreases, on decisions pooled across all treatments. Standard errors in parentheses. Significance levels: $^{***}p < 0.01$,** $p < 0.05$,* $p < 0.1$.

Social Preferences I return

Inspired by Andreoni [1990], we first model egotistic and other-regarding transfers.

$$U(x_i, p_i(T_j), I_{i,j}) = \gamma(x_i) + \phi(p_i) + \delta_t(T_j + p_i) + \epsilon_t(x_i - x_j)$$

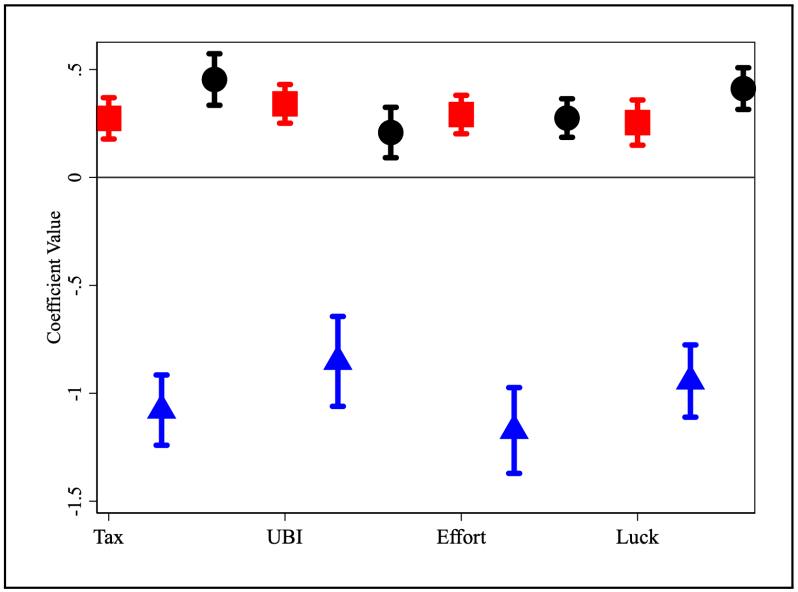
- Where
  - x_i is own income
  - p_i is a private transfer from i to j.
  - T_j is the net tax benefit of the matched partner.
  - $I_{i,j}$ is inequality between i and j.

Egotistic transfers much larger than other-regarding transfers in all treatments. Egotistic transfers constant across all treatments.

