Social Preferences

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GOALS OF THIS LECTURE

(1) Theory of social preferences: a new, tractable way to capture fairness and justice principles. Applicable to way more than taxation (e.g.: IO problems, trade problems, macro problems).

(2) Empirical evidence on social preferences.

(3) Methodological tool: Online experiments.

Theory

This paper: "Generalized Social Welfare Weights for Optimal Tax Theory" Saez and Stantcheva (2016).

Standard Welfarist Approach: Critiques and Puzzles

- Maximize concave function or weighted sum of individiual utilities.

$$\max_{T(.)} SWF = \max_{T(.)} \int_i \omega_i \cdot u_i$$

- Special case: utilitarianism, $\omega_i = 1$.
- Cannot capture elements important in tax practice:
  - Source of income: earned versus luck.
  - Counterfactuals: what individuals *would* have done absent tax system.
  - Horizontal Equity concerns that go against "tagging."
- Utilitarianism critique: 100% redistribution optimal with concave $u(.)$ and no behavioral responses
- Methodological and conceptual critique: Policy makers use reform-approach rather than posit and maximize objective.

A Novel Approach to Model Social Preferences

- Tax reform approach: weighs gains and losses from tax changes.

$$\delta T(z) \text{ desirable iff: } -\int_i g_i \cdot \delta T(z_i) > 0 \text{ with } g_i \equiv G'(u_i)\frac{\partial u_i}{\partial c}$$

- Optimality: no budget neutral reform can increase welfare.
- Weights directly come from social welfare function, are restrictive.

A Novel Approach to Model Social Preferences

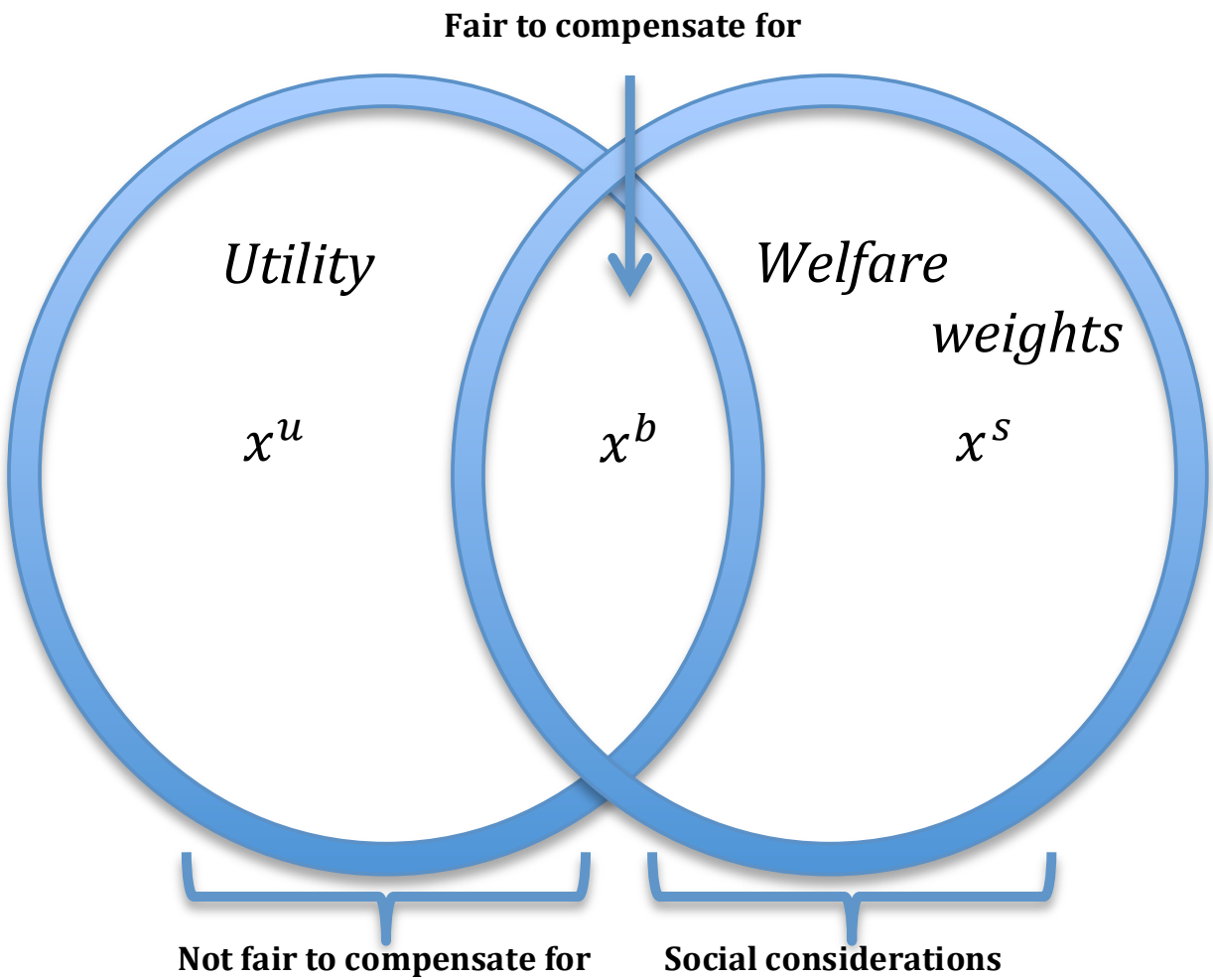
- Tax reform approach: weighs gains and losses from tax changes.

$$\text{Change in welfare: } -\int_i g_i \cdot \delta T(z_i) \text{ with } g_i \equiv g(c_i, z_i; x_i^s, x_i^b).$$

- Replace restrictive social welfare weight by generalized social marginal welfare weights.
  - g_i measures social value of $\$1$ transfer for person i.
  - Specified to directly capture fairness criteria.
  - Not necessarily derived from SWF

Generalized social welfare weights approach

$$u_i = u(c_i - v(z_i; x_i^u, x_i^b)) \qquad g_i = g(c_i, z_i; x_i^s, x_i^b)$$



Resolve Puzzles and Unify Alternative Approaches

- Resolve puzzles: Can depend on luck vs. deserved income, can capture counterfactuals ("Free Loaders"), can model horizontal equity concerns.
- Unify main alternatives to utilitarianism: Rawlsianism, Libertarianism, Equality of Opportunity, Poverty Alleviation, Fair Income Taxation.
- Pareto efficiency guaranteed (locally) by non-negative weights.
- As long as weights depend on taxes paid (in addition to consumption): non-trivial theory of taxation even absent behavioral responses.
- Positive tax theory: Can estimate weights from revealed social choices.

Related Literature

Recent Optimal Tax Theory: Golosov, Tsyvinski, and Werquin (2013) (dynamic tax reforms), Farhi and Werning (2013) (bequest taxation), Piketty and Saez (2013) (bequest taxation).

Critiques of Utilitarianism: Nozick (1974), Feldstein (2012), Mankiw (2010, 2013) and Weinzierl (2012).

Alternatives to Utilitarianism and Welfarism: Roemer *et al.* (2013), Besley and Coate (1992), Kanbur, Keen, and Tuomala (1994), Fleurbaey and Maniquet (2008).

Outline

Outline

General Model

- Mass 1 of individuals indexed by i.
- Utility from consumption c_i and income z_i (no income effects):

$$u_i = u(c_i - v(z_i; x_i^u, x_i^b))$$

  where x_i^u and x_i^b are vectors of characteristics

- $u(.)$ increasing, v decreasing in z_i.
- Typical income tax: $T(z)$, hence $c_i = z_i - T(z_i)$.
  - More general tax systems, with conditioning variables possible, depending on what is observable and politically feasible.

Small Tax Reform Approach

Consider a small tax reform $\delta T(z)$
[formally $\delta T(z)$ = small reform in direction $\Delta T(z)$: $\delta T(z) = \varepsilon \cdot \Delta T(z)$ with $\varepsilon \to 0$]

- Small reform $\delta T(z)$ affects individual i utility by δu_i and earnings by δz_i
- By envelope theorem: $\delta u_i = -\frac{\partial u_i}{\partial c} \cdot \delta T(z_i)$
- $\Rightarrow$ Mechanical $-\delta T(z_i)$ measures money-metric welfare impact on i
- Change in tax paid by individual i is $\delta T(z_i) + T'(z_i)\delta z_i$.

Definition

A reform $\delta T(z)$ is budget neutral if and only if $\int_i [\delta T(z_i) + T'(z_i)\delta z_i] = 0$.

Generalized social welfare weights approach

Definition

The generalized social marginal welfare weight on individual i is:

$$g_i = g(c_i, z_i; x_i^s, x_i^b)$$

g is a function, x_i^s is a vector of characteristics which only affect the social welfare weight, while x_i^b is a vector of characteristics which also affect utility.

- Recall utility is: $u_i = u(c_i - v(z_i; x_i^u, x_i^b))$
- Characteristics x^s, x^u, x^b may be unobservable to the government.
  - x^b: fair to redistribute, enters utility – e.g. ability to earn
  - x^s: fair to redistribute, not in utility – e.g. family background
  - x^u: unfair to redistribute, enters utility – e.g. taste for work

Optimality Criterion with Generalized Weights

Definition

Tax reform desirability criterion. Small budget neutral tax reform $\delta T(z)$ desirable **iff** $\int_i g_i \cdot \delta T(z_i) < 0$, with g_i the generalized social marginal welfare weight on i evaluated at $(z_i - T(z_i), z_i, x_i^s, x_i^b)$.

- Reform only requires knowing g_i and responses δz_i around current $T(z)$

Definition

Optimal tax criterion. $T(z)$ optimal **iff**, for any small budget neutral reform $\delta T(z)$, $\int_i g_i \cdot \delta T(z_i) = 0$, with g_i the generalized social marginal welfare weight on i evaluated at $(z_i - T(z_i), z_i, x_i^s, x_i^b)$.

- No budget neutral reform can locally improve welfare as evaluated using generalized weights (local approach by definition)

Aggregating Standard Weights at Each Income Level

Taxes depend on z only: express everything in terms of observable z.
$H(z)$: CDF of earnings, $h(z)$: PDF of earnings [both depend on $T(.)$]

Definition

$\bar{G}(z)$ is the (relative) average social marginal welfare weight for individuals earning at least z:

$$\bar{G}(z) \equiv \frac{\int_{\{i:z_i \geq z\}} g_i}{Prob(z_i \geq z) \cdot \int_i g_i}$$

$\bar{g}(z)$ is the average social marginal welfare weight at z defined so that

$$\int_z^{\infty} \bar{g}(z')dH(z') = \bar{G}(z)[1 - H(z)]$$

Nonlinear Tax Formula Expressed with Welfare Weights

Proposition

The optimal marginal tax at z:

$$T'(z) = \frac{1 - \bar{G}(z)}{1 - \bar{G}(z) + \alpha(z) \cdot e(z)}$$

$e(z)$: average elasticity of z_i w.r.t $1 - T'$ at $z_i = z$
$\alpha(z)$: local Pareto parameter $zh(z)/[1 - H(z)]$.

Proof follows the same "small reform" approach of Saez (2001): increase T' in a small band $[z, z + dz]$ and work out effect on budget and weighted welfare

Proof

- Reform $\delta T(z)$ increases marginal tax by $\delta\tau$ in small band $[z, z+dz]$.
- Mechanical revenue effect: extra taxes $dz\delta\tau$ from each taxpayer above z: $dz\delta\tau[1-H(z)]$ is collected.
- Behavioral response: those in $[z, dz]$, reduce income by $\delta z = -ez\delta\tau/(1-T'(z))$ where e is the elasticity of earnings z w.r.t $1-T'$. Total tax loss $-dz\delta\tau \cdot h(z)e(z)zT'(z)/(1-T'(z))$ with $e(z)$ the average elasticity in the small band.
- Net revenue collected by the reform and rebated lump sum is: $dR = dz\delta\tau \cdot \left[1 - H(z) - h(z) \cdot e(z) \cdot z \cdot \frac{T'(z)}{1-T'(z)}\right]$.
- Welfare effect of reform: $-\int_i g_i \delta T(z_i)$ with $\delta T(z_i) = -dR$ for $z_i \leq z$ and $\delta T(z_i) = \delta\tau dz - dR$ for $z_i > z$. Net effect on welfare is $dR \cdot \int_i g_i - \delta\tau dz \int_{\{i:z_i \geq z\}} g_i$.
- Setting net welfare effect to zero, using $(1-H(z))\bar{G}(z) = \int_{\{i:z_i \geq z\}} g_i / \int_i g_i$ and $\alpha(z) = zh(z)/(1-H(z))$, we obtain the tax formula.

Linear Tax Formula Expressed with Welfare Weights

The optimal linear tax rate, such that $c_i = z_i \cdot (1 - \tau) + \tau \cdot \int_i z_i$ can also be expressed as a function of an income weighted average marginal welfare weight (Piketty and Saez, 2013).

Proposition

The optimal linear income tax is:

$$\tau = \frac{1 - \bar{g}}{1 - \bar{g} + e} \quad \text{with} \quad \bar{g} \equiv \frac{\int_i g_i \cdot z_i}{\int_i g_i \cdot \int_i z_i}$$

e: elasticity of $\int_i z_i$ w.r.t $(1 - \tau)$.

Applying Standard Formulas with Generalized Weights

- Individual weights need to be "aggregated" up to characteristics that tax system can conditioned on.
  - E.g.: If $T(z, x^b)$ possible, aggregate weights at each $(z, x^b) \to \bar{g}(z, x^b)$.
  - If standard $T(z)$, aggregate at each z: $\bar{G}(z)$ and $\bar{g}(z)$.
- Then apply standard formulas. Nests standard approach.
- If $g_i \geq 0$ for all i, (local) Pareto efficiency guaranteed.
- Can we back out weights? Optimum $\Leftrightarrow$ max $SWF = \int_i \omega_i \cdot u_i$ with *Pareto weights* $\omega_i = g_i / u_{ci} \geq 0$ where g_i and u_{ci} are evaluated at the optimum allocation
  - Impossible to posit correct weights ω_i without *first* solving for optimum

Outline

1. Optimal Tax Theory with Fixed Incomes

Modelling fixed incomes in our general model.

- Focus on redistributive issues.
- $z = z_i$ is fixed for each individual (fully inelastic labor supply).
- Concave uniform utility $u_i = u(c_i)$

Standard utilitarian approach.

