# Inequality Externalities Beliefs and Preferences for Redistribution

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Cluster of Excellence
The Politics of Inequality

# Motivation: Motives behind redistributive preferences

**Why do we care about economic inequality?**

- Fairness concerns,
- Incentive effects,
- Implications for future individual income, or...

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**Why do we care about economic inequality?**

- Fairness concerns,
- Incentive effects,
- Implications for future individual income, or...
- Inequality affecting society – inequality acting as an externality

**What is an inequality externality?**

An *inequality externality* occurs when economic inequality affects some pertinent societal variable, such as crime, social unrest, economic growth, or anything else we might care about.
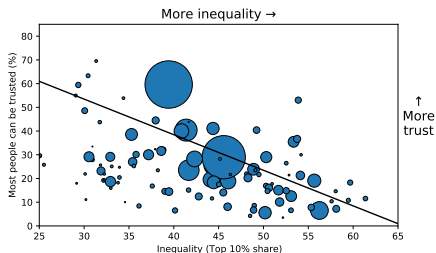
# Motivation: Inequality externalities

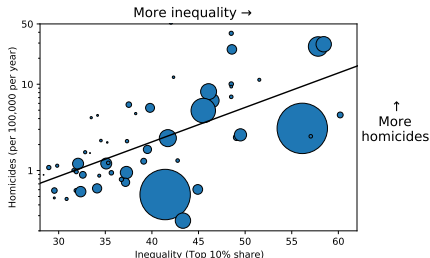Potentially very significant, often informally discussed;

> *"You can see the deteriorating impact of [inequality] on our current political system"* – Alan Greenspan (2014)

*Plato, Aristotle, A. Smith, de Tocqueville, Keynes, F. Roosevelt, Obama, B. Johnson, Sen, Draghi, more →* Here



**Generalized trust**
(World Values Survey)

**Homicides**
(World Bank)

Note: Cross-country correlations. Top 10% income share data from the World Inequality Database.

Still: **No evidence on whether voters hold such beliefs.**

- Not in Gallup, WVS, ESS, ISSP...
  - Questions on inequality are common; questions on inequality *externalities* are very rare.
- Rare exceptions  Existing questions

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(Cappelen et al., 2007; Alesina and Giuliano, 2011; Kuziemko et al., 2015; Alesina et al., 2018; Gärtner et al., 2019; Almås et al., 2020; Stantcheva, 2021, more)

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This paper: Empirical, but advances existing theoretical frameworks.

(Alesina and Giuliano, 2011; Rueda and Stegmueller, 2016; Støstad and Cowell, 2020)

`More theory`

**Research questions**

- Do individuals hold externality beliefs? (Part One)

# This paper

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**Survey of U.S. citizens fielded between Dec. 6-24**

- Fully representative along age, gender, geographical region and political affiliation via quota-based sampling  `Detailed demographics`
- Survey provider Lucid
  - 5,010 completed surveys (final sample 4,371)  `Attention checks + data quality`
- Data handling, main hypotheses and analyses pre-registered

**Part One: Descriptive results**

- "Generally speaking, do you think inequality changes society for the better or worse?" `Full question`
  - 60%: "Somewhat/a lot for the worse"
  - 15%: "Somewhat/a lot for the better"
  - 21%: "Positive/negative effects cancel each other out"
  - 3%: "Inequality does not affect society"

- 59% agree that "more unequal countries generally function worse" `Full question`

- Striking answers from open-ended text questions `Here`

$\rightarrow$ Prevailing sentiment that inequality <u>does</u> affect society

$\rightarrow$ Majority believe in *negative* effects of inequality

# Specific Externality Beliefs: Descriptive evidence
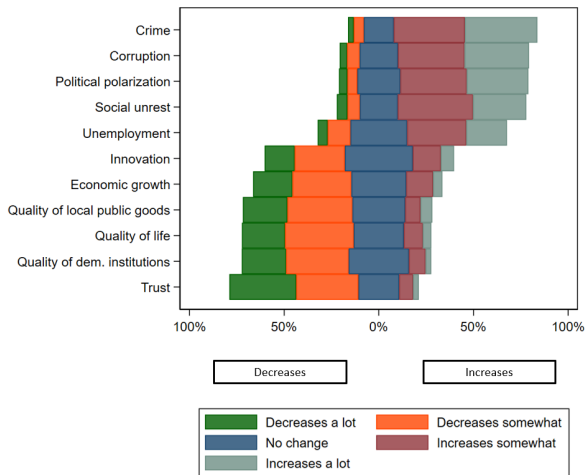


- First ever database on inequality externality beliefs

**Note.** Data from control group only. All questions are posed symmetrically. Example question text: *"How does more economic inequality change the amount of social unrest in a country?"* Table  Question phrasing  Non-monotonic beliefs  Top or bottom inequalities?  Time dimension
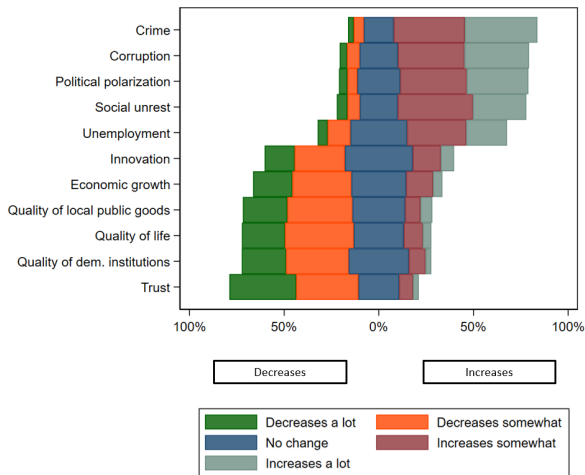
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# Specific Externality Beliefs: Descriptive evidence



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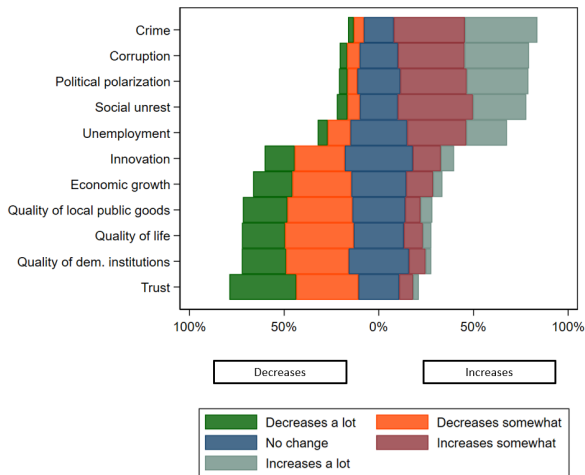
- Consistent beliefs in *negative* externalities

- Largest consensus for crime (76%)

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# Specific Externality Beliefs: Descriptive evidence



- First ever database on inequality externality beliefs

- Consistent beliefs in *negative* externalities

- Largest consensus for crime (76%)