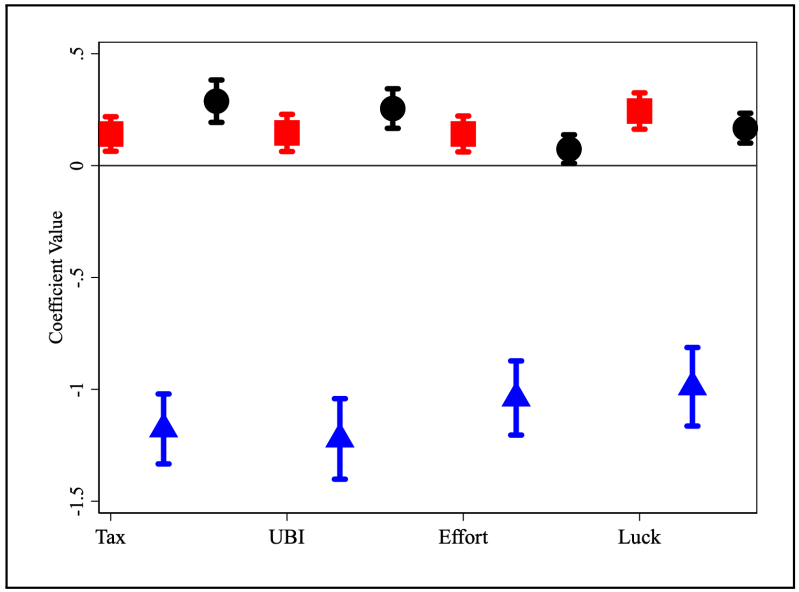
Social Preferences – Prosocial

return

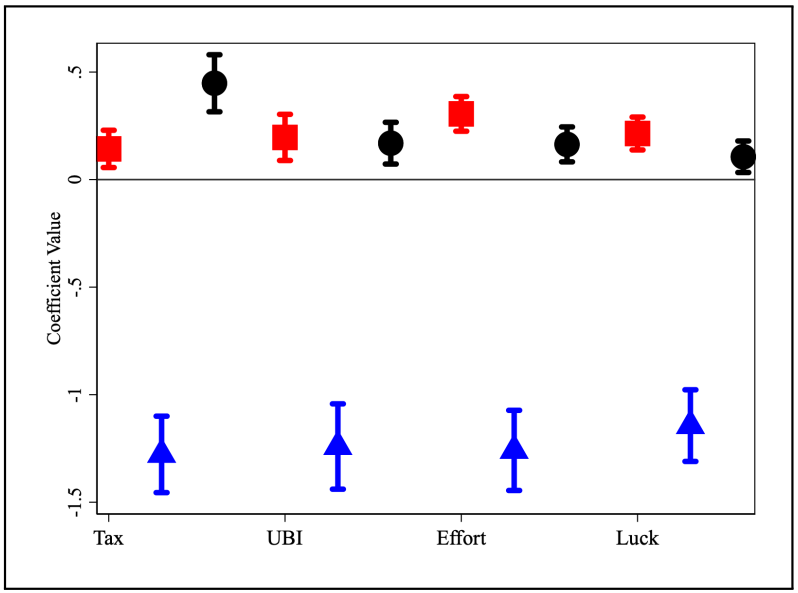
Germany



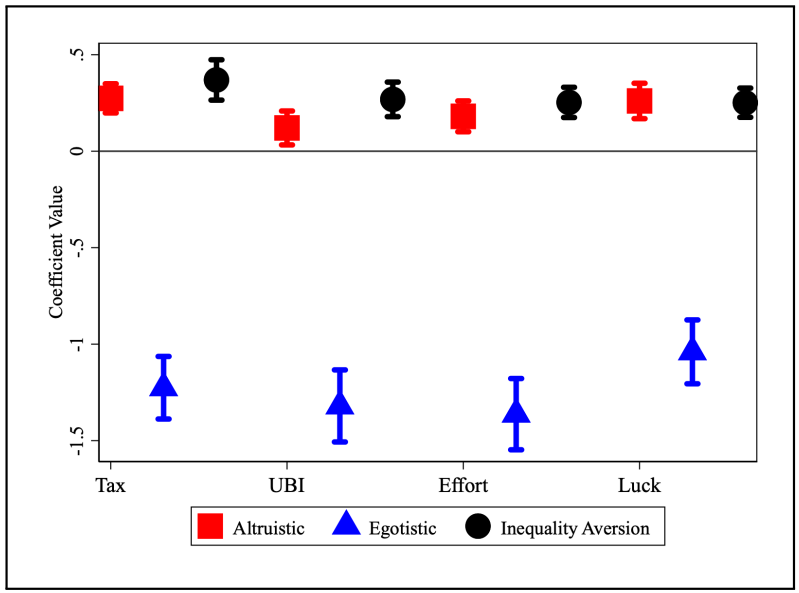
India



Indonesia



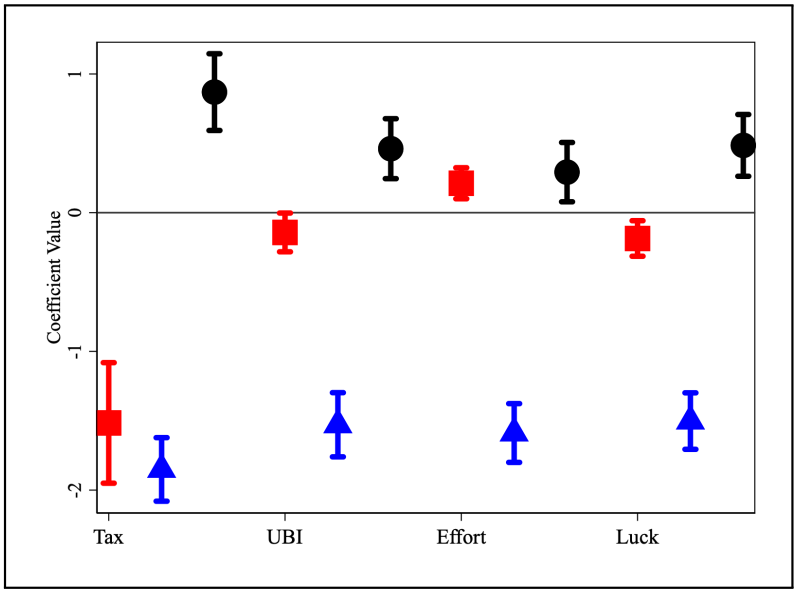
USA



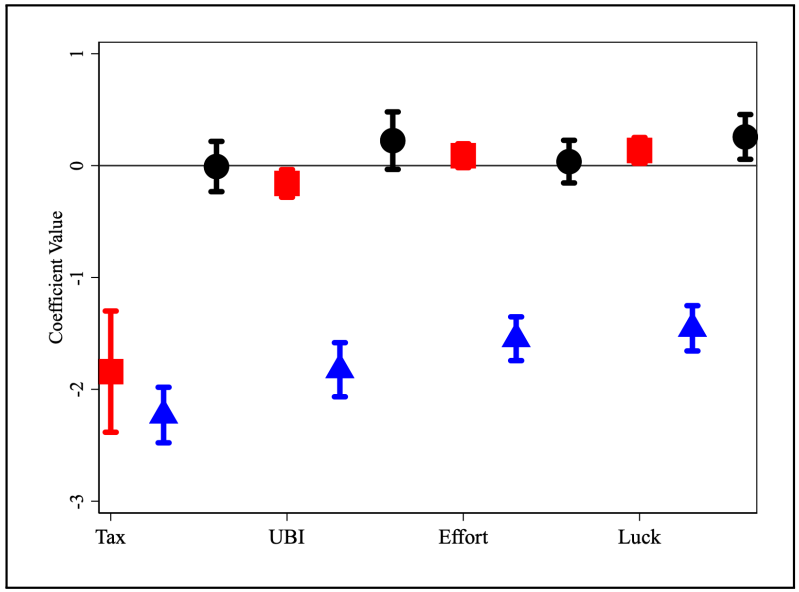
Social Preferences – Antisocial

return

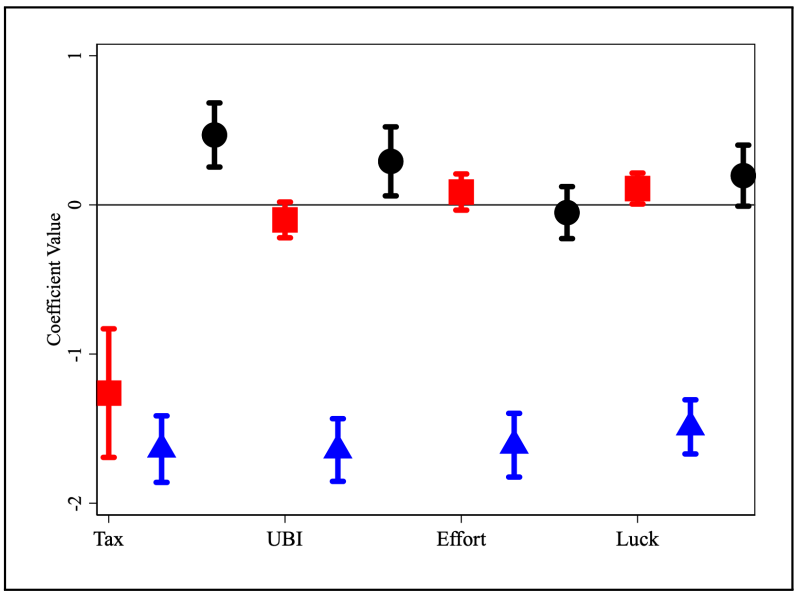
Germany



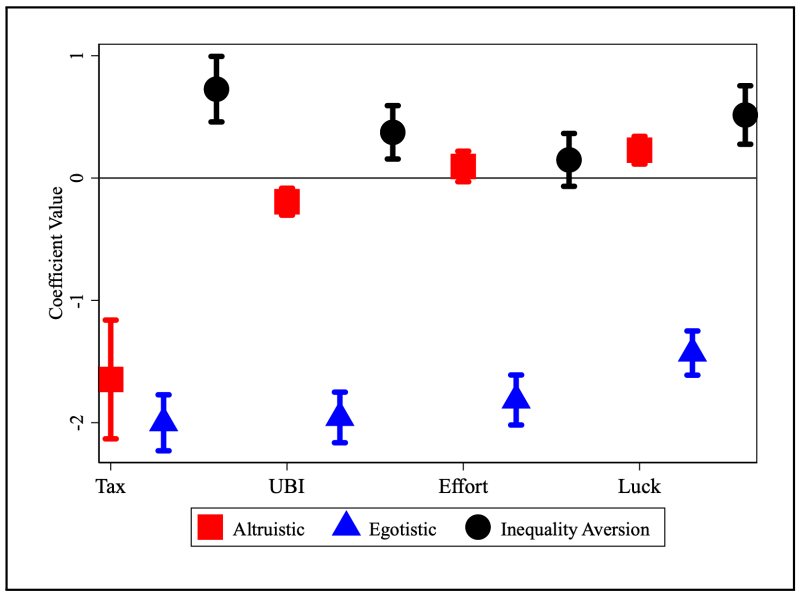
India



Indonesia



USA



Inequality Aversion return

- Crowding out specifications can't shed light on Anarchy.
- We repurpose Fehr and Schmidt [1999] to include a treatment-specific advantageous (respectively, disadvantageous) inequality aversion term $\rho_{i,\boldsymbol{p},\alpha}$ (respectively $\rho_{i,\boldsymbol{p},\beta}$).

$$U_i(x_i, x_j) = \gamma x_i \; - (\alpha_i + \rho_{i,\boldsymbol{p},\alpha}) max\{x_j - x_i, 0\} - (\beta_i + \rho_{i,\boldsymbol{p},\beta}) max\{x_i - x_j, 0\}, i \neq j$$