- Optimum: $c = z - T(z)$ is constant across z, full redistribution.
- Is it acceptable to confiscate incomes fully?
- Very sensitive to utility specification
- Heterogeneity in consumption utility? $u_i = u(x_i^c \cdot c_i)$

1. Tax Theory with Fixed Incomes: Generalized Weights

Definition

Let $g_i = g(c_i, z_i) = \tilde{g}(c_i, z_i - c_i)$ with $\tilde{g}_c \leq 0$, $\tilde{g}_{z-c} \geq 0$.

i) Utilitarian weights: $g_i = g(c_i, z_i) = \tilde{g}(c_i)$ for all z_i, with $\tilde{g}(\cdot)$ decreasing.

ii) Libertarian weights: $g_i = g(c_i, z_i) = \tilde{g}(z_i - c_i)$ with $\tilde{g}(\cdot)$ increasing.

- Weights depend negatively on c – "ability to pay" notion.
- Depend positively on tax paid – taxpayers contribute socially more.
- Optimal tax system: weights need to be equalized across all incomes z:

$$\tilde{g}(z - T(z), T(z)) \text{ constant with } z$$

1. Tax Theory with Fixed Incomes: Optimum

Proposition

The optimal tax schedule with no behavioral responses is:

$$T'(z) = \frac{1}{1 - \tilde{g}_{z-c}/\tilde{g}_c} \quad \text{and} \quad 0 \leq T'(z) \leq 1. \tag{1}$$

Corollary

Standard utilitarian case, $T'(z) \equiv 1$. Libertarian case, $T'(z) \equiv 0$.

- Empirical survey shows respondents indeed put weight on both disposable income and taxes paid.
- Between the two polar cases, $g(c,z) = \tilde{g}(c - \alpha(z-c)) = \tilde{g}(z - (1+\alpha)T(z))$ with $\tilde{g}$ decreasing.
- Can be empirically calibrated and implied optimal tax derived.

2. Luck versus Deserved Income: Setting

- Fairer to tax luck income than earned income and to insure against luck shocks.
- Provides micro-foundation for weights increasing in taxes, decreasing in consumption.
- y^d: deserved income due to effort
- y^l: luck income, not due to effort, with average Ey^l.
- $z = y^d + y^l$: total income.
- Society believes earned income fully deserved, luck income not deserved. Captured by binary set of weights:

$$g_i = 1(c_i \leq y_i^d + Ey^l)$$

$g_i = 1$ if taxed more than excess luck income (relative to average).

2. No behavioral responses: Observable Luck Income

- If luck income observable, can condition taxes on it: $T_i = T(z_i, y_i^l)$.
- Aggregate weights for each (z, y^l) pair:
  $\bar{g}(z, y^l) = 1(z - T(z, y^l) \leq z - y^l + Ey^l)$.
- Optimum: everybody's luck income must be Ey^l with
  $T(z, y^l) = y^l - Ey^l + T(z)$ and $T(z) = 0$.
- Example: Health care costs.

2. No behavioral responses: Unobservable Luck Income

- Can no longer condition taxes on luck income: $T_i = T(z_i)$.
- Aggregating weights:
  $\tilde{g}(c, z-c) = Prob(c_i \leq z_i - y_i^l + Ey^l | c_i = c, z_i = z)$.
- Under reasonable assumptions, provides micro-foundation for weights $\tilde{g}(c, z-c)$ decreasing in c, increasing in $z-c$.
- If bigger $z-c$ at c constant, means bigger z. Then, y^l increases but typically by less than z, hence person more deserving, and hence $\tilde{g}(c, z-c) \uparrow$.
- Optimum should equalize $\tilde{g}(z - T(z), z)$ across all z.
- Non-trivial theory of optimal taxation, even without behavioral responses.

3. Transfers and Free Loaders: Setting

- Behavioral responses closely tied to social weights: biggest complaint against redistribution is "free loaders."
- Generalized welfare weights can capture "counterfactuals."
- Consider linear tax model where τ funds demogrant transfer.
- $u_i = u(c_i - v(z_i; \theta_i)) = u(c_{z_i} - \theta_i \cdot z_i)$ with $z_i \in \{0, 1\}$.
- Individuals can choose to not work, $z = 0$, $c_i = c_0$.
- If they work, earn $z = \$1$, consume $c_1 = (1 - \tau) + c_0$.
- Cost of work θ, with cdf $P(\theta)$, is private information.
- Individual: work iff $\theta \leq c_1 - c_0 = (1 - \tau)$.
- Fraction working: $P(1 - \tau)$.
- e: elasticity of aggregate earnings $P\,(1 - \tau\ )$ w.r.t $(1 - \tau)$.

3. Transfers and Free Loaders: Optimal Taxation

Apply linear tax formula:

- $\tau = (1 - \bar{g})/(1 - \bar{g} + e)$
- In this model, $\bar{g} = \int_i g_i z_i / (\int_i g_i \cdot \int_i z_i) = \bar{g}_1 / [P \cdot \bar{g}_1 + (1 - P) \cdot \bar{g}_0]$ with: $\bar{g}_1$ the average g_i on workers, and $\bar{g}_0$ the average g_i on non-workers.

Standard Approach:

- $g_i = u'(c_0)$ **for all non-workers** so that $\bar{g}_0 = u'(c_0)$.
- Hence, approach does not allow to distinguish between the deserving poor and free loaders.
- We can only look at actual situation: work or not, not "why" one does not work.
- Contrasts with public debate and historical evolution of welfare

3. Transfers and Free Loaders: Generalized Welfare Weights

- Distinguish people according to what would have done absent transfer.
- **Workers**: Fraction $P(1-\tau)$. Set $g_i = u'(c_1 - \theta_i)$.
- **Deserving poor**: would not work even absent any transfer: $\theta > 1$. Fraction $1 - P(1)$. Set $g_i = u'(c_0)$.
- **Free Loaders**: do not work because of transfer: $1 \geq \theta > (1-\tau)$. Fraction $P(1) - P(1-\tau)$. Set $g_i = 0$.
- Cost of work enters weights – fair to compensate for (i.e., not laziness).
- Average weight on non-workers $\bar{g}_0 = u'(c_0) \cdot (1 - P(1))/(1 - P(1-\tau)) < u'(c_0)$ lower than in utilitarian case.
- Reduces optimal tax rate not just through e but also through $\bar{g}_0$.

3. Transfers and Free Loaders: Remarks and Applications

- Ex post, possible to find suitable Pareto weights $\omega(\theta)$ that rationalize same tax.
  - $\omega(\theta) = 1$ for $\theta \leq (1 - \tau^*)$ (workers)
  - $\omega(\theta) = 1$ for $\theta \geq 1$ (deserving poor)
  - $\omega(\theta) = 0$ for $(1 - \tau^*) < \theta < 1$ (free loaders).
- But: these weights depend on optimum tax rate τ^*.
- Other applications:
  - **Desirability of in-work benefits** if weight on non-workers becomes low enough relative to workers.
  - **Transfers over the business cycle**: composition of those out of work depends on ease of finding job.

4. Horizontal Equity: Puzzle and the Standard Approach

- Standard theory strongly recommends use of "tags" – yet not used much.
- Illustrate in Ramsey problem, where need to raise revenue E.
- 2 groups of measure 1, differ according to inelastic attribute $m \in \{1, 2\}$ and income elasticities $e_1 < e_2$.
- Standard approach: apply Ramsey tax rule, generates horizontal inequity:

$$\tau_m = \frac{1 - \bar{g}_m}{1 - \bar{g}_m + e_m} \quad \text{with} \quad \bar{g}_m = \frac{\int_{i \in m} u_{ci} \cdot z_i}{p \cdot \int_{i \in m} z_i},$$

  $p > 0$: multiplier on budget constrained, adjusts to raise revenue E.
- Typically $\tau_1 > \tau_2$ because $e_1 < e_2$
- Horizontal equity: aversion to treating differently people with same income.

4. Horizontal Equity: Generalized Social Welfare Weights

- Social marginal welfare weights concentrated on those suffering from horizontal inequity.
  - Horizontal inequity carry higher priority than vertical inequity.
- If no horizontal inequity, a reform that creates horizontal inequity needs to be penalized: **weights need to depend on direction of reform**.
- If $i \in m$ then $i \notin n$ and define weight $g_i = g\left(\tau_m, \tau_n, \delta\tau_m, \delta\tau_n\right)$
- i) $g\left(\tau_m, \tau_n, \delta\tau_m, \delta\tau_n\right) = 1$ and $g\left(\tau_n, \tau_m, \delta\tau_n, \delta\tau_m\right) = 0$ if $\tau_m > \tau_n$.
- ii) $g\left(\tau, \tau, \delta\tau_m, \delta\tau_n\right) = 1$ and $g\left(\tau, \tau, \delta\tau_n, \delta\tau_m\right) = 0$ if $\tau_m = \tau_n = \tau$ and $\delta\tau_m > \delta\tau_n$.
- iii) $g\left(\tau, \tau, \delta\tau_m, \delta\tau_n\right) = g\left(\tau, \tau, \delta\tau_n, \delta\tau_m\right) = 1$ if $\tau_m = \tau_n = \tau$ and $\delta\tau_m = \delta\tau_n$.

4. Horizontal Equity: Optimum with Generalized Weights

Regularity assumptions.

- There is a uniform tax rate $\tau_1 = \tau_2 = \tau^*$ that can raise E.
- Laffer curves $\tau_1 \to \tau_1 \cdot \int_{i\in 1} z_i$, $\tau_2 \to \tau_2 \cdot \int_{i\in 2} z_i$, and $\tau \to \tau \cdot (\int_{i\in 1} z_i + \int_{i\in 2} z_i)$ are single peaked.

Proposition

Let τ^* be the smallest uniform rate that raises E: $\tau^*(\int_{i\in 1} z_i + \int_{i\in 2} z_i) = E$.
i) If $1/(1+e_2) \geq \tau^*$ the only optimum has horizontal equity with $\tau_1 = \tau_2 = \tau^*$.
ii) If $1/(1+e_2) < \tau^*$ the only optimum has horizontal inequity with $\tau_2 = 1/(1+e_2) < \tau^*$ (revenue maximizing rate) and $\tau_1 < \tau^*$ the smallest tax rate s.t. $\tau_1 \cdot \int_{i\in 1} z_i + \tau_2 \cdot \int_{i\in 2} z_i = E$ (Pareto dominates $\tau_1 = \tau_2 = \tau^*$)

4. Horizontal Equity with Generalized Weights

- Horizontal inequity can be part of an optimum only if helps group discriminated against.
- Tagging must be Pareto improving to be desirable, limits scope for use.
- New Rawlsian criterion: *"Permissible to discriminate against a group based on tags, only if discrimination improves this group's welfare."*

Outline

1. Libertarianism and Rawlsianism

Libertarianism:

- Principle: "Individual fully entitled to his pre-tax income."
- Morally defensible if no difference in productivity, but different preferences for work.
- $g_i = g(c_i, z_i) = \tilde{g}(c_i - z_i)$, increasing ($x_i^s$ and x_i^b empty).
- Optimal formula yields: $T'(z_i) \equiv 0$.

Rawlsianism:

- Principle: "Care only about the most disadvantaged."
- $g_i = g(u_i - \min_j u_j) = 1(u_i - \min_j u_j = 0)$, with $x_i^s = u_i - \min_j u_j$ and x^b is empty.
- If least advantaged people have zero earnings independently of taxes, $\bar{G}(z) = 0$ for all $z > 0$.
- Optimal formula yields: $T'(z) = 1/[1 + \alpha(z) \cdot e(z)]$ (maximize demogrant $-T(0)$).

2. Equality of Opportunity: Setting

- Standard utility $u(c - v(z/w_i))$ with w_i ability to earn
- w_i is result of i) family background $B_i \in \{0, 1\}$ (which individuals not responsible for) and ii) merit (which individuals are responsible for) = rank r_i conditional on background.
- Advantaged background gives earning ability w advantage: $w(r_i|B_i = 1) > w(r_i|B_i = 0)$
- Society is willing to redistribute across backgrounds, but not across incomes conditional on background.
- $\Rightarrow$ Conditional on earnings, those coming from $B_i = 0$ are more meritorious [because they rank higher in merit]
- $\bar{c}(r) \equiv (\int_{(i:r_i=r)} c_i)/Prob(i : r_i = r)$: average consumption at rank r.
- $g_i = g(c_i; \bar{c}(r_i)) = 1(c_i \leq \bar{c}(r_i))$

2. Equality of Opportunity: Results

- Suppose government cannot condition taxes on background.
- $\bar{G}(z)$: **Representation index**: % from disadvantaged background earning $\geq z$ relative to % from disadvantaged background in population.
- Implied Social Welfare function as in Roemer et al. (2003).
- $\bar{G}(z)$ decreasing since harder for those from disadvantaged background to reach upper incomes.
- If at top incomes, representation is zero, revenue maximizing top tax rate.
- Justification for social welfare weights decreasing with income not due to decreasing marginal utility (utilitarianism).

2. Equality of Opportunity vs. Utilitarian Tax Rates

	Equality of Opportunity			Utilitarian (log-utility)	
	Fraction from low background (=parents below median) above each percentile	Implied social welfare weight G(z) above each percentile	Implied optimal marginal tax rate at each percentile	Utilitarian social welfare weight G(z) above each percentile	Utilitarian optimal marginal tax rate at each percentile
	(1)	(2)	(3)	(4)	(5)
Income percentile					
z= 25th percentile	44.3%	0.886	53%	0.793	67%
z= 50th percentile	37.3%	0.746	45%	0.574	58%
z= 75th percentile	30.3%	0.606	40%	0.385	51%
z= 90th percentile	23.6%	0.472	34%	0.255	42%
z= 99th percentile	17.0%	0.340	46%	0.077	54%
z= 99.9th percentile	16.5%	0.330	47%	0.016	56%

Chetty *et al.* (2013) intergenerational mobility data for the U.S.
Above 99^{th} percentile, stable representation, hence stable tax rates.
Optimal tax rate lower than in utilitarian case.