- Even true for economic growth, unemployment and innovation

Magnitudes

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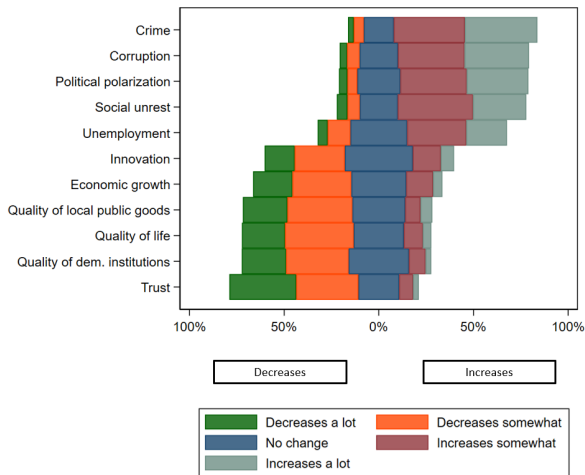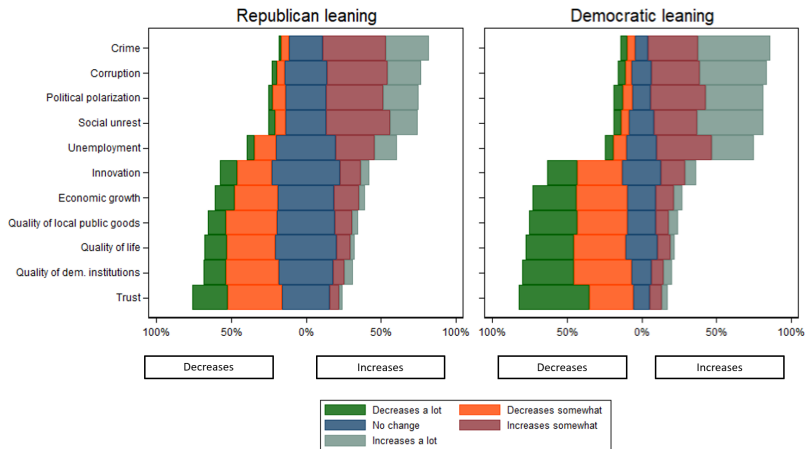
Top or bottom inequalities?  Time dimension
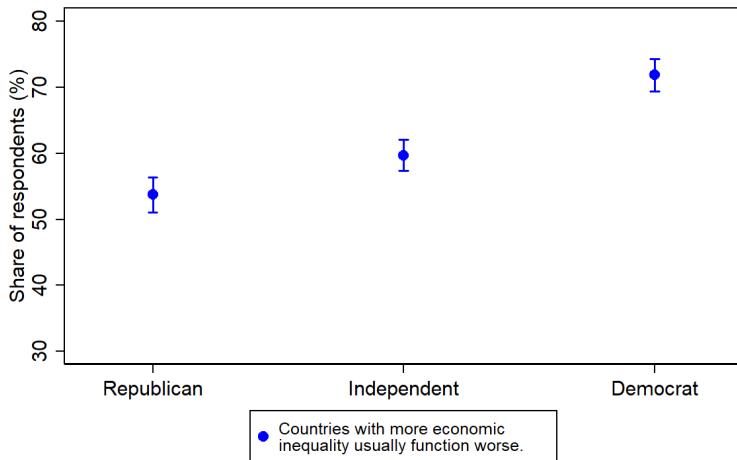
- Democrats most likely to believe in negative externalities
  Very conservative/liberal   Trump/Sanders supporters

- Even Republicans consistently believe in negative over positive externalities

**Note:** Full sample (n=4317). Respondents are asked whether they agree with the following statement: *"Countries with more economic inequality usually function worse."*.
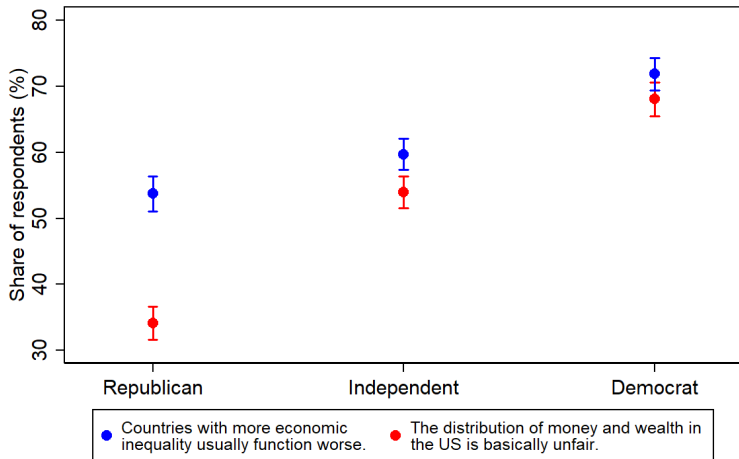
**Note:** Full sample (n=4317). Respondents are asked whether they agree with the following statements: *"The distribution of money and wealth in the US is basically fair, because everybody has an equal opportunity to succeed"* and *"Countries with more economic inequality usually function worse"* More.

# Heterogeneity: Income and wealth levels

Externality beliefs are almost uncorrelated with resources.

This is true for both income and wealth: `Are wealth and income different?`
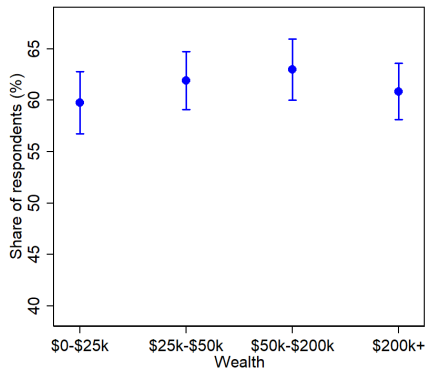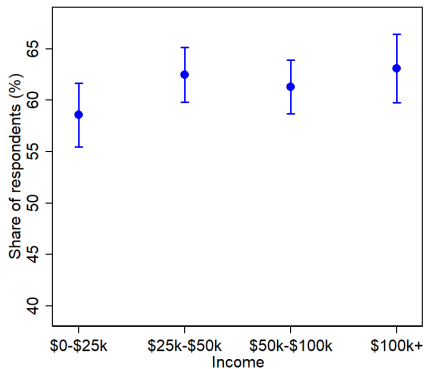


More unequal countries function worse

**Note:** Full sample (n=4317). Questions identical to previous graphs.

# Heterogeneity: Income and wealth levels

Externality beliefs are almost uncorrelated with resources.

In sharp contrast with fairness views: Are wealth and income different?
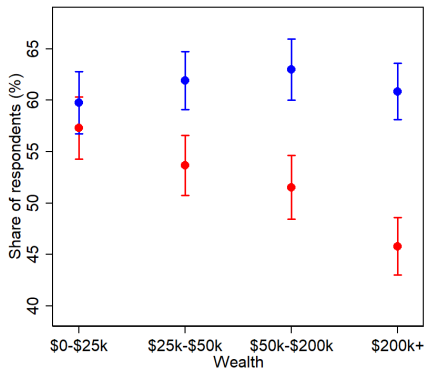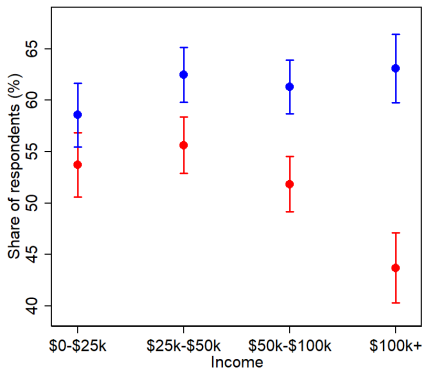


**Note:** Full sample (n=4317). Question identical to previous graphs. More  Other belief heterogeneities

**Part Two: Information experiment**

# Survey flow

**Video information treatments**

- Three externality treatments
- One fairness treatment (reference)
- Dual control groups
- "Secondary survey"

**Data handling, main hypotheses and analyses pre-registered**

# Video treatments
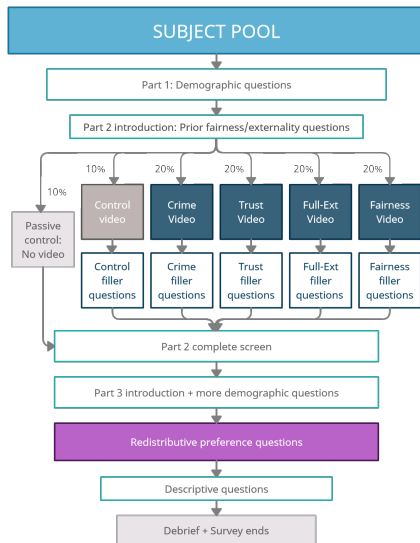


As you can see, countries that are **more unequal** usually have **much less trust between people** and **many more homicides.**
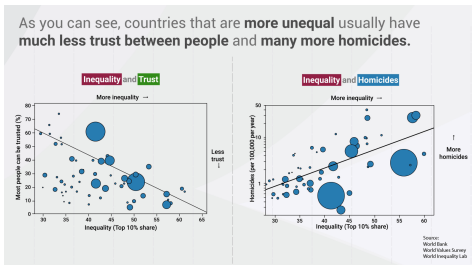
Full externality treatment (Merged crime and trust treatments, more)
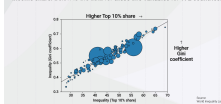


Active control
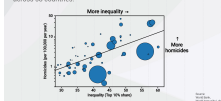


Crime treatment
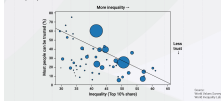


Trust treatment



Fairness treatment

Main question:

**Did the video treatments affect redistributive preferences?**

Pre-specified a standardized main outcome index ("RP index") from the sum of four redistributive outcome dummies. See four questions here

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**Proposed channel:**

Video $\rightarrow$ Externality / fairness beliefs $\rightarrow$ Redist. preferences

- First-stage as expected, no spillovers. More

# Main treatment effects

**Causal effect on redistributive preferences from the full externality and fairness treatments.**

No significance (but expected direction) for crime and trust treatments.