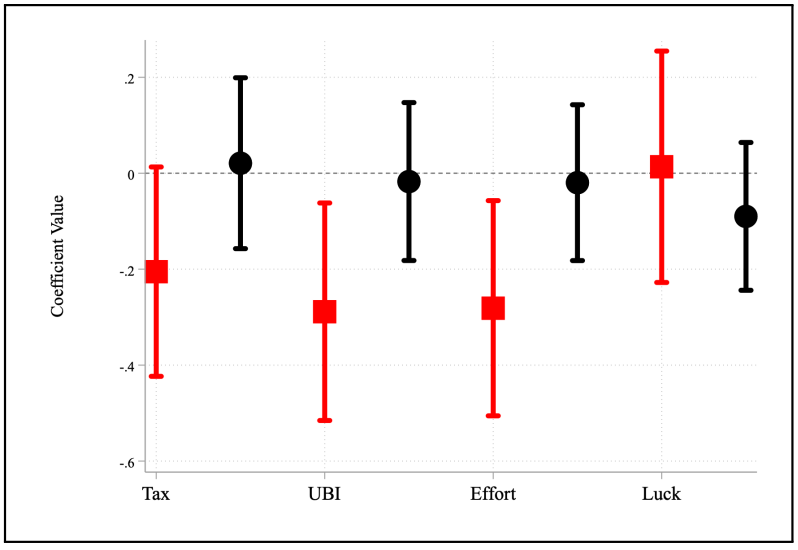
Where:

- x_i is own income
- x_j is other's income
- α_i (β_i) is disadvantageous (advantageous) inequality aversion, a parameter to estimate.

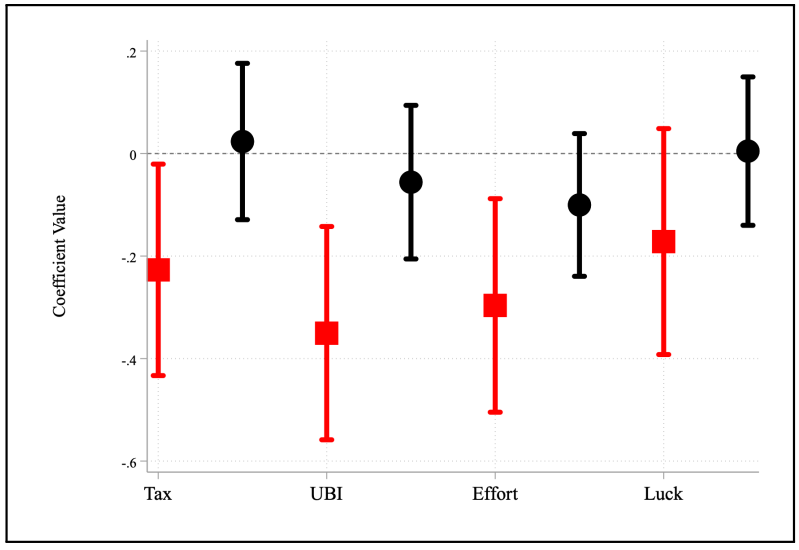
Inequality Aversion Relative to Anarchy

return

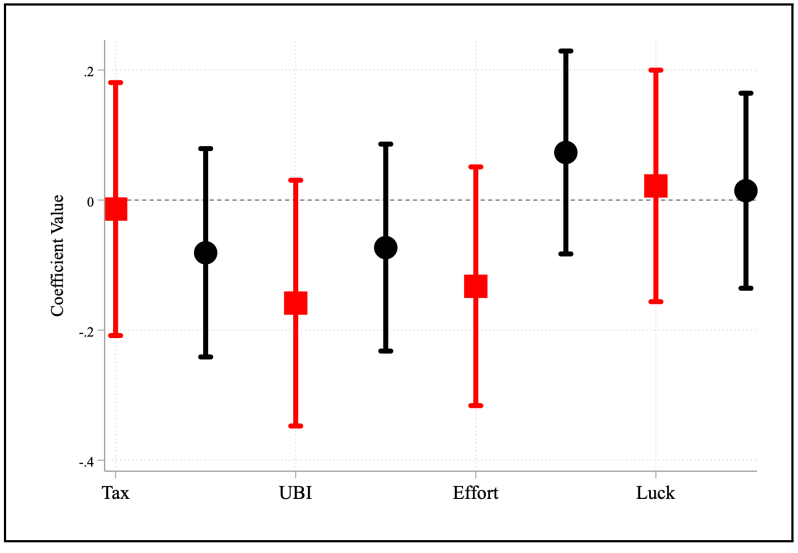
Germany



India



Indonesia



USA