3. Poverty Alleviation: Setting

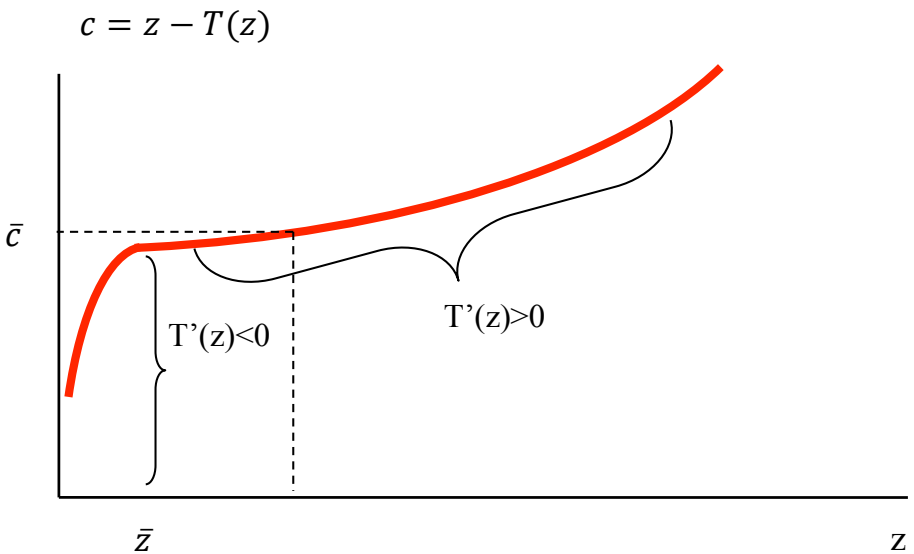
- Poverty gets substantial attention in public debate.
- Poverty alleviation objectives can lead to Pareto dominated outcomes:
  - Besley and Coate (1992) and Kanbur, Keen, and Tuomala (1994).
  - Intuition: disregard people's disutility from work.
- Generalized welfare weights can avoid pitfall of Pareto inefficiency.
- $\bar{c}$: poverty threshold. "Poor": $c < \bar{c}$.
- $u_i = u(c_i - v(z_i/w_i))$.
- $\bar{z}$: (endogenous) pre-tax poverty threshold: $\bar{c} = \bar{z} - T(\bar{z})$.
- Poverty gap alleviation: care about shortfall in consumption.
- $g_i = g(c_i, z_i; \bar{c}) = 1 > 0$ if $c_i < \bar{c}$ and $g_i = g(c_i, z_i; \bar{c}) = 0$ if $c_i \geq \bar{c}$.
- $\Rightarrow \bar{g}(z) = 0$ for $z \geq \bar{z}$ and $\bar{g}(z) = 1/H(\bar{z})$ for $z < \bar{z}$.
- $\Rightarrow \bar{G}(z) = 0$ for $z \geq \bar{z}$ and $1 - \bar{G}(z) = \frac{1/H(\bar{z})-1}{1/H(z)-1}$ for $z < \bar{z}$.

3. Optimal Tax Schedule that Minimizes Poverty Gap

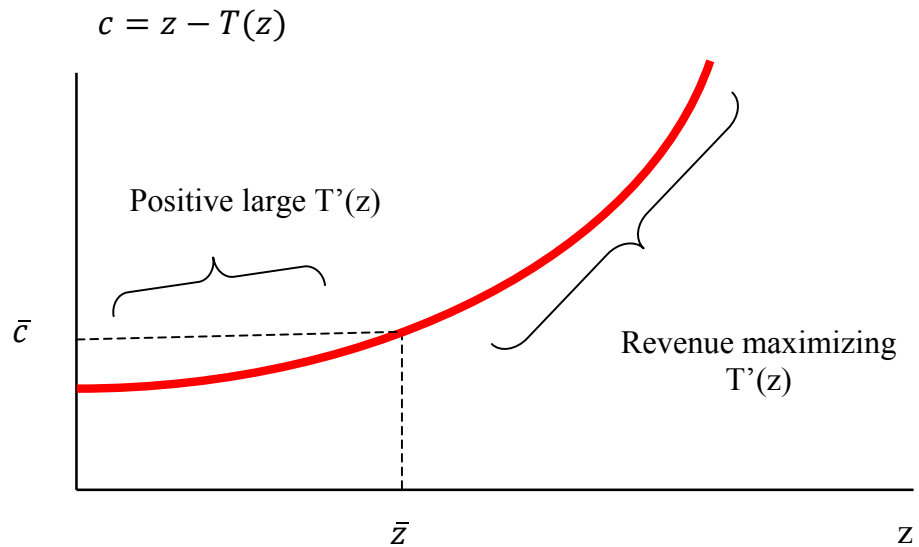
Proposition

$$T'(z) = \frac{1}{1 + \alpha(z) \cdot e(z)} \quad \text{if} \quad z > \bar{z}$$

$$T'(z) = \frac{1}{1 + \alpha(z) \cdot e(z) \cdot \frac{1/H(z) - 1}{1/H(\bar{z}) - 1}} \quad \text{if} \quad z \leq \bar{z}$$



(a) Direct poverty gap minimization



(b) Generalized weights approach

4. Fair Income Taxation: Principle

- Agents differ in preference for work (laziness) and skill.
- Fleurbaey and Maniquet (2008, 2011): trade-off "Equal Preferences Transfer Principle" and "Equal Skills Transfer Principle."
- Want to favor hard working low skilled but cannot tell them apart from the lazy high skilled.
- Show how their $w_{\min}$-equivalent leximin criterion translates into social marginal welfare weights.
- We purely reverse engineer here to show usefulness of formula and generalized weights.

4. Fair Income Taxation: Setting and Optimal tax rates

- $u_i = c_i - v(z_i/w_i, \theta_i)$, w_i: skill, θ_i: preference for work.
- Labor supply: $l_i = z_i/w_i \in [0,1]$ (full time work $l = 1$).
- Criterion: full weight on those with $w = w_{\min}$ getting smallest net transfer from government.
- Fleurbaey-Maniquet optimal tax system: $T'(z) = 0$ for $z \in [0, w_{\min}]$, $T'(z) = 1/(1 + \alpha(z) \cdot e(z)) > 0$ for $z > w_{\min}$.
- Implies $\bar{G}(z) = 1$ for $0 \leq z \leq w_{\min}$.
- Hence, $\int_z^{\infty} [1 - g(z')] dH(z') = 0$.
- Differentiating w.r.t z: $\bar{g}(z) = 1$ for $0 \leq z \leq w_{\min}$.
- For $z > w_{\min}$, $\bar{G}(z) = 0$, $\bar{g}(z) = 0$.

4. Fair Income Taxation: Underlying Welfare Weights

- Let $T_{\max} \equiv \max_{(i:w_i=w_{\min})}(z_i - c_i)$.
- $g(c_i, z_i; w_i, w_{\min}, T_{\max}) = \tilde{g}(z_i - c_i; w_i, w_{\min}, T_{\max})$ with:
  - $\tilde{g}(z_i - c_i; w_i, w_{\min}, T_{\max}) = 0$ for $w_i > w_{\min}$, for any $(z_i - c_i)$ (no weight on those above $w_{\min}$).
  - $\tilde{g}(.; w_i = w_{\min}, w_{\min}, T_{\max})$ is an (endogenous) Dirac distribution concentrated on $z - c = T_{\max}$
- Forces government to provide same transfer to all with $w_{\min}$.
- If at every $z < w_{\min}$ can find $w_{\min}$ agents, forces equal transfer at all $z < w_{\min}$.
- Zero transfer above $w_{\min}$ since no $w_{\min}$ agents found there.

Outline

Online Survey: Goals and Setup

Two goals of empirical application:

1. Discover notions of fairness people use to judge tax and transfer systems.
   - Focus on themes addressed in theoretical part.
2. Quantitatively calibrate simple weights

Online Platform:

- Amazon mTurk (Kuziemko, Norton, Saez, Stantcheva, 2015).
- 1100 respondents with background information.

Evidence against utilitarianism

- Respondents asked to compare families w/ different combinations of z, $z - T(z)$, $T(z)$.
- Who is most deserving of a \$1000 tax break?
- **Both disposable income and taxes paid matter** for deservedness
  - Family earning \$40K, paying \$10K in taxes judged more deserving than family earning \$50K, paying \$10K in taxes
  - Family earning \$50K, paying \$15K in taxes judged more deserving than family earning \$40K, paying \$5K in taxes
- **Frugal vs. Consumption-loving** person with same net income

Consumption-lover more deserving	Frugal more deserving	Taste for consumption irrelevant
4%	22%	74%

Which of the following two individuals do you think is most deserving of a $1,000 tax break?

Individual A earns $50,000 per year, pays $10,000 in taxes and hence nets out $40,000. She greatly enjoys spending money, going out to expensive restaurants, or traveling to fancy destinations. She always feels that she has too little money to spend.

Individual B earns the same amount, $50,000 per year, also pays $10,000 in taxes and hence also nets out $40,000. However, she is a very frugal person who feels that her current income is sufficient to satisfy her needs.

- ◯ Individual A is most deserving of the $1,000 tax break
- ◯ Individual B is most deserving of the $1,000 tax break
- ◯ Both individuals are exactly equally deserving of the tax $1,000 break

>>

Source: survey in Saez and Stantcheva (2013)

Does society care about effort to earn income?

- **Hard-working vs. Easy-going person with same net income**
- "*A earns $30,000 per year, by working in two different jobs, 60 hours per week at $10/hour. She pays $6,000 in taxes and nets out $24,000. She is very hard-working but she does not have high-paying jobs so that her wage is low.*"
- "*B also earns the same amount, $30,000 per year, by working part-time for 20 hours per week at $30/hour. She also pays $6,000 in taxes and hence nets out $24,000. She has a good wage rate per hour, but she prefers working less and earning less to enjoy other, non-work activities.*"

Hardworking more deserving	Easy-going more deserving	Hours of work irrelevant conditional on total earnings
43%	3%	54%

Do people care about "Free Loaders" and Behavioral Responses to Taxation?

Starting from same benefit level, which person most deserving of more benefits?

	Disabled unable to work	Unemployed looking for work	Unemployed not looking for work	On welfare not looking for work
Average rank (1-4)	1.4	1.6	3.0	3.5
% assigned 1st rank	57.5%	37.3%	2.7%	2.5%
% assigned last rank	2.3%	2.9%	25%	70.8%

Calibrating Social Welfare Weights

- Calibrate $\tilde{g}(c, T) = \tilde{g}(c - \alpha T)$
- 35 fictitious families, w/ different net incomes and taxes
- Respondents rank them pair-wise (5 random pairs each)

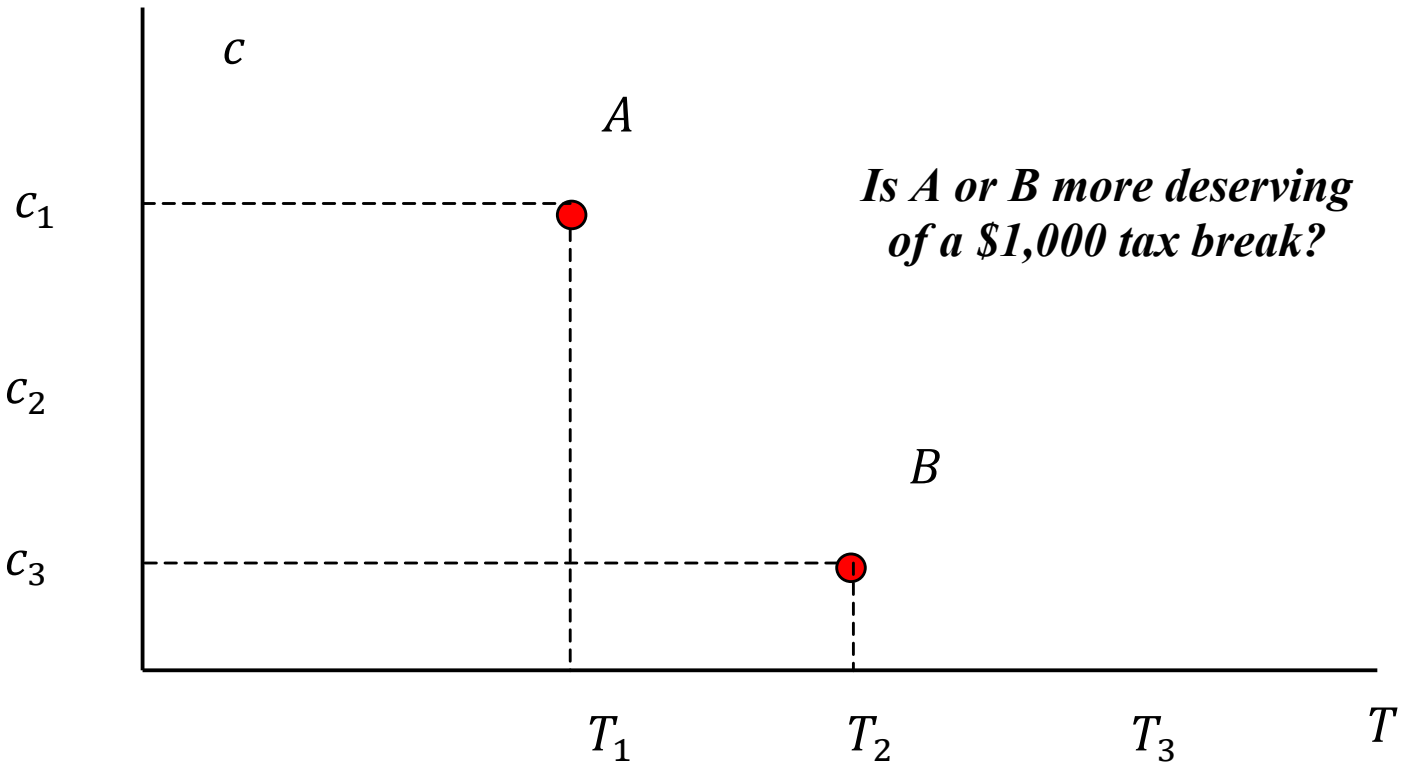
Which of these two families is most deserving of the $1,000 tax break?