|                | (1) RP Index (standardized) |
| -------------- | --------------------------- |
| Crime Ext. Tr. | 0.037                       |
|                | (0.036)                     |
| Trust Ext. Tr. | 0.043                       |
|                | (0.037)                     |
| **Full Ext. Tr.** | **0.107***               |
|                | **(0.037)**                 |
| **Fairness Tr.** | **0.208***                |
|                | **(0.037)**                 |
| Controls       | Yes                         |
| Observations   | 4371.000                    |

Main takeaway:

**Inequality externality beliefs causally change redistributive preferences.**

|                | (1) RP Index (standardized) |
|----------------|:---------------------------:|
| Crime Ext. Tr. | 0.037                       |
|                | (0.036)                     |
| Trust Ext. Tr. | 0.043                       |
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| **Full Ext. Tr.** | **0.107***               |
|                | **(0.037)**                 |
| **Fairness Tr.** | **0.208***                |
|                | **(0.037)**                 |
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**How important are inequality externality beliefs as a determinant for redistributive preferences?**

**1. Treatment effect**

- Treatment effect of full externality video is ~50% of fairness video

# Comparing fairness and externality views

1. **Treatment effect**
   - Treatment effect of full externality video is ∼50% of fairness video

2. **Asking responents to score importance of various motives**
   - Externality motives about ∼ 70% of fairness concerns  More

# Comparing fairness and externality views

**1. Treatment effect**
- Treatment effect of full externality video is ∼50% of fairness video

**2. Asking responents to score importance of various motives**
- Externality motives about ∼ 70% of fairness concerns    More

**3. Horse-race: Which motives explain respondents' preferences for redistribution?**
- Predictive power of externality beliefs is ∼ 70% of fairness views
  More

Externality beliefs seem <u>less polarized and polarizing</u> compared to fairness views:

- **Descriptive setting:** Externality views more broadly held across income and party

## Discussion: Polarization

Externality beliefs seem <u>less polarized and polarizing</u> compared to fairness views:

- **Descriptive setting:** Externality views more broadly held across income and party

- **Heterogeneous treatment in income:** Fairness treatment particularly convincing among low-income respondents, unlike broadly effective externality treatments  `More`

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- **Descriptive setting:** Externality views more broadly held across income and party

- **Heterogeneous treatment in income:** Fairness treatment particularly convincing among low-income respondents, unlike broadly effective externality treatments (More)

- **Anger:** Fairness treatment trigger <u>significantly more anger</u> in respondents than externality treatments (More)

# Discussion: Polarization

Externality beliefs seem <u>less polarized and polarizing</u> compared to fairness views.

**Intuitively sensible:**

- <u>Fairness arguments:</u> Fixed pie arguments
    - Require winners and losers
    - Philosophical in nature

- <u>Externality arguments:</u> A common enemy
    - Externalities apply to "everyone"
    - Consequentialist in nature

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- <u>Externality arguments</u>: A common enemy
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    - Consequentialist in nature

Takeaway point: **Externality arguments functionally different from fairness arguments.** Broadly effective, potentially less divisive.

# Conclusion

First known survey of Americans' inequality externality beliefs and their effect on redistributive preferences:

1. **Strong majority believes in inequality's negative externalities**
   - 97% believe economic inequality changes society in some way
   - Majority believes economic growth and innovation is *negatively* affected

2. **Externality beliefs are substantial causal determinants of redistributive preferences**
   - Magnitude between half and two-thirds of fairness beliefs

3. **Externality arguments are less polarized and polarizing than fairness arguments**

**Thank you!**

**And stay tuned – more surveys to come.**

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# References I

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Rueda, D. and Stegmueller, D. (2016). The Externalities of Inequality: Fear of Crime and Preferences for Redistribution in Western Europe. *American Journal of Political Science*, 60(2):472–489.

Stantcheva, S. (2021). Understanding Tax Policy: How Do People Reason? *The Quarterly Journal of Economics*, 136(4):2309–2369.

Støstad, M. and Cowell, F. (2020). Inequality as an Externality: Consequences for Tax Design. *Working Paper*.

# Not a rare observation

Plato (360 B.C.): "In a state which is desirous of being saved from the greatest of all plagues [...] here should exist among the citizens neither extreme poverty, nor, again, excess of wealth, for both are productive of both these evils."

Aristotle (350 B.C.): "It is clear then that those states in which the middle element is large, and stronger if possible than the other two (wealthy and poor) together, or at any rate stronger than either of them alone, have every chance of having a well-run constitution."

Smith, A. (1776): "The establishment of perfect justice, of perfect liberty, and of perfect equality, is the very simple secret which most effectively secures the highest degree of prosperity to all the three classes."

de Tocqueville, A. (1835): "It is the dissimilarities and inequalities among men which give rise to the notion of honor; as such differences become less, it grows feeble; and when they disappear, it will vanish too."

Keynes, J. M. (1919): "In fact, it was precisely the inequality of the distribution of wealth which made possible those vast accumulations of fixed wealth and of capital improvements which distinguished that age from all others."

Roosevelt, F.D. (1936): "For too many of us the political equality we once had won was meaningless in the face of economic inequality."

Becker, G. S. (1968): The opportunity-cost theory of crime

OECD (2006): "Inequalities may create incentives for people to improve their situation through work, innovation or acquiring new skills."

Sen, A. (2011) "I believe that virtually all the problems in the world come from inequality of one kind or another."

Obama, B. (2011): "This kind of inequality – a level that we haven't seen since the Great Depression – hurts us all."

Johnson, B. (2013): "Indeed some measure of inequality is essential for the spirit of envy and keeping up with the Joneses that is, like greed, a valuable spur to economic activity."

Pope Francis (2014): "Inequality is the root of social evil."

Sanders, B. (2014): "A nation will not survive morally or economically when so few have so much, while so many have so little."

Draghi, M. (2017): "Is [inequality] a seriously destabilising factor that we should cope with? Yes it is."

Wolf, M. (2019): "[Inequality] makes politics far more fractious, undermines social mobility; weakens aggregate demand and slows economic growth."

Go back

# Other inequality externality questions

General Social Survey (US):

- Agree/disagree: *"Large differences in income are necessary for America's prosperity."*

- Agreed in [1987, 1996, 2000, 2008]: (34%, 29%, 27%, 24%)

Martin Whyte's China surveys, n~3,250:

- 51% agrees that *"income gaps threaten stability"*

- 20% agrees that *"income gaps aid national wealth"*

- 50% agrees that *"income gaps foster hard work"*

International Social Justice Project (ISJP) surveys, broad range of European countries:

- Agree/disagree: *"There is an incentive for individual effort only if differences in income are large enough."*

Back

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- Agree/disagree: *"Large differences in income are necessary for America's prosperity."*
- Agreed in [1987, 1996, 2000, 2008]: (34%, 29%, 27%, 24%)

Back

## Theoretical underpinnings

Self-serving individuals may care about economic inequality $\bar{\theta}$ itself if it affects something they care about (Støstad and Cowell, 2020);

$$U_i(x_i(\bar{\theta}), \Psi(\bar{\theta}), ...) \rightarrow \tilde{U}_i(x_i', \bar{\theta}, ...),$$

Externality effects on individual consumption $x_i$ and other factors individuals care about $\Psi$.

Optimal tax rate depends on magnitude of inequality externality beliefs $\eta_i$:

$$\tau_i(z) = \frac{1 + \eta_i \Upsilon_i(z) - \bar{G}_i(z)}{1 + \eta_i \Upsilon_i(z) + \alpha_i(z)\epsilon_i(z) - \bar{G}_i(z)}, \tag{1}$$

$\alpha_i(z) = zf(z)/(1 - F(z)) =$ the local Pareto parameter
$\epsilon_i(z) =$ elasticity of taxable income
$\bar{G}_i =$ average social welfare weight above $z$
$\Upsilon_i(z) = \eta \left[ \kappa(z)\alpha(z)\epsilon + \bar{\kappa}(z) \right]$
$\kappa =$ weight of income bracket $z$ in inequality metric
$\bar{\kappa} =$ average weight of income brackets above $z$ in inequality metric

Back

# Attention checks

1. All respondents screened internally by Lucid
2. Respondents asked if they are U.S. citizens
3. Also asked a factual question about U.S. culture to ensure citizenship
   - Incorrect answers removed from the survey
4. Respondents must complete a captcha
5. Respondents must answer at least 2 of 3 other attention checks correctly:
   - Asked opinion on daylight savings; must write at least 3 words
   - Long question with hidden answer in middle
   - Simple question asked twice, respondent asked to duplicate answers
6. Simple attention check towards end of survey ("Please answer bottom")

Back

# Sanity checks: Ensuring data quality

**Data set passes every sanity check:**

1. Percentage of Republican voters per state in our data set tracks 2020 election results very well

2. Comparable results to other representative samples (where applicable)

3. Able to replicate results from redistributive preference literature

4. 96% of final respondents succeed on final attention check

Back
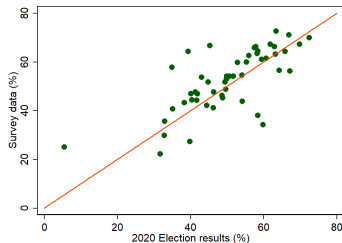


**Note:** Plot showing the 2020 U.S. election results by state plotted against the percentage of respondents who self-report as Republican in our data. Data points are inside error bars (not shown) for 44 of 50 states.