- Family earns $100,000 per year, pays $50,000 in taxes, and hence nets out $50,000
- Family earns $25,000 per year, pays $1,250 in taxes, and hence nets out $23,750

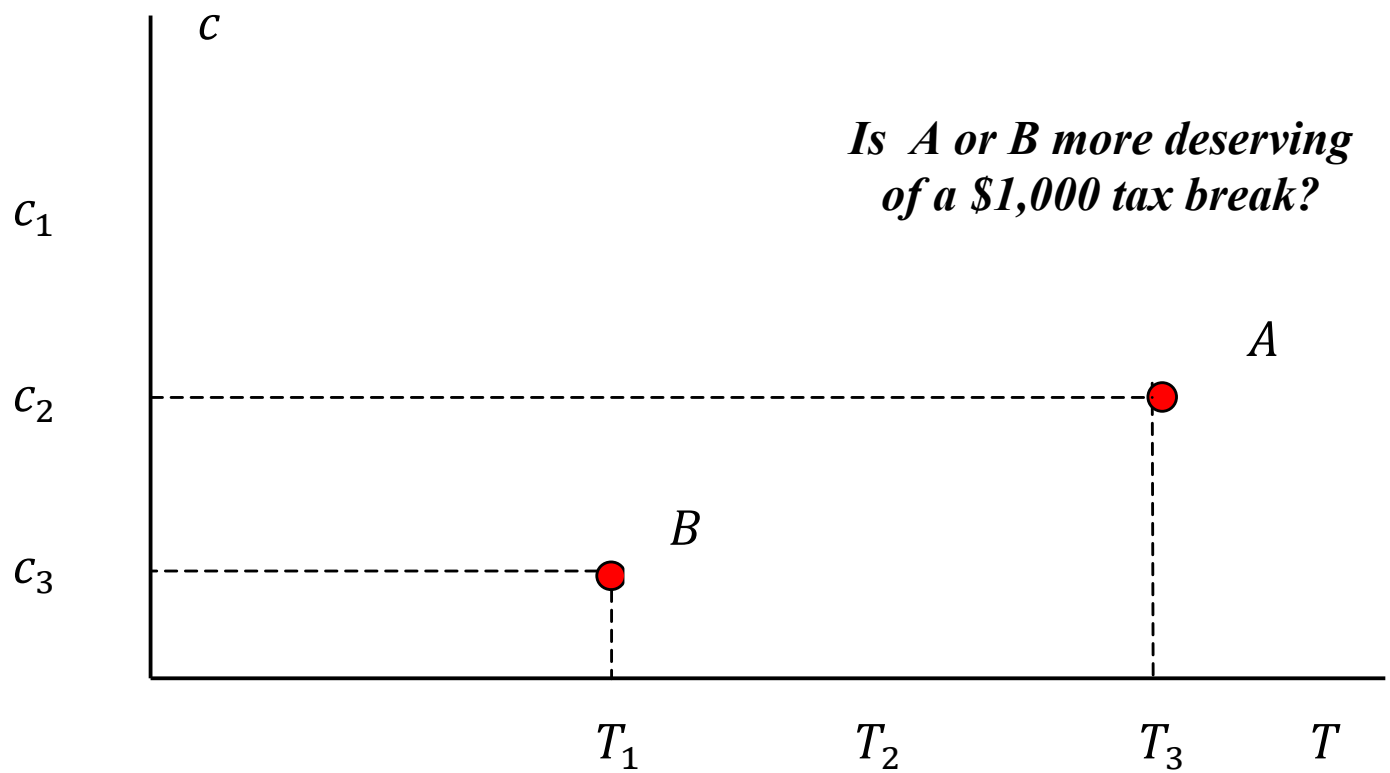
Which of these two families is most deserving of the $1,000 tax break?

- Family earns $50,000 per year, pays $2,500 in taxes, and hence nets out $47,500
- Family earns $500,000 per year, pays $170,000 in taxes, and hence nets out $330,000

Eliciting Social Preferences



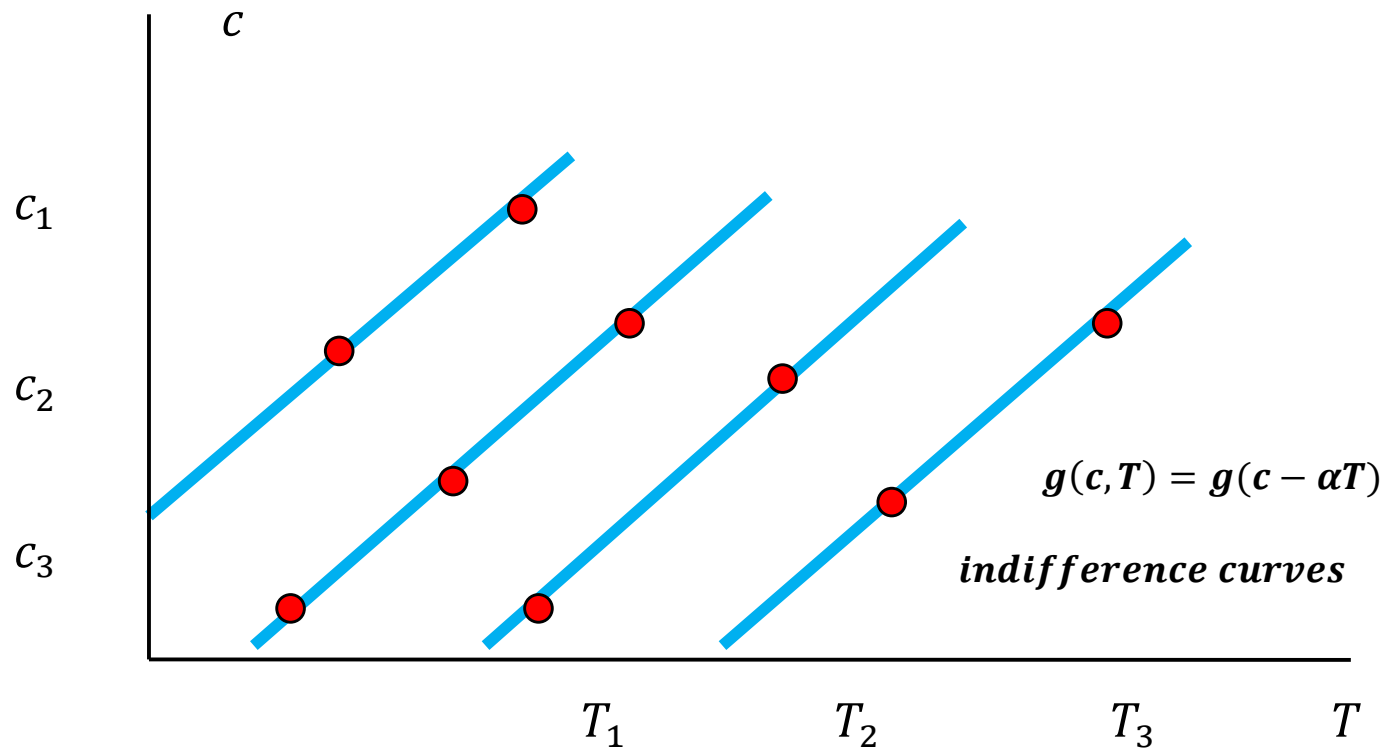
Eliciting Social Preferences



Eliciting Social Preferences

$S_{ijt} = 1$ if i ranked 1st in display t for respondent j, δT_{ijt} is difference in taxes, δc_{ijt} difference in net income for families in pair shown.

$$S_{ijt} = \beta_0 + \beta_T \delta T_{ijt} + \beta_c \delta c_{ijt} \qquad \alpha = \frac{\delta c}{\delta T}|_S = -\frac{\beta_T}{\beta_c} = -slope$$



Eliciting Social Preferences

	Probability of being deemed more deserving in pairwise comparison					
Sample	Full	Excludes cases with income of $1m	Excludes cases with income of $500K+	Excludes cases with income $500K+ and $10K or less	Liberal subjects only	Conservative subjects only
	(1)	(2)	(3)	(4)	(5)	(6)
d(Tax)	0.0017***	0.0052***	0.016***	0.015***	0.00082***	0.0032***
	(0.0003)	(0.0019)	(0.0019)	(0.0022)	(0.00046)	(0.00068)
d(Net Income)	-0.0046***	-0.0091***	-0.024***	-0.024***	-0.0048***	-0.0042***
	(0.00012)	(0.00028)	(0.00078)	(0.00094)	(0.00018)	(0.00027)
Number of observations	11,450	8,368	5,816	3,702	5,250	2,540
Implied α	0.37	0.58	0.65	0.64	0.17	0.77
	(0.06)	(0.06)	(0.07)	(0.09)	(0.12)	(0.16)
Implied marginal tax rate	73%	63%	61%	61%	85%	57%

Outline

Conclusion

- Generalized marginal social welfare weights are fruitful way to extend standard welfarist theory of optimal taxation.
  - Allow to dissociate individual characteristics from social criteria.
  - Which characteristics are fair to compensate for?
- Helps resolve puzzles of traditional welfarist approach.
- Unifies existing alternatives to welfarism.
- Weights can **prioritize social justice principles** in lexicographic form:
  1. Injustices created by tax system itself (horizontal equity)
  2. Compensation principle (health, family background)
  3. Luck component in earnings ability
  4. Utilitarian concept of decreasing marginal utility of consumption.

Empirical Work on Social Preferences

This paper: "Intergenerational Mobility and Support for Redistribution" by Alberto Alesina, Stefanie Stantcheva, and Edoardo Teso.

https://scholar.harvard.edu/stantcheva/publications/intergenerational-mobility-and-support-redistribution

Intergenerational Mobility and Preferences for Redistribution

Alberto Alesina, Stefanie Stantcheva, and Edoardo Teso

(Stereo)typically Documented Views

Americans:

- Econ system mostly “fair," American dream alive
- Wealth is reward for ability and effort
- Poverty due to inability to take advantage of opportunity
- Effort pays off

Continental Europeans:

- Econ system is basically unfair
- Wealth due to family history, connections, sticky social classes
- Poverty due to bad luck, society’s inability to help the needy
- Effort may payoff

- 70% of Americans versus 35% of Europeans believe you can climb social ladder if you work hard (WVS)
- Yet, intergenerational mobility not systematically higher in the US (Chetty *et al.* 2014)

This Paper: Research Questions

- Do people have realistic views about intergenerational mobility?
- What are their views on fairness, such as the role of effort vs. luck?
- Link between perceived intergenerational mobility and preferred redistribution policies?
  - **Equality of opportunities** policies (education, bequest taxes)
  - **Equality of outcome** policies (social insurance, progressive income taxation)?
- Correlation and Causality (experimental).
- Heterogeneity by socio-economic background, political views, own mobility experience?

Method: Surveys and Randomized Experiments

- Online surveys on representative samples in the US, UK, France, Italy, and Sweden. ▸ Stats
- Research agenda ahead.
- Can collect more data to reduce noise, further treatments to test channels. Suggestions very welcome!
- Survey structure: Background/ Fairness / Randomized: Info on Mobility / Perceptions of Mobility / Policies / Randomized: Views on government
- Sample collected (mainly) September/October 2016
  $N \approx 2,000$ for IT, UK, FR, $N \approx 4000$ for U.S., $N \approx 1,500$ for SE.

Survey and Methodology

Survey Structure

- **Background** socio-economic questions, own social mobility experience, political experience.
- **Fairness**: Fair system, reasons poor, reasons rich. Detail
- **Randomized "information"** experiment to shift views on extent of social mobility. Randomization
- **Perceptions of intergenerational mobility** in own country.
- **Policies:** Overall intervention, overall support for equality of opportunity, income taxes, estate tax, budget.
- **Government:** views on role and capacities of government (order randomized, pre or post info treatment).

Eliciting Beliefs on Upward Mobility

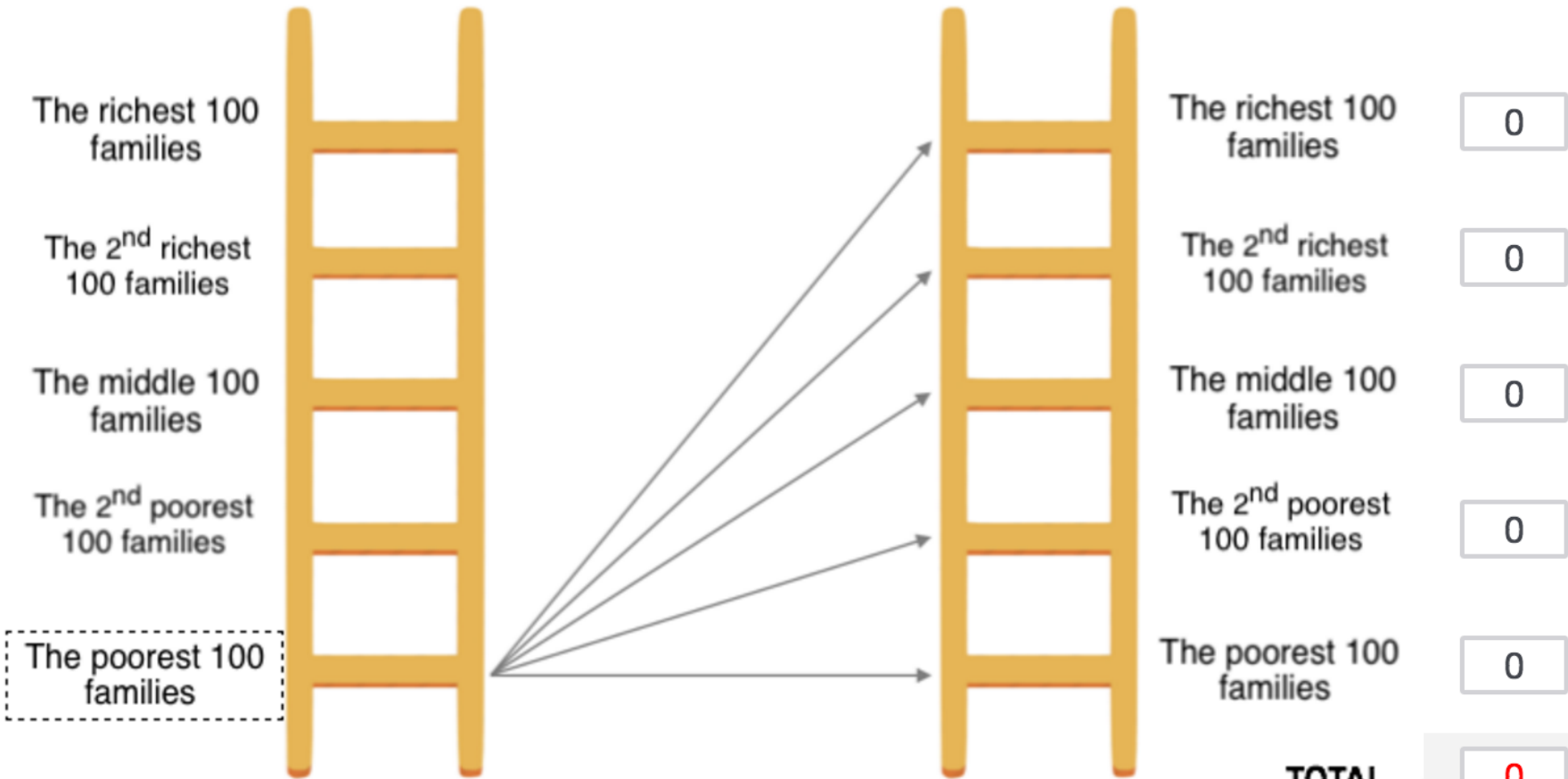
For the following questions, we focus on 500 families that represent the U.S. population. We divide them into five groups on the basis of their income, with each group containing 100 families. These groups are: the poorest 100 families, the second poorest 100 families, the middle 100 families, the second richest 100 families, and the richest 100 families.

In the following questions, we will ask you to evaluate the chances that children born in one of the poorest 100 families, once they grow up, will belong to any of these income groups.

Please fill out the entries to the right of the figure below to tell us, in your opinion, how many out of 100 children coming from the poorest 100 families will grow up to be in each income group.

Eliciting respondent's beliefs on upward mobility

Here are **500 families** that represent the US population:



Eliciting Beliefs on Upward Mobility (II)

Qualitative questions for robustness:

> *Do you think the chances that a child from the poorest 100 families will grow up to be among the richest 100 families are: [Close to zero, Low, Fairly Low, Fairly High, High*].

"American dream question:"

> *How do you feel about the following statement? "In [country] everybody has a chance to make it and be economically successful."*

Ask about mobility conditional on "effort" and "talent."

> *Consider 100 children coming from the poorest 100 families. These children are very determined and put in hard work both at school and, later in life, when finding a job and doing that job.*
>
> *Consider 100 children coming from the poorest 100 families. These children are very talented.*

Robustness: provided absolute cutoffs for quintiles: no change.

Questions on Policies

Logic: Split desired policies into components

i) overall government involvement and intervention,

ii) how to share a given tax burden,

iii) how to allocate a given budget.

Income taxes on top 1%, next 9%, next 40%, bottom 50%. Detail

Budget allocation on 1) Defense/ Security, 2) Infrastructure, 3) Education, 4) SS, Medicare, DI, and SSI, 5) Social Insurance and Income Support Programs, 6) Health. Detail

Estate tax: Rate support. Detail

Support for equality of opportunity policies: subject to other policies being reduced (qualitative, robust, no free lunch). Detail

Questions on Role and Capacities of Government

Randomized block (outcomes/ pre-existing characteristics):

Trust in government

Tools of the government

Are unequal opportunities a problem?

Scope of government: to reduce unequal opportunities for children from rich and poor backgrounds, from 1 to 7.

Is lowering or raising taxes better for reducing unequal opportunities? Detail

Ensuring reasonable answers

Appeal to people's social responsibility. Detail

Warn that "careless answers" will be flagged.

Constrain answers to add up to 100. Tabulating answers – few strange patterns. Detail

Attention check question (0.88%), Meade and Craig (2012).

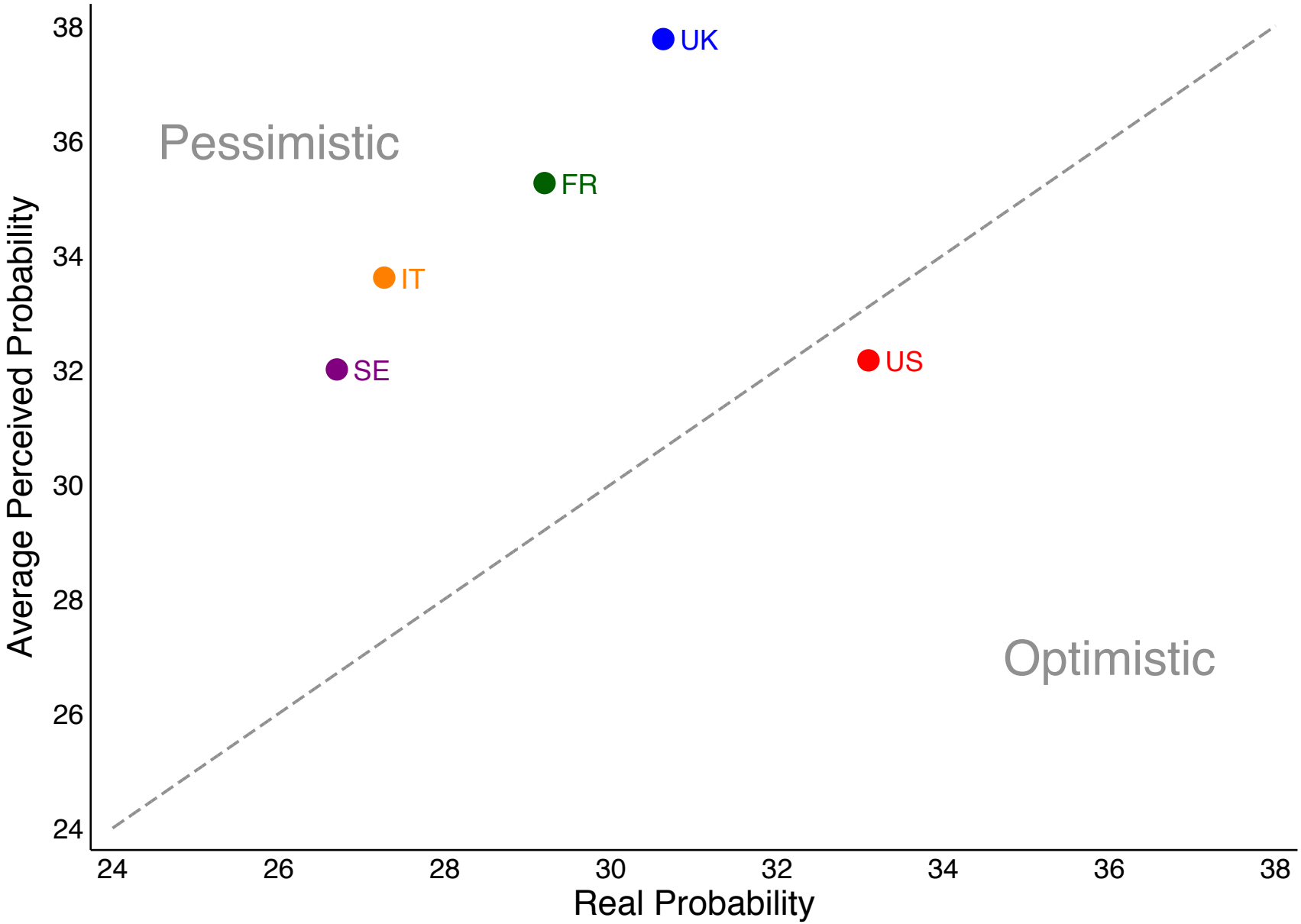
Time spent on separate questions' pages and overall survey time.

Ask for feedback post survey, whether felt survey was biased (18%).

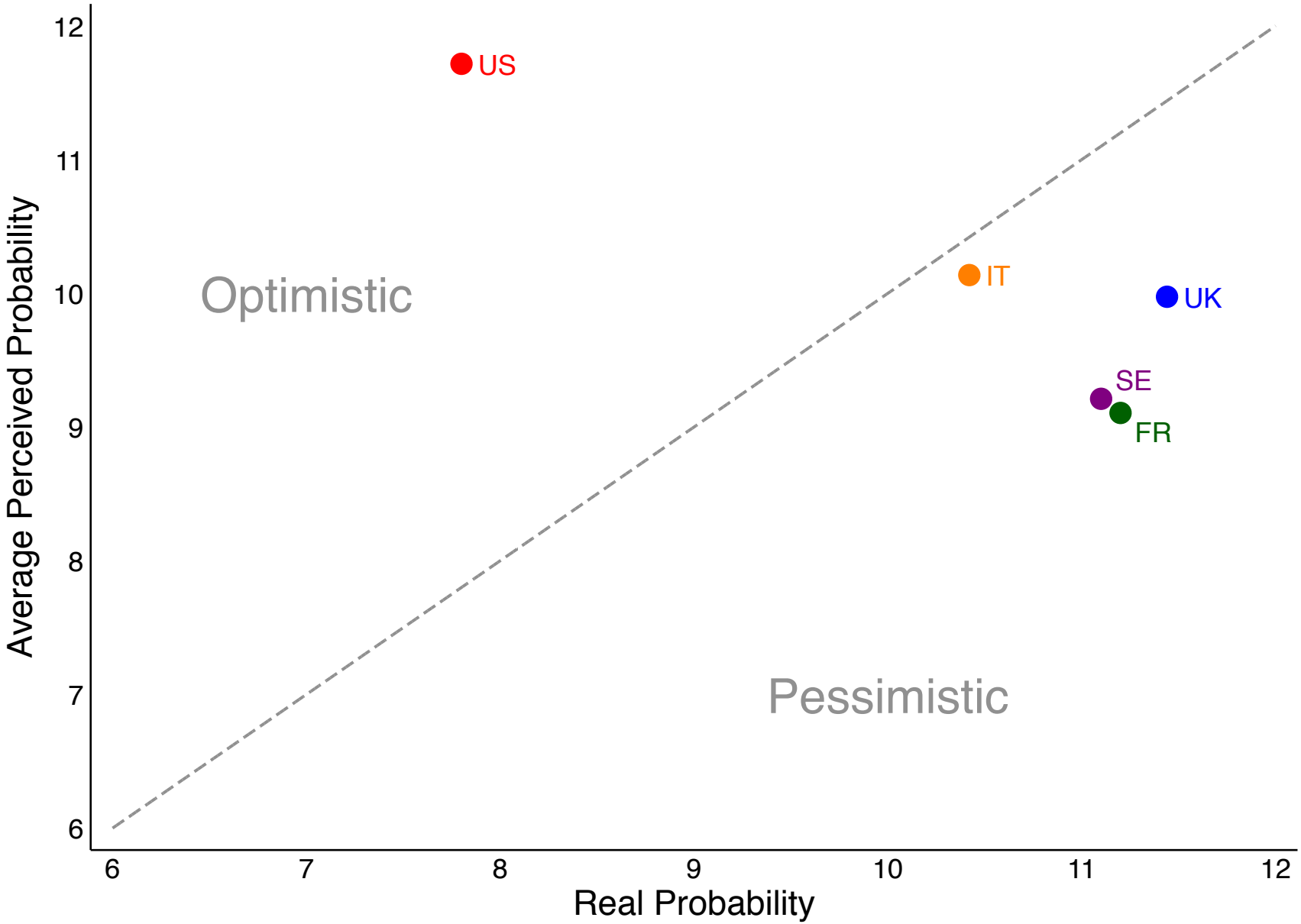
Asked for questions in different orders (ascending vs. descending) and on different pages.

Mobility Perceptions and Misperceptions

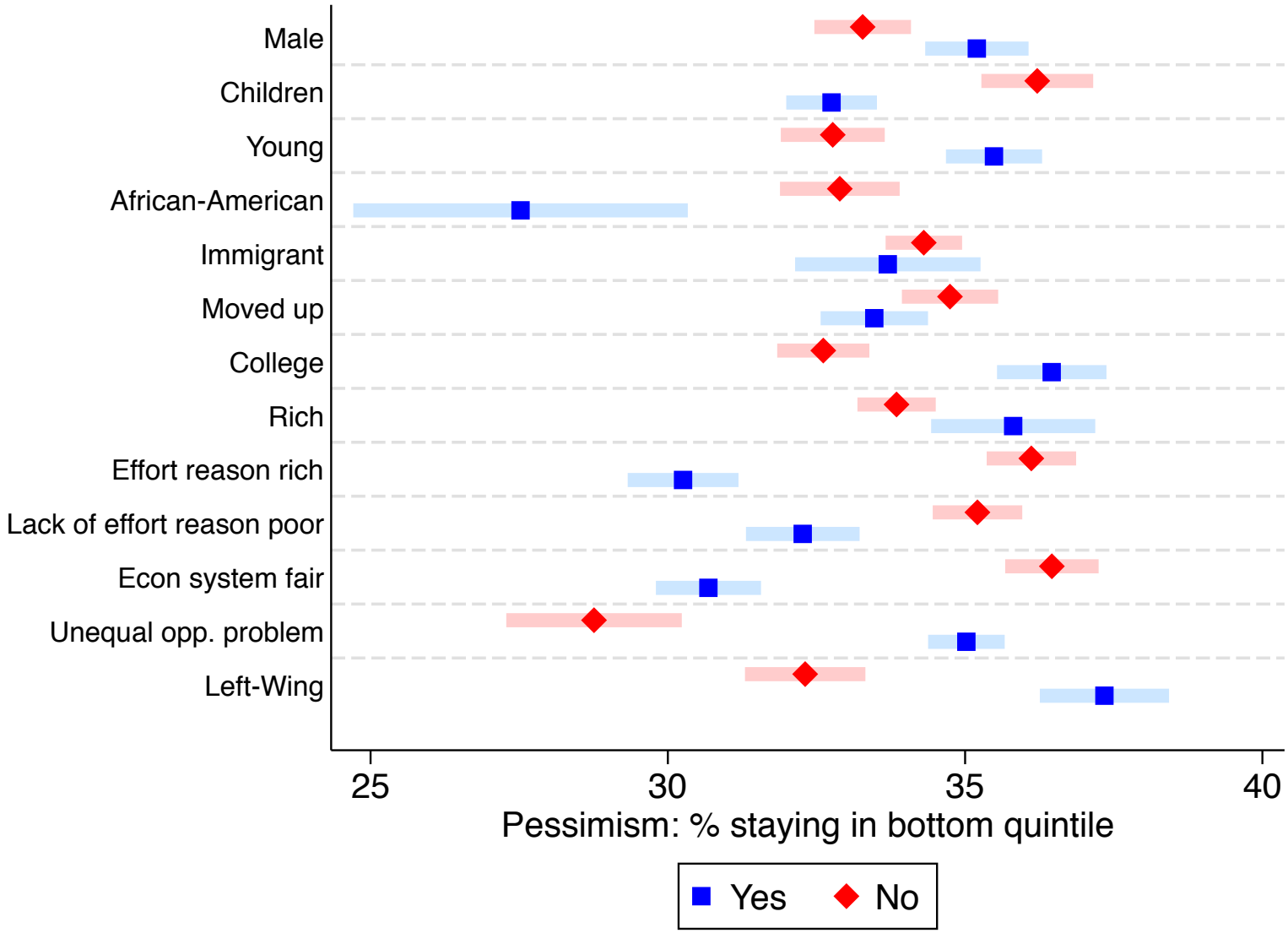
Probability of Staying in Bottom Quintile (Actual vs. Perceived)