## Descriptive evidence: General Externality Beliefs

*This question is about what economic inequality does to society. Generally speaking, do you think more economic inequality changes society for the better or for the worse?*

|  | Freq. | Percent |
|---|---|---|
| A lot for the better | 38 | 4.13 |
| Somewhat for the better | 102 | 11.09 |
| Good and bad effects cancel each other out | 194 | 21.09 |
| Somewhat for the worse | 324 | 35.22 |
| A lot for the worse | 231 | 25.11 |
| Inequality does not affect society | 30 | 3.26 |
| Total | 932 | 100 |

**Note:** Only data from control group shown. Those who answered "Good and bad effects cancel each other out" and "Inequality does not affect society" answered this in a follow-up question. Their original answer was "Neither / No change", which was selected by 24% of the total respondents. Back

# More unequal countries generally function worse

How much do you agree with the following statement?
*Countries with more economic inequality usually function worse.*

- Totally agree (4.58%)

- Somewhat agree (10.44%)

- Neither agree nor disagree (25.90%)

- Somewhat disagree (36.24%)

- Totally disagree (22.84%)

Back

# Descriptive questions: Full table

| | Crime | Corruption | Pol. polar. | Social unrest | Unemployment | Innovation | Econ. growth | Public goods | Quality of life | Dem. inst. | Trust |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Increases | 76% | 69% | 68% | 68% | 53% | 22% | 19% | 14% | 14% | 12% | 10% |
| No change | 16% | 20% | 23% | 20% | 30% | 36% | 29% | 28% | 26% | 32% | 22% |
| Decreases | 8% | 11% | 10% | 12% | 17% | 42% | 52% | 58% | 59% | 56% | 68% |

**Note.** This table reports full results from the descriptive questions in the control group (n=932).

Back

# Specific Externality Beliefs: Descriptive evidence

Example question:

"*How does more economic inequality change the amount of social unrest in a country?*"

- *More inequality $\rightarrow$ a lot less social unrest*
- *More inequality $\rightarrow$ somewhat less social unrest*
- *More inequality does not affect the amount of social unrest*
- *More inequality $\rightarrow$ somewhat more social unrest*
- *More inequality $\rightarrow$ a lot more social unrest*

**Symmetry is preserved** (and answer order randomly swapped).

**Different phrasing** for $1/3$ of respondents: "*do larger differences in income and wealth*" instead of "*does more economic inequality*" $\rightarrow$ **very similar results**.

Back

| Externality | Additional definition |
| --- | --- |
| The amount of crime | *Note: When we say the amount of crime we mean the overall crime rate, including homicides, robberies, property crime and more.* |
| The overall level of trust | *Note: When we say the total level of trust we mean the strength of a country's social fabric. Some examples are whether most people trust others, whether people cooperate with each other, how many people return lost wallets, and so on.* |
| The amount of social unrest | None |
| The rate of economic growth | None |
| The amount of corruption | None |
| The overall amount of unemployment | None |
| The overall amount of innovation | None |
| The overall quality of life | *Note: Here we want you to compare between people <u>with the same incomes living in more or less unequal societies.</u>* |
| The overall amount of political polarization | *Note: When we say political polarization we mean to what extent people's and politicians' opinions are divided on political issues, as well as how strong these divisions are.* |
| The quality of democratic institutions | *Note: When we say the quality of democratic institutions we mean the capable and equitable functioning of the political system, the avoidance of abuses of power, the equality of the rule of law, whether civil liberties are respected, and so on.* |
| The quality of local public goods | *Note: When we say the quality of local public goods we mean the quality of things like schools, local government services, parks, youth centers and more.* |

Back

# Most respondents have monotonic beliefs

Are elicited beliefs dependent on reference point ($=$ high US inequality)?

Results general with a sufficient assumption:
<u>Monotonic inequality externality beliefs.</u>

Examined this (and more) in a robustness survey w. Dynata, N$\sim$1700, Aug '22:

*"In the earlier question you answered that '[previous answer]'.*
*Do you think this is true in any kind of country – no matter whether the country*
*is initially very equal, very unequal, or anything else?"*

|  | Crime | Trust | Pol. polar. | Social unrest | Corr uption | Econ. growth | Dem. inst. | Inno- vation |
|---|---|---|---|---|---|---|---|---|
| Yes (*monotonic*) | 90% | 84% | 82% | 82% | 79% | 78% | 77% | 76% |
| No (*non-monotonic*) | 10% | 16% | 18% | 18% | 21% | 22% | 23% | 24% |

Back

# Both top and bottom inequalities matter

<u>What type of inequality matters?</u>

Examined this (and more) in a robustness survey w. Dynata, N∼1700, Aug '22:

*What do you think matters more for how economic inequality changes the level of [outcome]?*

- *Economic differences near the bottom, meaning how many relatively poor people there are and how little they have, or*
- *Economic differences near the top, meaning how many relatively rich people there are and how much they have.*

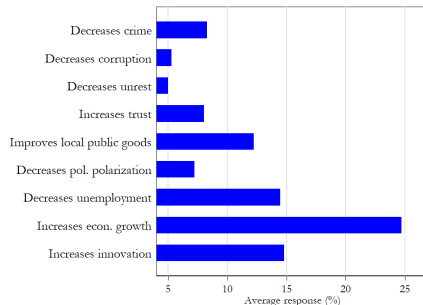|  | Pol. polar. | Crime | Corr- uption | Inno- vation | Social unrest | Econ. growth | Trust | Dem. inst. |
|---|---|---|---|---|---|---|---|---|
| Both | 51% | 46% | 45% | 43% | 41% | 40% | 38% | 37% |
| Bottom inequality | 33% | 47% | 26% | 43% | 41% | 43% | 50% | 43% |
| Top inequality | 16% | 7% | 30% | 14% | 12% | 16% | 12% | 20% |

Back

# Which inequality externalities are meaningful?

Respondents asked to delegate 100 points to externalities that "matter the most":
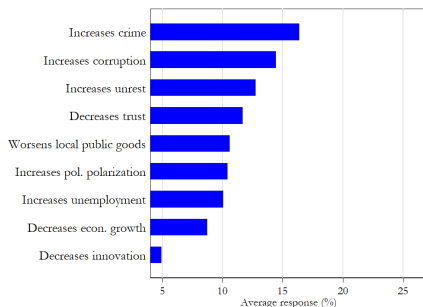


**Note:** These questions were only asked to those in the control groups who also (i) answered that inequality is a negative (left) or positive (right) externality, and (ii) did not answer that they changed their mind when posed this question. n=472 (left) and n=100 (right).

Full phrasing    Back

"How do you think economic inequality changes society? For this question we want to hear your ideas and opinions more broadly.

Some example answers would be "Society would become more/less ____" or "____ would increase/decrease" (where you write whatever you think instead of ____). But these are just examples; feel free to use your own words! Remember that there are no wrong answers, and that we appreciate it if you put some thought into the response."

"*Income inequality stifles economic growth and is a catalyst for crime.*"

- 69 year-old white man from Delaware (Democrat)  Back

"How do you think economic inequality changes society? For this question we want to hear your ideas and opinions more broadly.

Some example answers would be "Society would become more/less ____" or "____ would increase/decrease" (where you write whatever you think instead of ____). But these are just examples; feel free to use your own words! Remember that there are no wrong answers, and that we appreciate it if you put some thought into the response."

"*Income inequality provides people incentives to work harder to advance.*"

- 75 year-old white man from California (Republican) Back

# General Externality Beliefs: Text-based question

"How do you think economic inequality changes society? For this question we want to hear your ideas and opinions more broadly.

Some example answers would be "Society would become more/less ____" or "____ would increase/decrease" (where you write whatever you think instead of ____). But these are just examples; feel free to use your own words! Remember that there are no wrong answers, and that we appreciate it if you put some thought into the response."