Probability of Moving to Top Quintile (Actual vs. Perceived)

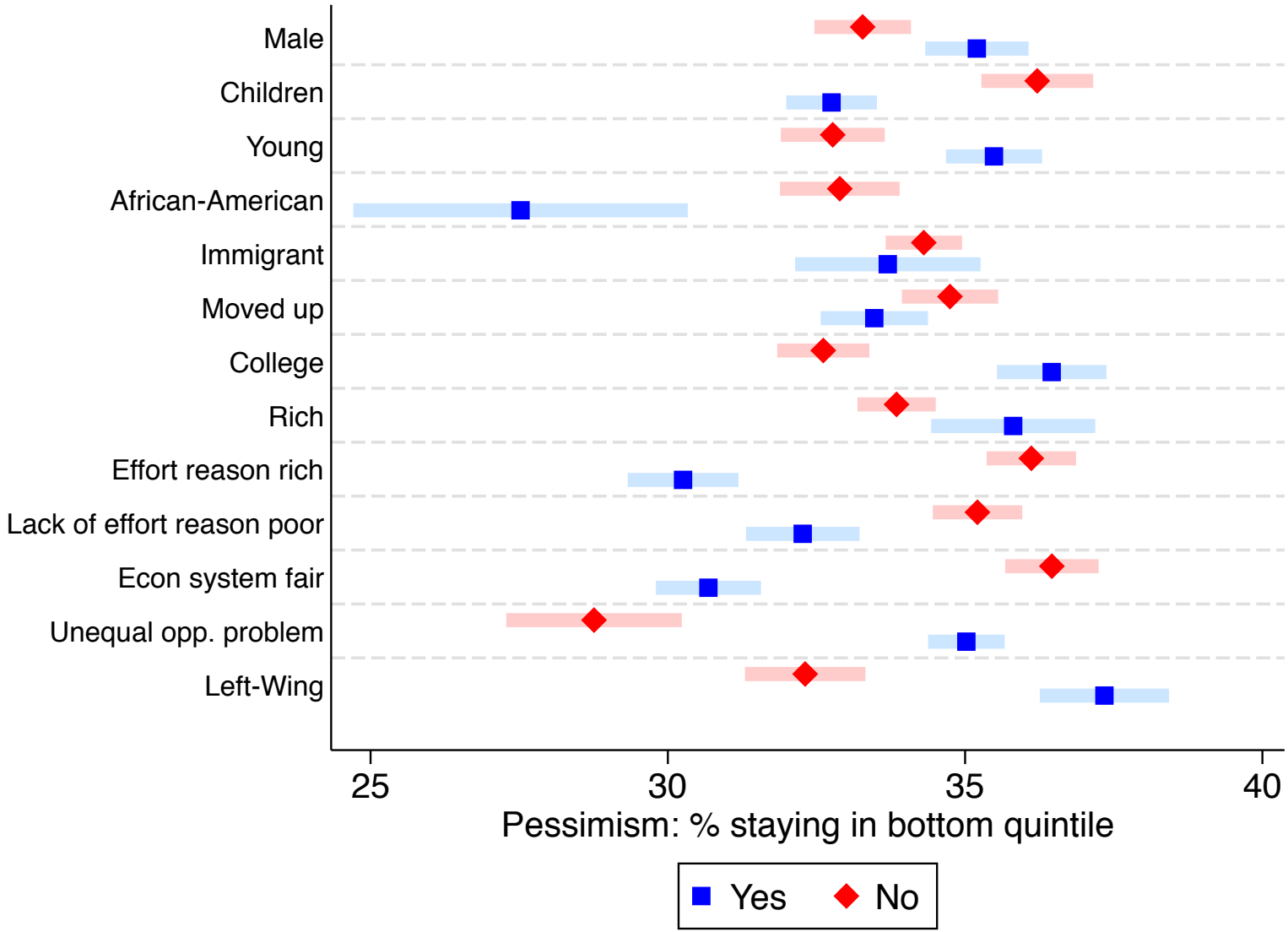


Which Groups are More Pessimistic?



Men, people without children, high income, college-educated, young, non African-American, those who do not believe in effort, think unequal opp. are problem.

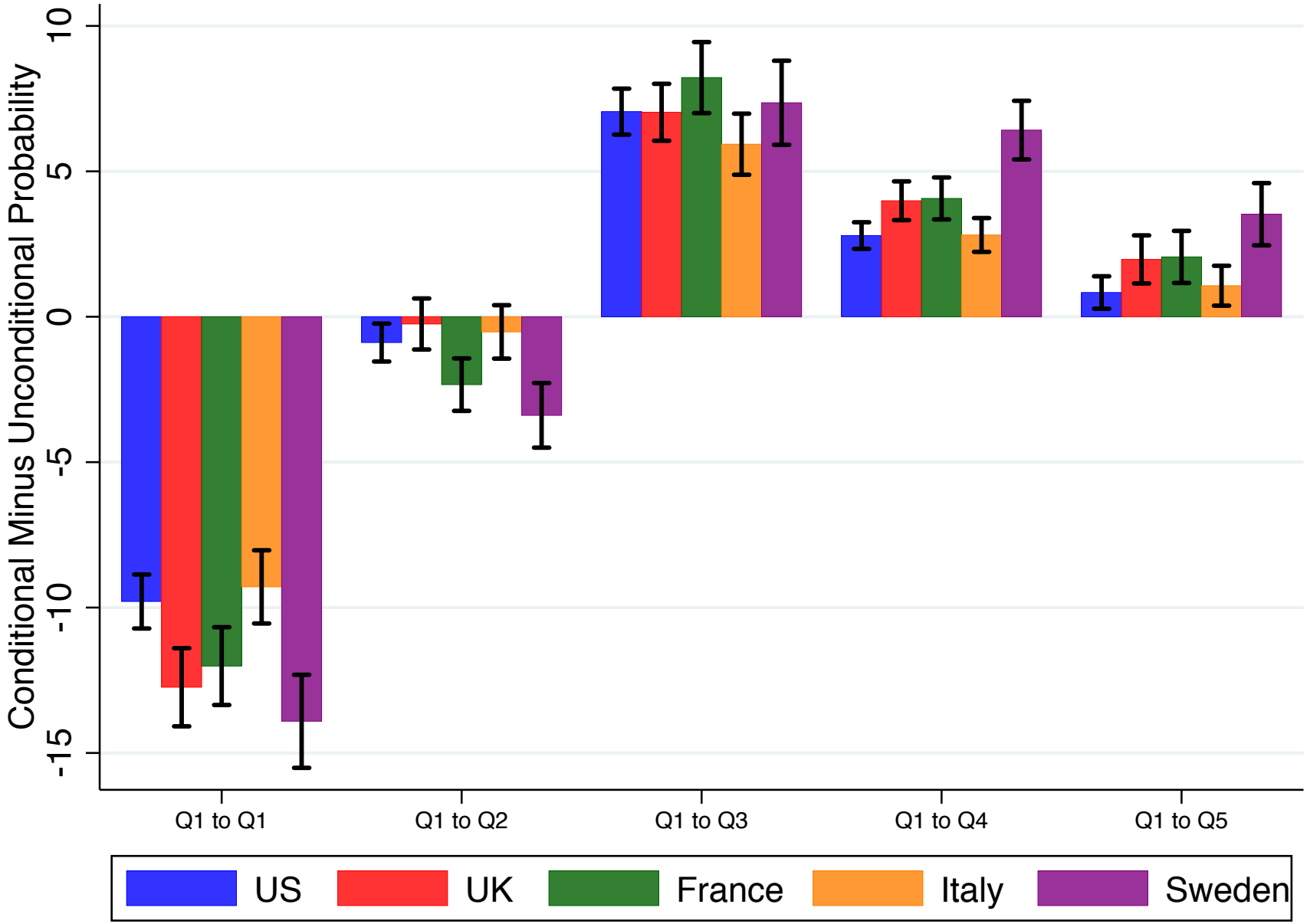
Which Groups are More Pessimistic?



Strongest predictor are political views (left/right wing).

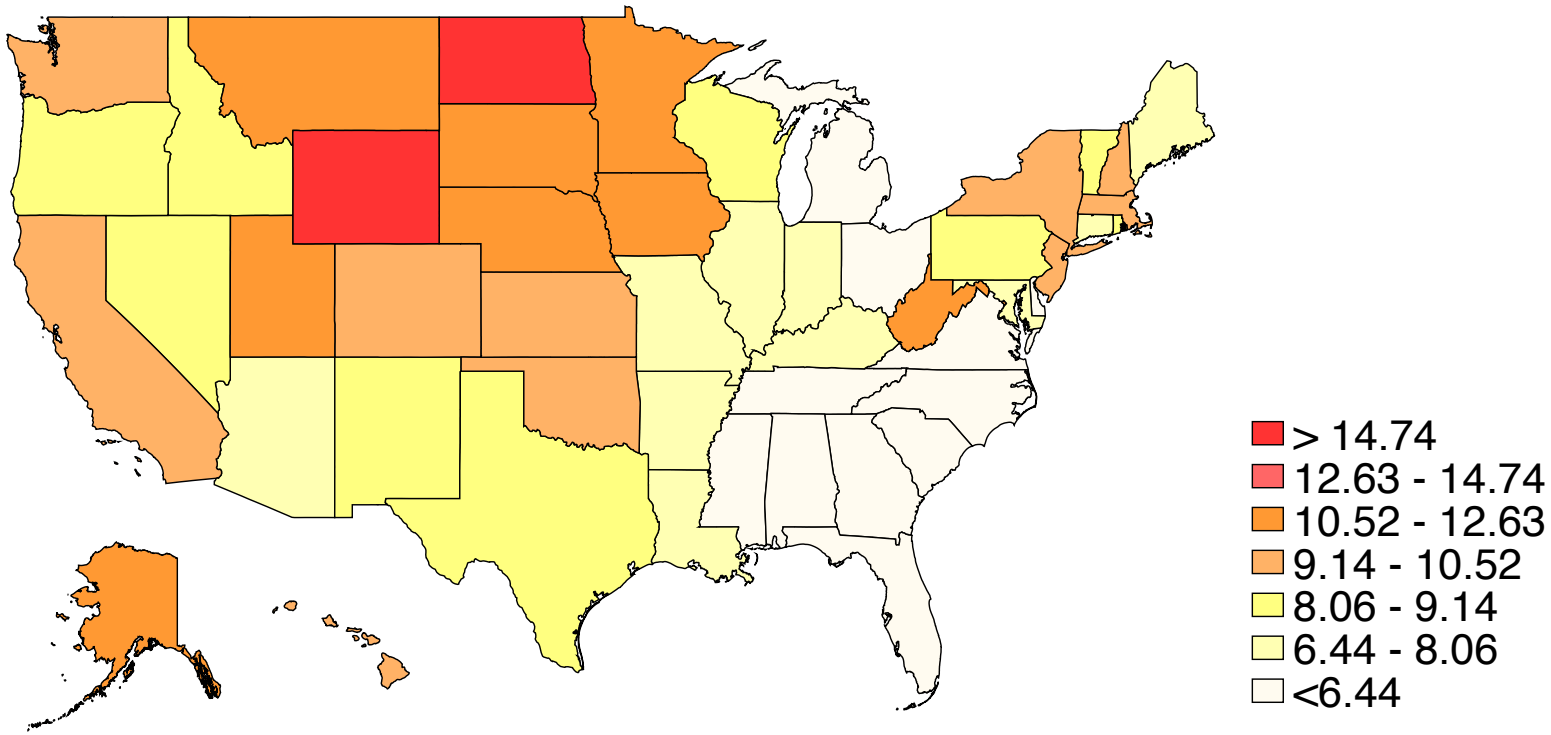
Role of Effort

Does Effort Change the Perceived Mobility?

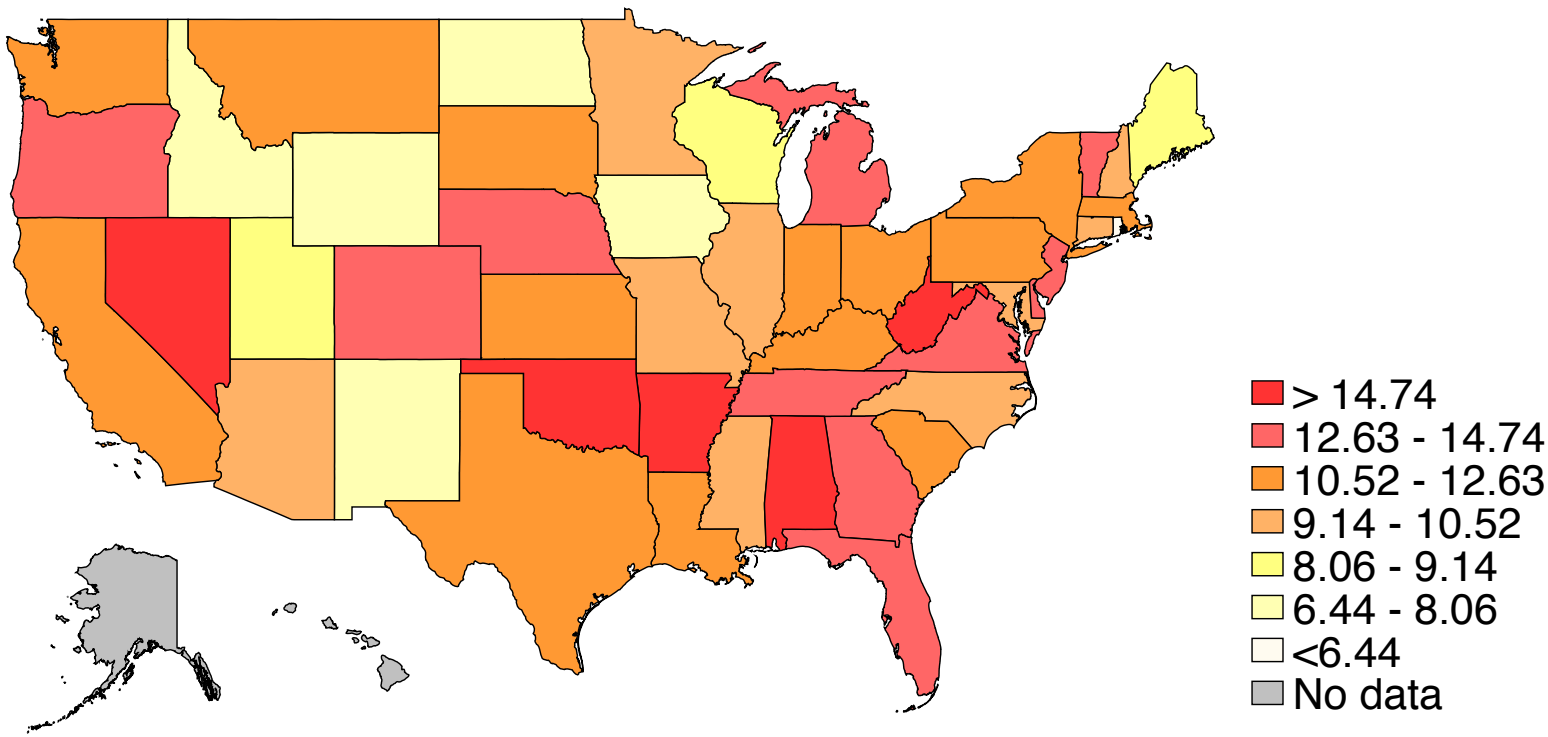


Geography of Perceptions in the U.S.

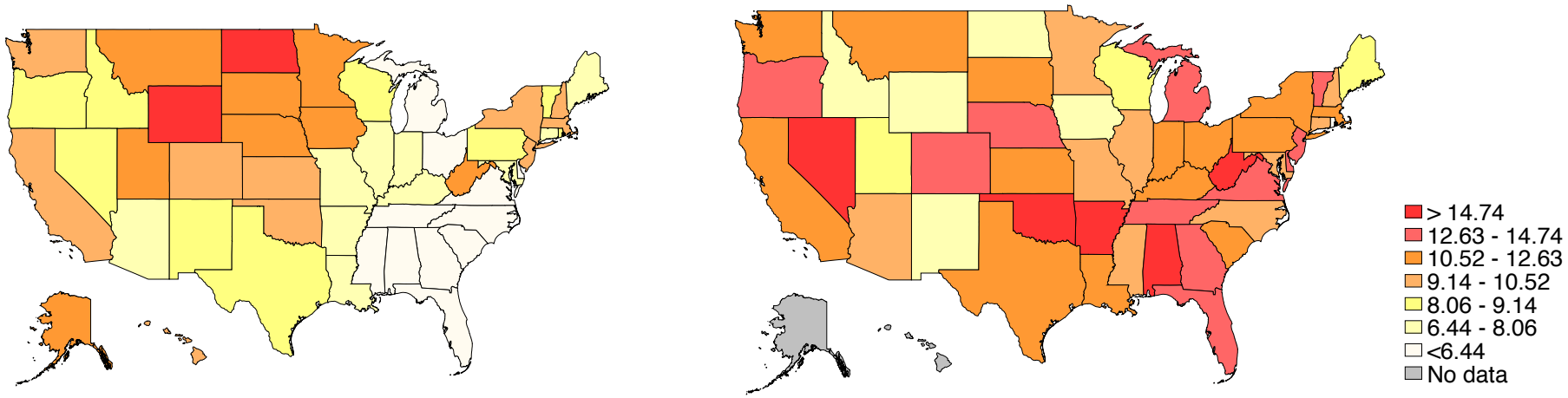
Actual probability of moving from bottom to top quintile



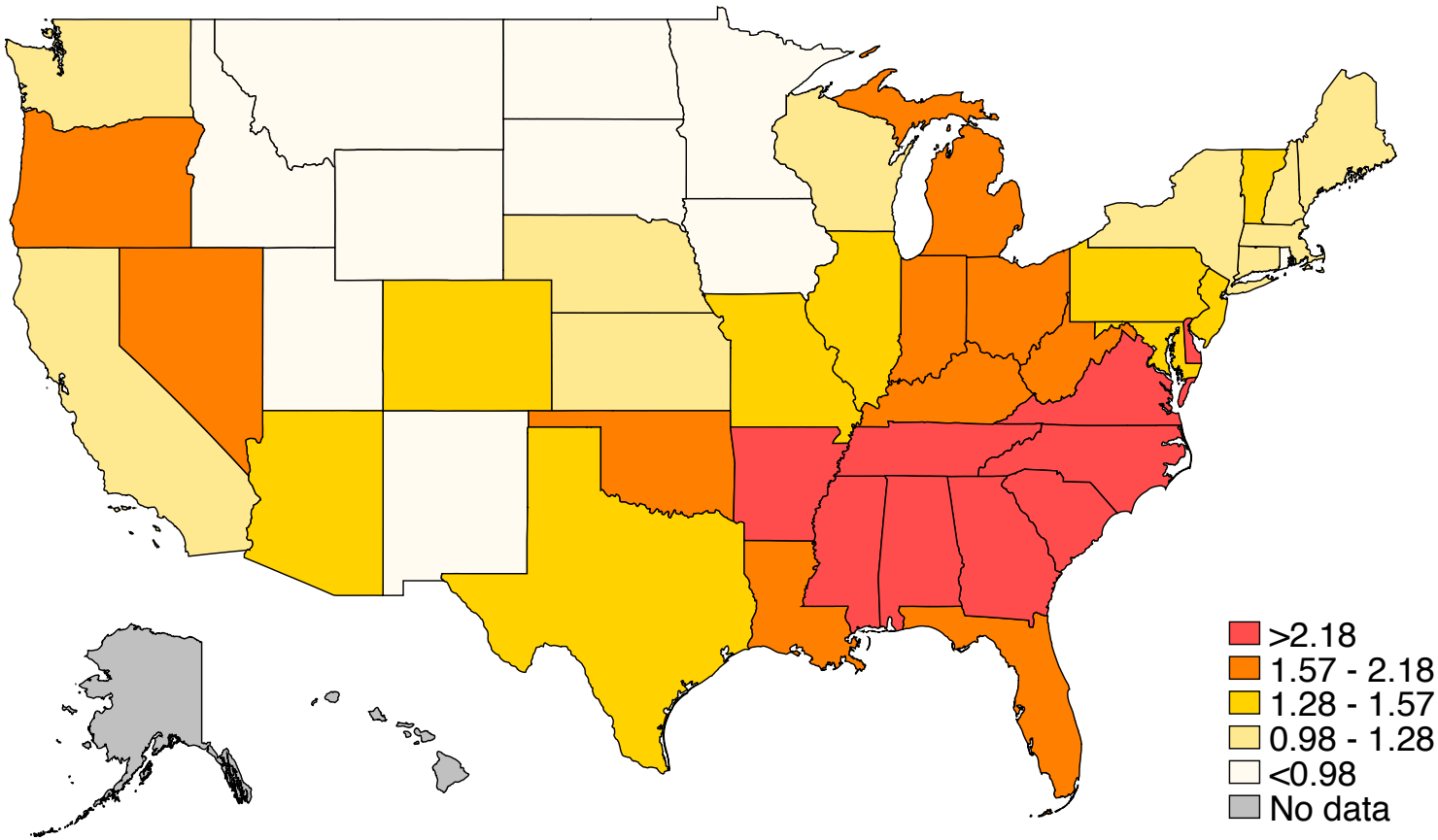
Perceived probability of moving from bottom to top



Actual and perceived probability of moving from bottom to top quintile

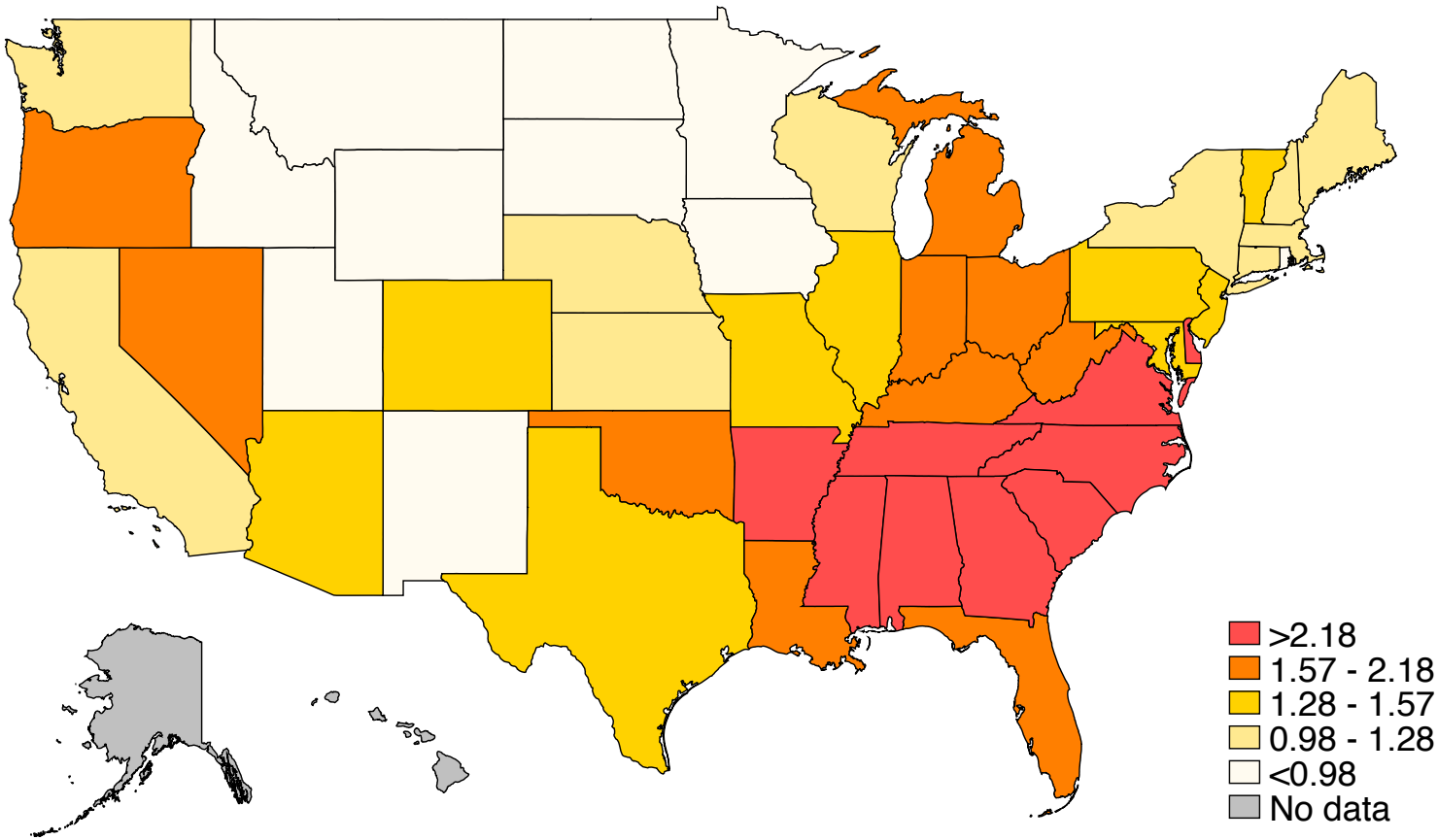


Ratio of actual local and perceived probability of moving from bottom to top



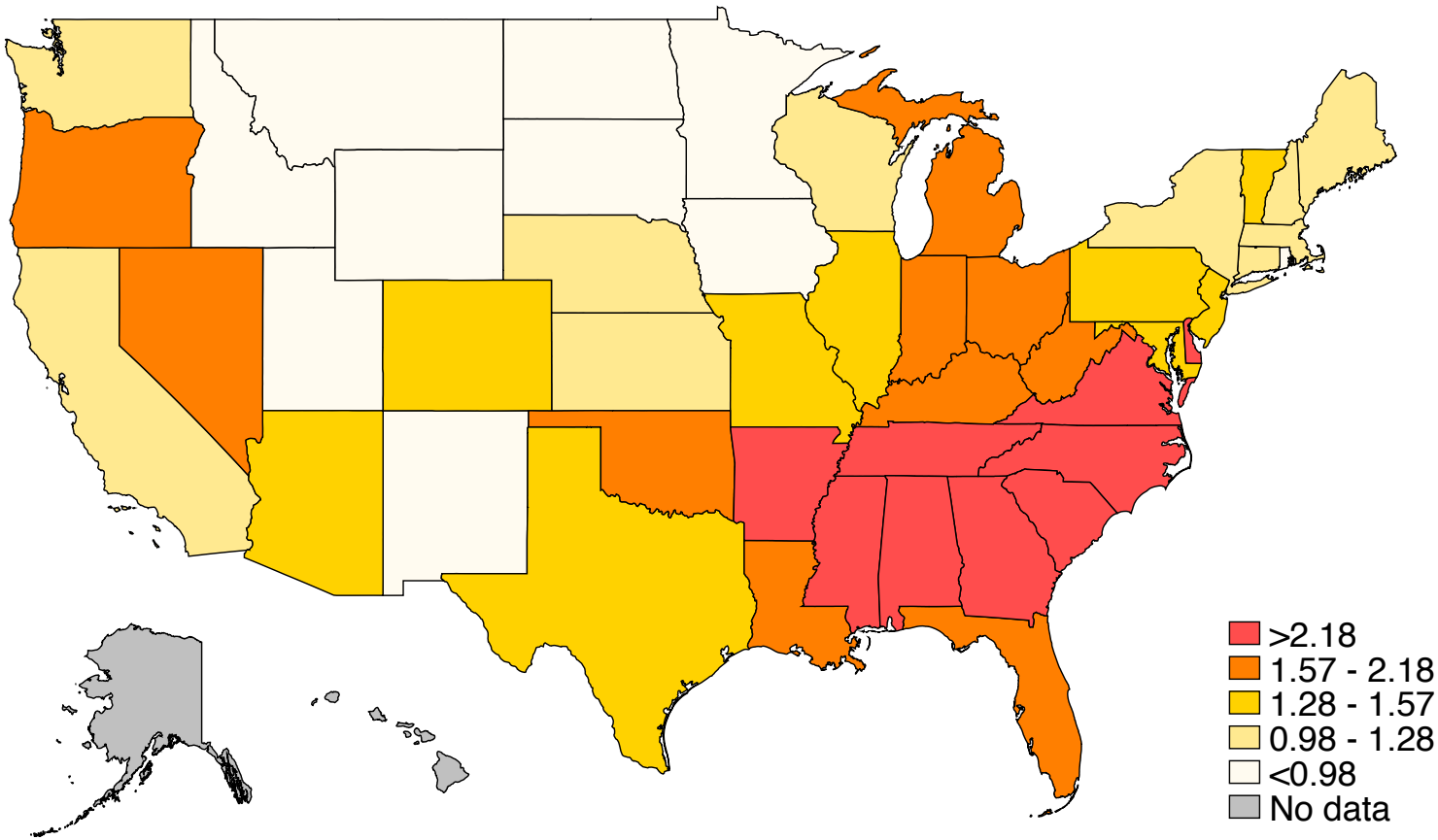
What are local perceptions correlated with, controlling for individual-level characteristics? ▸ National

Ratio of actual local and perceived probability of moving from bottom to top



Include: manufacturing share, college grads, income, etc...