*"Society would become more unstable, the rich get richer while the working man works harder to make ends meet."*

- 62 year-old Hispanic man from Texas (Republican) <span>Back</span>

# General Externality Beliefs: Text-based question

"How do you think economic inequality changes society? For this question we want to hear your ideas and opinions more broadly.

Some example answers would be "Society would become more/less ____" or "____ would increase/decrease" (where you write whatever you think instead of ____). But these are just examples; feel free to use your own words! Remember that there are no wrong answers, and that we appreciate it if you put some thought into the response."

"*Inequality-Ive been homeless and hungry watching the affluent waste and squander whole you're wishing someone would care. And I've seen people get pissed off enough to want to teach them a lesson when they are too blind to care. I don't blame them. It's disgusting to watch . Heartbreaking even. So society wo u ls have to change as a natural result of all this, the gap becoming larger and larger and more heated between the factions.The Hunger Games. That's where our society is headed.*"

- 41 year-old white woman from California (Independent) `Back`

# General Externality Beliefs: Text-based question

"How do you think economic inequality changes society? For this question we want to hear your ideas and opinions more broadly.

Some example answers would be "Society would become more/less ____" or "____ would increase/decrease" (where you write whatever you think instead of ____). But these are just examples; feel free to use your own words! Remember that there are no wrong answers, and that we appreciate it if you put some thought into the response."

"*Too much income inequality kills the hope of the lower income people. It also makes them angry and more prone to civil disorder. It affects the upper 5% too, isolating them from, and reducing their empathy for, the rest of society, which, in turn, can lead to more civil strife.*"

- 71 year-old white man from Minnesota (Independent) Back

# Party heterogeneity: More questions
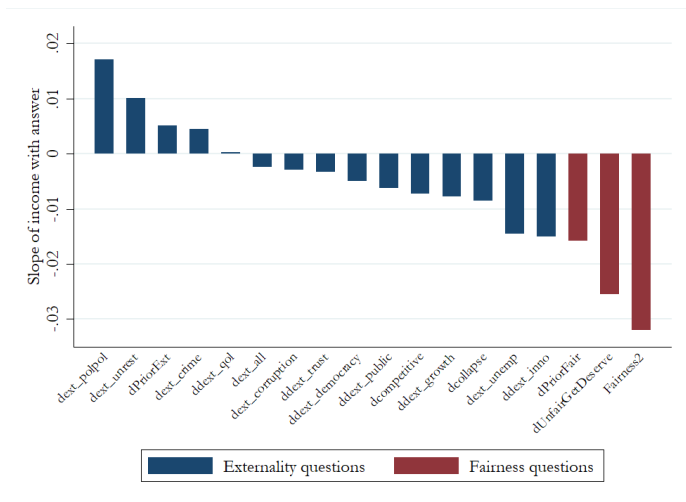
Fairness questions are always more party-polarized than ext. questions:
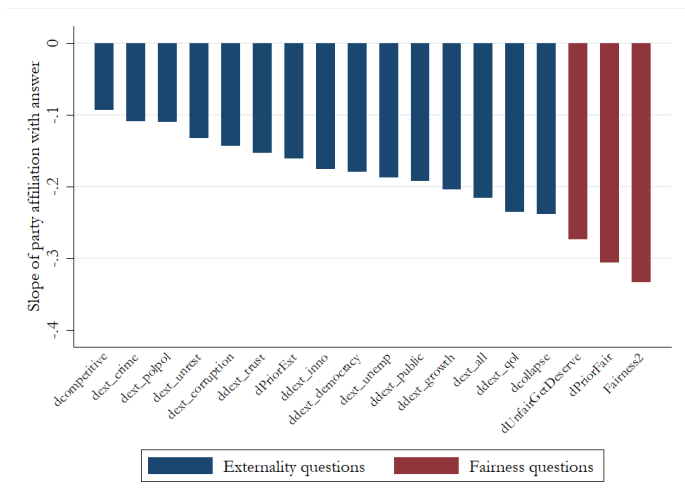


Note: The effect of being Republican-leaning on each externality (blue) or fairness (red) question. Back

Fairness questions are always more income-polarized than ext. questions:



Note: The effect of income (12-point scale) on each externality (blue) or fairness (red) question. Back

# Abolishing billionaires? Income and wealth differences

Income and wealth are heavily correlated in our data set (t=48.00), but only wealth correlates with whether individuals want to abolish billionaires: Back
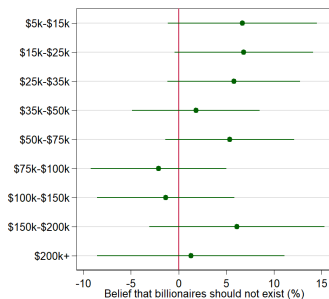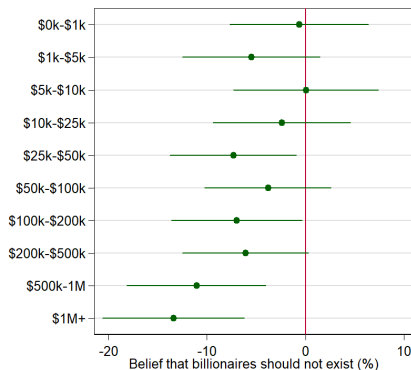


Note: The correlations of wealth and income with whether the respondent answered "In favor" to the question "In the United States, 614 people currently possess wealth in excess of $1 billion. Are you in favor or against a reform that would prevent wealth from being higher than $1 billion?". The reference groups are $0-$5k (income) and below $0 (wealth).

**Very Conservative**

**Very Liberal**
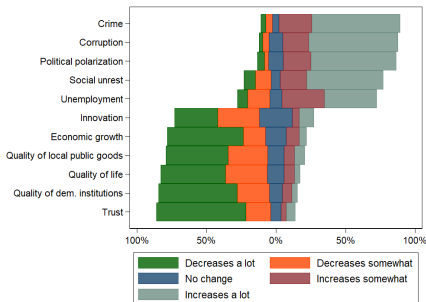
Back

# Other heterogeneity
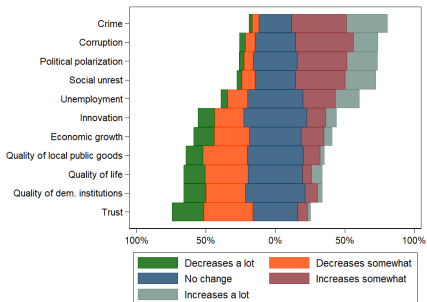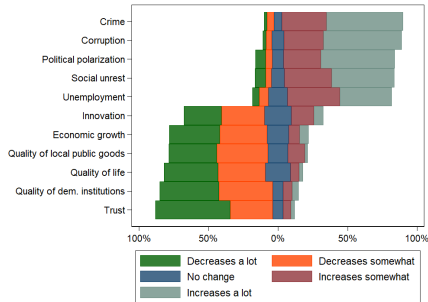
- **Fairness views** strongly correlated with inequality externality beliefs

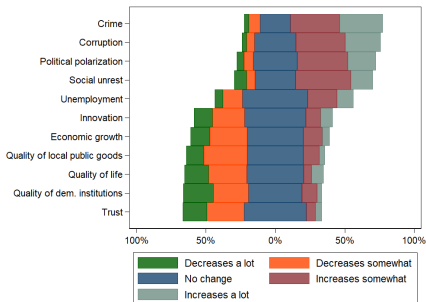- **Older individuals** are *more* likely to believe that inequality has negative effects (although results are somewhat mixed)

- **White** respondents are *more* likely to believe in negative effects

- **Higher education** is correlated to negative externality beliefs

- **Gender** is *not* correlated with externality beliefs

- **Broad region** (South, West, Mid-West, North-East) is *not* correlated with externality beliefs

Back

# Question phrasing: Externality magnitudes

Question text:

*When thinking about how inequality [negatively / positively] affects society, which dimensions do you think matter the most, generally speaking?*

*Please indicate what dimensions you think matter the most by giving scores below that add up to 100.*

Back

# Treatment effects: First stage
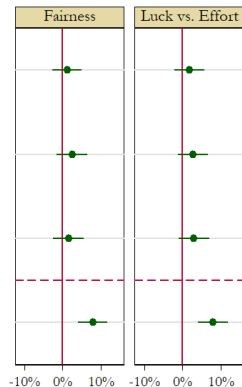


**Externality opinions**

**Fairness views**

**Externality opinions** | **Fairness views**

- Externality treatments affect ext. opinions

# Treatment effects: First stage

**Externality opinions**  **Fairness views**
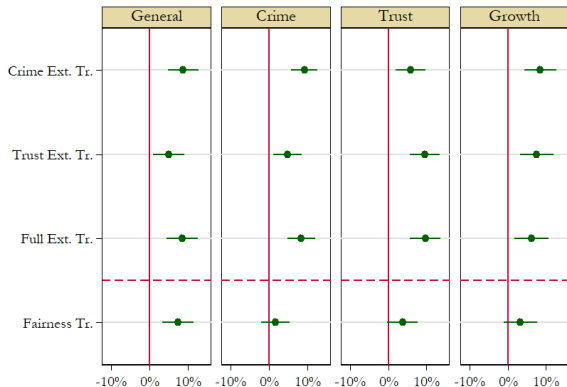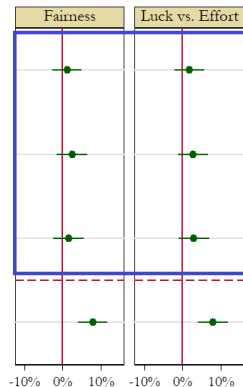


- Externality treatments affect ext. opinions – but not fairness views

# Treatment effects: First stage
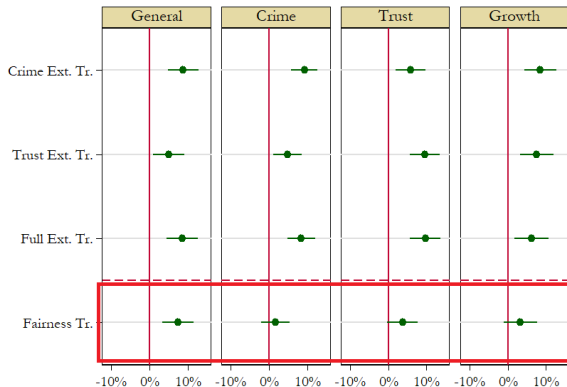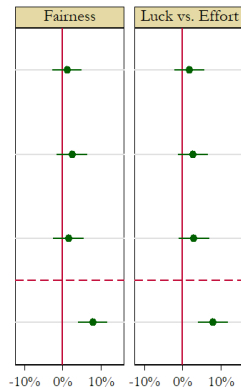


**Externality opinions**          **Fairness views**

- Externality treatments affect ext. opinions – but not fairness views
- Fairness treatment affects fairness views

**Externality opinions**  **Fairness views**

- Externality treatments affect ext. opinions – but not fairness views
- Fairness treatment affects fairness views – (generally) not externality views

Full first-stage results   Text-based first stage

# First stage regression

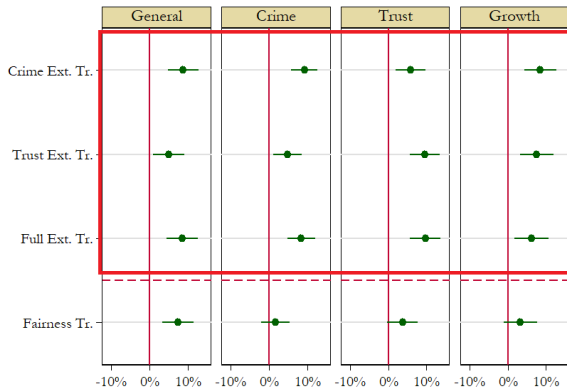| | (1) General neg. ext. b/se | (2) Ineq. incr. crime b/se | (3) Ineq. red. trust b/se | (4) Ineq. red. growth b/se | (5) Society unfair (post) b/se | (6) Fairness2_alt b/se |
|---|---|---|---|---|---|---|
| Crime Ext. Tr. | 0.088*** | 0.093*** | 0.059*** | 0.086*** | 0.012 | 0.018 |
| | (0.021) | (0.018) | (0.020) | (0.022) | (0.020) | (0.020) |
| Trust Ext. Tr. | 0.050** | 0.048** | 0.096*** | 0.076*** | 0.025 | 0.028 |
| | (0.021) | (0.019) | (0.020) | (0.023) | (0.020) | (0.020) |
| Full Ext. Tr. | 0.085*** | 0.084*** | 0.097*** | 0.062*** | 0.016 | 0.030 |
| | (0.021) | (0.019) | (0.020) | (0.023) | (0.020) | (0.020) |
| Fairness Tr. | 0.075*** | 0.017 | 0.037* | 0.033 | 0.079*** | 0.079*** |
| | (0.021) | (0.019) | (0.021) | (0.022) | (0.020) | (0.020) |
| Controls | | | | | | |
| R2 | 0.159 | 0.084 | 0.093 | 0.102 | 0.239 | 0.241 |
| Observations | 4371.000 | 4371.000 | 4371.000 | 4371.000 | 4371.000 | 4371.000 |

**Note.** This table reports results from a regression of each treatment group on externality beliefs and fairness views. Controls not listed include gender, race, income-group, age-group, education, employment status, geographic region. Standard errors are in parentheses. *Significance levels:* *10%, **5%, ***1%.

- Externality treatments affect externality beliefs
- Fairness treatment affects fairness views and general externality views, but not specific externality views
  - General externality belief effect likely from spillovers

Back

# Redistributive preference questions

1. How much redistribution of income do you prefer across citizens in the U.S.?
2. Agree/disagree: The government should take measures to reduce differences in income levels.
3. How big of an issue do you think income inequality is in America?
4. What is your preferred top 10% average tax rate?

Back

The general text question also allows us to check if treatments worked:

| | Mentioned crime (%) |
|---|---|
| Crime tr. | **17.04** |
| Trust tr. | 4.48 |
| Full ext tr. | **13.23** |
| Fairness tr. | 4.13 |
| Control (passive) | 4.46 |
| Control (active) | 4.57 |

| | Mentioned trust (%) |
|---|---|
| Crime tr. | 0.32 |
| Trust tr. | **6.30** |
| Full ext tr. | **3.71** |
| Fairness tr. | 0.23 |
| Control (passive) | 0.32 |
| Control (active) | 0.00 |

| | Mentioned video (%) |
|---|---|
| Crime tr. | 0.43 |
| Trust tr. | 0.12 |
| Full ext tr. | 0.37 |
| Fairness tr. | 0.00 |
| Control (passive) | 0.00 |
| Control (active) | 0.00 |

- Respondents in crime and full externality treatments mention crime
- Respondents in trust and full externality treatments mention trust
- Very few respondents mention video (or other related words), indicating success of the "secondary survey" <span>Back</span>

**Heterogeneous treatments in income / wealth:**

- Externality treatments similarly effective across the income/wealth distribution
- Fairness treatment particularly convincing at the bottom

See more  Back

|                     | RP Index  |
|---------------------|-----------|
| Full Ext. Tr.       | 0.099*    |
|                     | (0.053)   |
| Full Ext. Tr. $50k+ | 0.017     |
|                     | (0.074)   |
| Fairness Tr.        | 0.308***  |
|                     | (0.054)   |
| Fairness Tr. $50k+  | -0.197*** |
|                     | (0.073)   |
| Controls            | Yes       |
| Adjusted R2         | 0.388     |
| Observations        | 4371.000  |

**Note.** Interaction effects between income and full externality and fairness treatments. Controls included. Standard errors are in parentheses. *Significance levels*: *10%, **5%, ***1%. Full Table

**Heterogeneous treatments in income / wealth:**

- Externality treatments similarly effective across the income/wealth distribution
- Fairness treatment particularly convincing at the bottom

**Heterogeneous treatments in party:**

- Generally, Republicans *less* likely to be affected by full externality treatment
- Results more mixed across treatments

See more    Back

|                      | RP Index   |
|----------------------|------------|
| Full Ext. Tr.        | 0.099*     |
|                      | (0.053)    |
| Full Ext. Tr. $50k+  | 0.017      |
|                      | (0.074)    |
| Fairness Tr.         | 0.308***   |
|                      | (0.054)    |
| Fairness Tr. $50k+   | -0.197***  |
|                      | (0.073)    |
| Controls             | Yes        |
| Adjusted R2          | 0.388      |
| Observations         | 4371.000   |

**Note.** Interaction effects between income and full externality and fairness treatments. Controls included. Standard errors are in parentheses. *Significance levels*: *10%, **5%, ***1%. Full Table

| | (1) RP Index b/se | (2) Wants redistribution b/se | (3) Ineq. is serious issue b/se | (4) Gov. reduce ineq. b/se | (5) Increase top taxes b/se |
|---|---|---|---|---|---|
| Crime Ext. Tr. | 0.041 | 0.016 | 0.035 | -0.006 | 0.013 |
| | (0.052) | (0.030) | (0.027) | (0.029) | (0.029) |
| CrimeIncome | -0.009 | 0.030 | -0.033 | 0.027 | -0.037 |
| | (0.073) | (0.041) | (0.039) | (0.040) | (0.042) |
| Trust Ext. Tr. | 0.067 | -0.001 | 0.043 | 0.024 | 0.030 |
| | (0.053) | (0.030) | (0.028) | (0.029) | (0.030) |
| TrustIncome | -0.049 | 0.015 | -0.055 | 0.026 | -0.055 |
| | (0.074) | (0.043) | (0.040) | (0.040) | (0.043) |
| Full Ext. Tr. | 0.099* | 0.041 | 0.091*** | 0.019 | -0.009 |
| | (0.053) | (0.031) | (0.029) | (0.029) | (0.031) |
| FullIncome | 0.017 | 0.019 | -0.046 | 0.058 | -0.007 |
| | (0.074) | (0.043) | (0.040) | (0.040) | (0.043) |
| Fairness Tr. | 0.308*** | 0.091*** | 0.168*** | 0.080*** | 0.106*** |
| | (0.054) | (0.032) | (0.028) | (0.029) | (0.030) |
| FairnessIncome | -0.197*** | -0.076* | -0.105*** | -0.023 | -0.080* |
| | (0.073) | (0.043) | (0.039) | (0.040) | (0.042) |
| Controls | Yes | Yes | Yes | Yes | Yes |
| Adjusted R2 | 0.388 | 0.165 | 0.310 | 0.289 | 0.166 |
| Observations | 4371.000 | 4371.000 | 4371.000 | 4371.000 | 4371.000 |

**Note.** This table reports results from a regression of different redistributive preference outcomes on fairness views, political views, externality beliefs and attitudes towards the government, as well as socio-economic control variables. Controls not listed include gender, race, income-group, age-group, education, employment status, geographic region. Standard errors are in parentheses.

*Significance levels*: *10%, **5%, ***1%.  Back

# Heterogeneous treatments over party

- Those who vote Republican and Independent less likely to be affected by *full* externality treatment

- Crime and trust treatments broadly effective, similar to fairness treatment
    - Republicans and Independents *more* likely to be affected by trust treatment

- Results vary over specifications

Back

# Emotional reactions to treatment: Anger

Respondents were asked at the end of the survey which emotion they felt after watching the video (anger, concern, surprise, confusion, interest, indifferent);

Striking result:

$\rightarrow$ **Less anger in externality and control groups than fairness group**

All differences significant at 1% level.

Other emotions broadly similar; respondents more confused by active control.

Full Table    Back
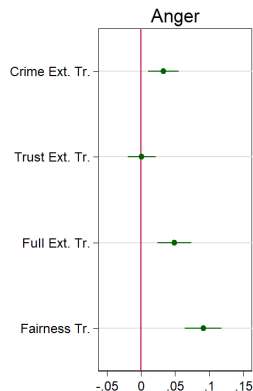
## Emotional reactions to treatments

|  | (1) Active control | (2) Crime | (3) Trust | (4) Full externality | (5) Fairness |
|---|---|---|---|---|---|
| Anger | 2.8% | 6.2% | 2.9% | 7.8% | 11.8% |
| Concern | 19.5% | 37.2% | 28.2% | 32.0% | 32.9% |
| Surprise | 10.8% | 13.9% | 12.5% | 13.0% | 12.9% |
| Interest | 41.5% | 37.1% | 42.2% | 37.8% | 34.0% |
| Indifference | 17.7% | 17.7% | 19.2% | 17.5% | 17.9% |
| Confusion | 16.9% | 4.2% | 6.0% | 5.8% | 4.5% |
| Observations | 390 | 927 | 822 | 806 | 867 |

**Note.** Emotions reported after seeing each treatment video. Respondents generally responded at least one emotion. Back

- Anger significantly higher in fairness treatment
- Individuals more confused by active control (balanced by passive control)
- Interest a "leftover"-answer
- Concern, surprise, indifference and confusion broadly similar over treatments

# Redistributive preference modules

- **Preferred level of redistribution** (Likert 1-7)
    - *How much redistribution of income do you prefer across citizens in the U.S.?*
        - *No redistribution means that the initial level of inequality is kept.*
        - *Full redistribution means that all citizens should have the same income.*

- **Ineq. serious issue** (Likert 1-5, from Stantcheva (2021))
    - *How big of an issue do you think income inequality is in America?*
        - *Not an issue at all / a small issue / an issue / a serious issue / a very serious issue*

- **Government should redistribute** (Likert 1-5, from ESS)
    - *To what extent do you agree or disagree with the following statement: The government should take measures to reduce differences in income levels.*
        - *Agree strongly / agree / neither agree nor disagree / disagree / disagree strongly*

# Redistributive preference modules

- **Top 10% tax rate** (7 options - from 0% to 100%)
  - *In your view, which average income tax rate should the richest 10% of households in the U.S. pay?*
    - *0%: I don't want to tax them at all. 0-15%: I want to tax them at a very low rate. 15-25%: I want to tax them at a lower rate than now, but not very low. 25-35%: I want to tax them at roughly what they are taxed now. 35-45%: I want to tax them at a higher rate than now, but not very high. 45-70%: I want to tax them at a very high rate. 70-100%: I want to tax them at extremely high rates.*

- **RP index**
  - Standardized sum of all dichotomized RP variables
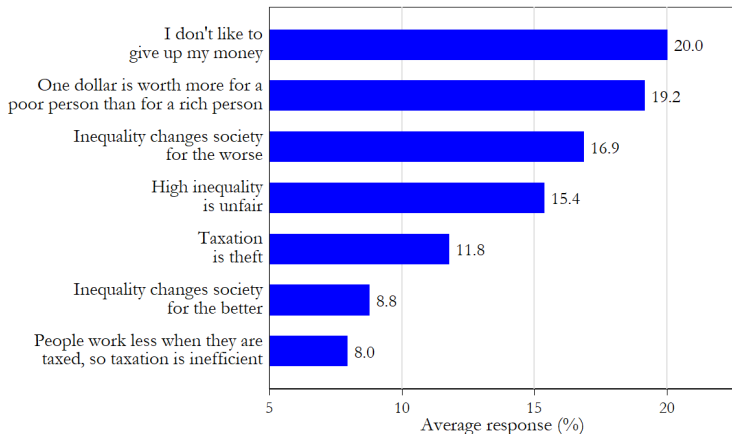
**Note:** Respondents asked to delegate 100 points to "what matters most to you" when thinking about their preferred level of redistribution. Standard errors of data points are ∼ 0.6%. Full module

Back

# 100 points question module

When thinking about your preferred level of redistribution, what *matters most* to you?

Please indicate what dimensions matter by giving scores below that add up to 100.

| | |
|---|---|
| Taxation is theft | 0 |
| Inequality changes society for the **worse** (more inequality → a worse society through various ways) | 0 |
| Inequality changes society for the **better** (more inequality → a better society through various ways) | 0 |
| People work less when they're taxed, so taxation is inefficient | 0 |
| High inequality is unfair | 0 |
| I don't like to give up my money | 0 |
| One dollar is worth more for a poor person than for a rich person | 0 |
| Total | 0 |

Figure: Screenshot of the 100 points module

Strengths:

- A direct approach
- Clearly compares the absolute magnitude of each determinant

Weaknesses:

- Complicated question
- Attention issues



When thinking about your preferred level of redistribution, what *matters most* to you?

Please indicate what dimensions matter by giving scores below that add up to 100.

| | |
|---|---|
| Taxation is theft | 0 |
| Inequality changes society for the **worse** (more inequality → a worse society through various ways) | 0 |
| Inequality changes society for the **better** (more inequality → a better society through various ways) | 0 |
| People work less when they're taxed, so taxation is inefficient | 0 |
| High inequality is unfair | 0 |
| I don't like to give up my money | 0 |
| One dollar is worth more for a poor person than for a rich person | 0 |
| Total | 0 |

Figure: Screenshot of the 100 points module

Categories; Fairness, diminishing marginal utility of income (DMU), selfishness, negative externalities, positive externalities, tax aversion, and tax efficiency.

Back

Finding predictive power of externality questions:

Pre-specified classical horse-race with 2 questions from 4 groups $\rightarrow$

# Comparing fairness / externality views III: Horse-race

Finding <u>predictive power of externality questions</u>:

Pre-specified classical horse-race with 2 questions from 4 groups →

<u>Strengths</u>:

- Not easily manipulable by respondents
- Explores predictive power, not marginal effect

<u>Weaknesses</u>:

- No causality
- Omitted variables likely
- Not possible to create fully comparable questions

Fairness:
1. Is the current distribution of resources fair?
2. Are the rich hard-working or did they have advantages?

Externalities:
1. Do more unequal countries function worse?
2. Does more economic inequality change society for the worse?

Political variables:
1. Republican- or Democrat-leaning?
2. Favorite politician Sanders/Harris (over Trump/Romney)

Classical economist variables:
1. Does more taxation lead to much less work?
2. Can we generally trust government to do what's right?

|  | (1) RP Index | (2) RP Index | (3) RP Index | (4) RP Index | (5) RP Index | (6) RP Index |
|---|---|---|---|---|---|---|
| Rich because of luck |  | 0.624*** |  |  |  | 0.401*** |
|  |  | (0.060) |  |  |  | (0.057) |
| Society is unfair |  | 0.620*** |  |  |  | 0.416*** |
|  |  | (0.059) |  |  |  | (0.056) |
| Belief uneq. countr. worse |  |  | 0.434*** |  |  | 0.269*** |
|  |  |  | (0.058) |  |  | (0.050) |
| Neg. externality belief |  |  | 0.640*** |  |  | 0.272*** |
|  |  |  | (0.058) |  |  | (0.054) |
| Leans Republican |  |  |  | -0.429*** |  | -0.245*** |
|  |  |  |  | (0.084) |  | (0.072) |
| Sanders/Harris supporter |  |  |  | 0.533*** |  | 0.260*** |
|  |  |  |  | (0.085) |  | (0.075) |
| Trusts the government |  |  |  |  | 0.436*** | 0.131** |
|  |  |  |  |  | (0.066) | (0.054) |
| Taxation reduces work |  |  |  |  | -0.115* | -0.004 |
|  |  |  |  |  | (0.061) | (0.048) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R2 | 0.104 | 0.382 | 0.297 | 0.296 | 0.148 | 0.494 |
| Observations | 932.000 | 932.000 | 932.000 | 932.000 | 932.000 | 932.000 |

**Note.** This table reports results from a regression of the redistributive preference index on fairness views, political views, externality beliefs and attitudes towards the government, as well as socio-economic control variables. Controls included. Standard errors are in parentheses. *Significance levels*: *10%, **5%, ***1%.

Back

# Main modules on Externality Beliefs

- **General belief 1** (pre-treatment, Likert 1-5)
  - *How much do you agree with the following statement? Countries with more economic inequality usually function worse.*

- **General belief 2** (post-treatment, Likert 1-5)
  - *This question is about what economic inequality does to society. Generally speaking, do you think more economic inequality changes society for the better or for the worse?*

- **Inequality's effect on crime** (post-treatment, Likert 1-5)
  - *How does more economic inequality change the amount of crime in a country? Note: When we say the amount of crime we mean the overall crime rate, including homicides, robberies, property crime and more.*

- **Inequality's effect on trust** (post-treatment, Likert 1-5)
  - *How does more economic inequality change the overall level of trust in a country? Note: When we say the total level of trust we mean the strength of a country's social fabric. Some examples are whether most people trust others, whether people cooperate with each other, how many people return lost wallets, and so on.*

# Main modules on Externality Beliefs

- **Inequality's effect on social unrest** (post-treatment, Likert 1-5)
  - *How does more economic inequality change the amount of social unrest in a country?*

- **Inequality's effect on economic growth** (post-treatment, Likert 1-5)
  - *How does more economic inequality change the rate of economic growth in a country?*

- **Inequality's effect on corruption** (post-treatment, Likert 1-5)
  - *How does more economic inequality change the amount of corruption in a country?*

- **Inequality's effect on unemployment** (post-treatment, Likert 1-5)
  - *How does more economic inequality change the amount of unemployment in a country?*

# Main modules on Fairness views

- **Fairness due to equality of opportunity** (pre-treatment, Likert 1-5)
  - *How much do you agree with the following statement? The distribution of money and wealth in the US is basically fair, because everybody has an equal opportunity to succeed.*

- **Fairness w.r.t. to deservingness** (post-treatment, Likert 1-5)
  - *Do you feel that the distribution of money and wealth in this country today is fair, because everybody gets what they are entitled to or unfair, because some get much more than they are entitled to, while others get too little?*

- **Luck vs. effort to get ahead** (post-treatment, binary, from Stantcheva (2021))
  - *Which has more to do with why a person is rich? Is someone rich because he or she worked harder than others or because he or she had more advantages than others? (Please pick the one closest to your views, even if it does not match your view perfectly.)*

# Respondent characteristics

| | Total | Share sample | Share US |
|---|---|---|---|
| **Targeted** | | | |
| Republican | 1,385 | 0.32 | 0.31 |
| Democrat | 1,293 | 0.30 | 0.27 |
| Independent | 1,685 | 0.39 | 0.41 |
| Female | 2,183 | 0.50 | 0.51 |
| Age 18-29 | 611 | 0.14 | 0.17 |
| Age 30-39 | 726 | 0.17 | 0.16 |
| Age 40-49 | 748 | 0.17 | 0.15 |
| Age 50-59 | 621 | 0.14 | 0.16 |
| Age 60-69 | 761 | 0.17 | 0.16 |
| Age 70 and above | 904 | 0.21 | 0.16 |
| South | 1,679 | 0.38 | 0.38 |
| West | 1,067 | 0.24 | 0.24 |
| North-East | 698 | 0.16 | 0.17 |
| Midwest | 927 | 0.21 | 0.21 |
| **Not targeted** | | | |
| HH Income: 0-25k | 970 | 0.22 | 0.18 |
| HH Income: 25-50k | 1,260 | 0.29 | 0.29 |
| HH Income: 50-100k | 1,331 | 0.30 | 0.20 |
| HH Income: 100k and more | 810 | 0.19 | 0.33 |
| 4-year college degree or more | 2,179 | 0.50 | 0.36 |
| (Self-)Employed | 2,064 | 0.47 | 0.58 |
| Unemployed | 413 | 0.09 | 0.04 |
| Outside the labor force | 1,894 | 0.43 | 0.38 |
| White | 3,350 | 0.77 | 0.60 |
| Black | 411 | 0.09 | 0.13 |
| Neither black or white | 610 | 0.14 | 0.27 |

Back

# Treatment effects when post-treatment beliefs are included

| | (1) RP Index b/se | (2) Wants redistribution b/se | (3) Increase top taxes b/se | (4) Gov. reduce ineq. b/se | (5) Ineq. is serious issue b/se |
|---|---|---|---|---|---|
| Crime Ext. Tr. | -0.009 | 0.021 | -0.030 | -0.006 | 0.003 |
| | (0.033) | (0.020) | (0.020) | (0.019) | (0.018) |
| Trust Ext. Tr. | -0.001 | -0.004 | -0.020 | 0.022 | 0.001 |
| | (0.034) | (0.021) | (0.021) | (0.019) | (0.019) |
| Full Ext. Tr. | 0.054 | 0.039* | -0.043** | 0.032* | 0.050*** |
| | (0.034) | (0.021) | (0.021) | (0.019) | (0.019) |
| Fairness Tr. | 0.122*** | 0.032 | 0.031 | 0.034* | 0.079*** |
| | (0.033) | (0.021) | (0.020) | (0.019) | (0.018) |
| General neg. ext. | 0.285*** | 0.055*** | 0.127*** | 0.097*** | 0.130*** |
| | (0.028) | (0.017) | (0.018) | (0.016) | (0.016) |
| Ineq. incr. crime | 0.050 | 0.030 | 0.052*** | -0.006 | -0.004 |
| | (0.032) | (0.018) | (0.020) | (0.018) | (0.018) |
| Ineq. red. trust | 0.076** | -0.002 | 0.093*** | 0.006 | 0.012 |
| | (0.031) | (0.018) | (0.019) | (0.017) | (0.017) |
| Society is unfair (post) | 0.407*** | 0.110*** | 0.114*** | 0.170*** | 0.191*** |
| | (0.030) | (0.017) | (0.019) | (0.017) | (0.018) |
| Rich because of hard work | -0.367*** | -0.088*** | -0.138*** | -0.163*** | -0.139*** |
| | (0.029) | (0.017) | (0.018) | (0.017) | (0.017) |
| Controls | Yes | Yes | Yes | Yes | Yes |
| R2 | 0.508 | 0.197 | 0.254 | 0.365 | 0.396 |
| Observations | 4371.000 | 4371.000 | 4371.000 | 4371.000 | 4371.000 |