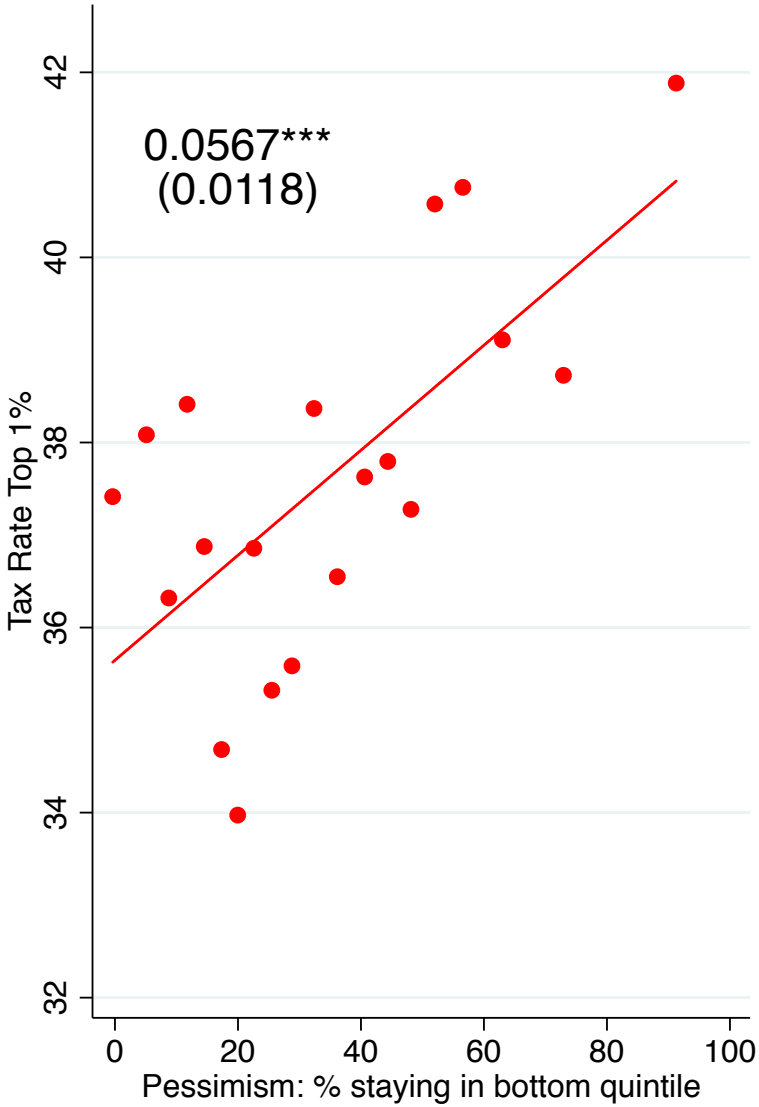
Ratio of actual local and perceived probability of moving from bottom to top

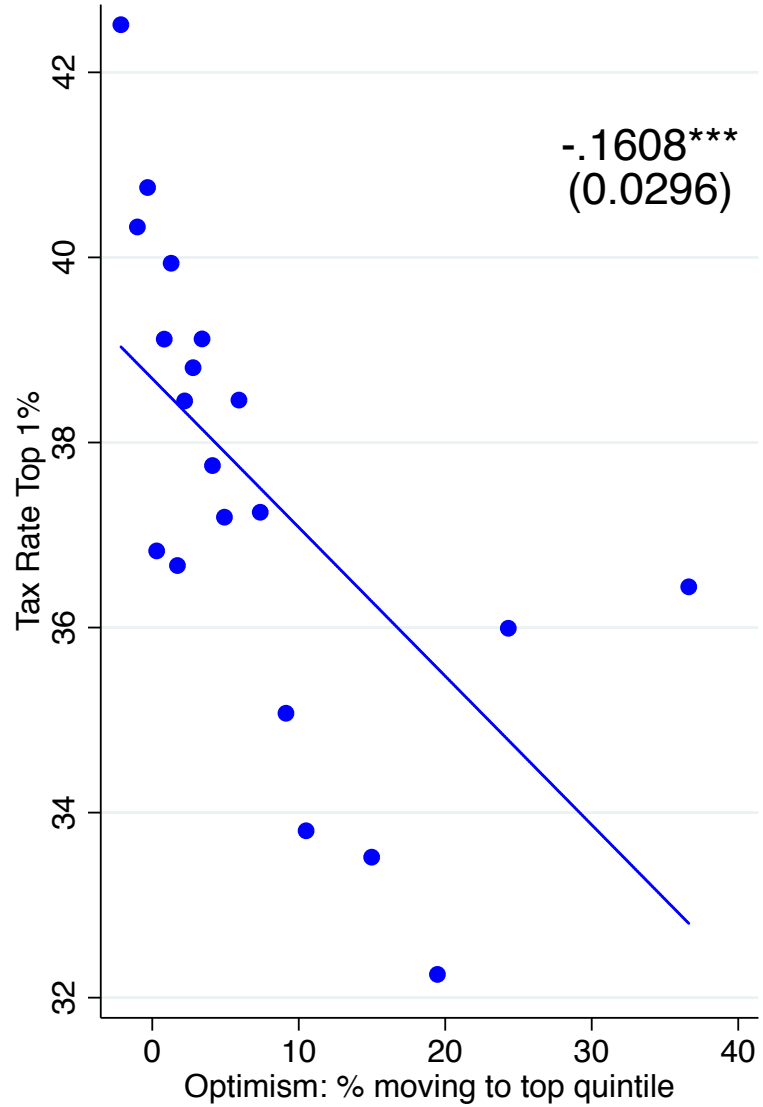


Strongest predictors of optimism: 1) high racial segregation 2) low income segregation (controlling for both at same time).

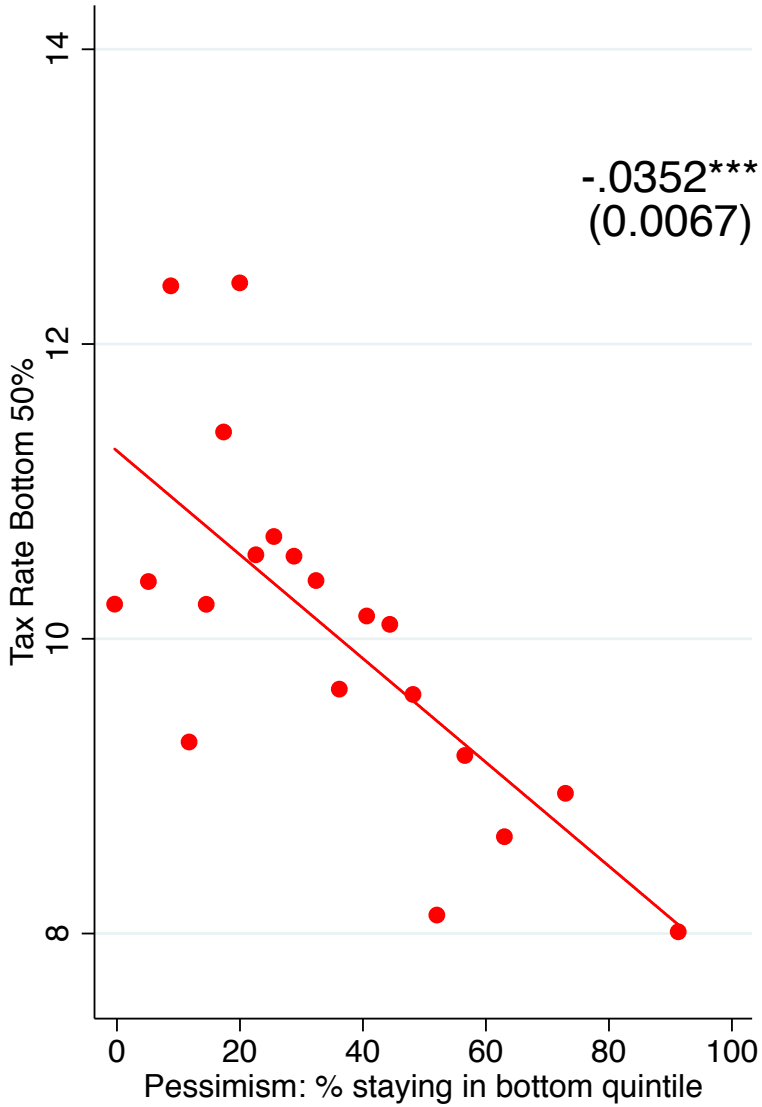
Perceptions of Mobility and Policy Preferences

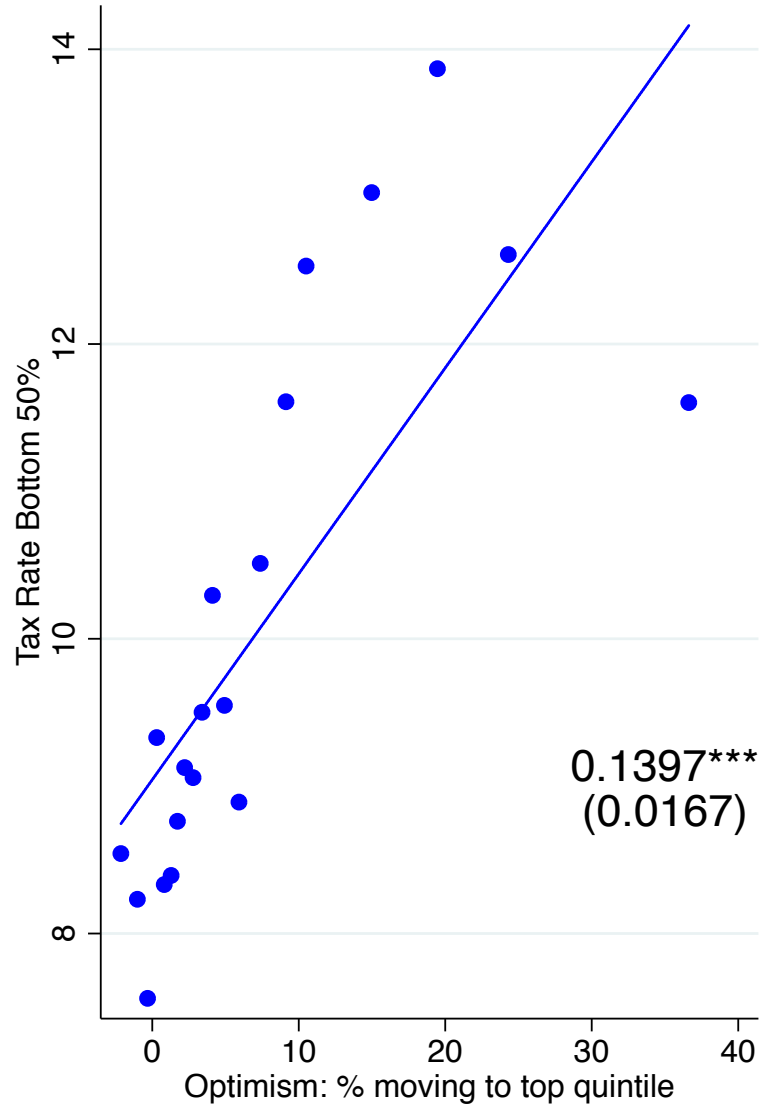
Pessimism, Optimism, and Top Tax Rate



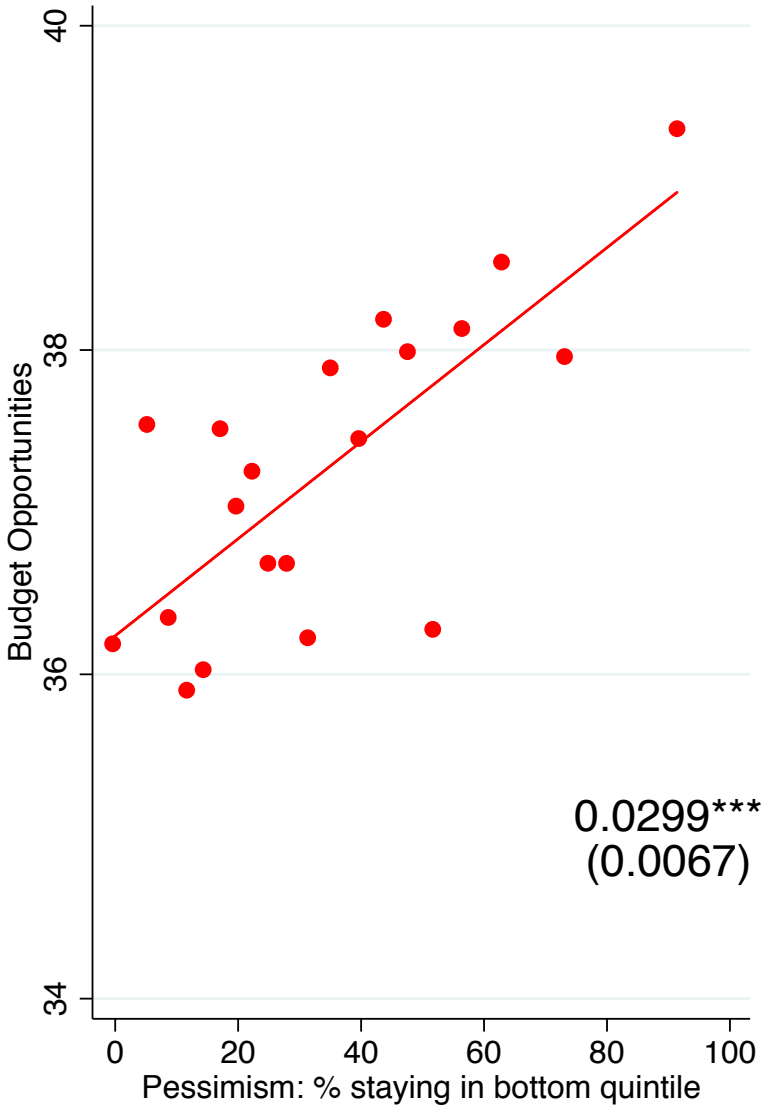


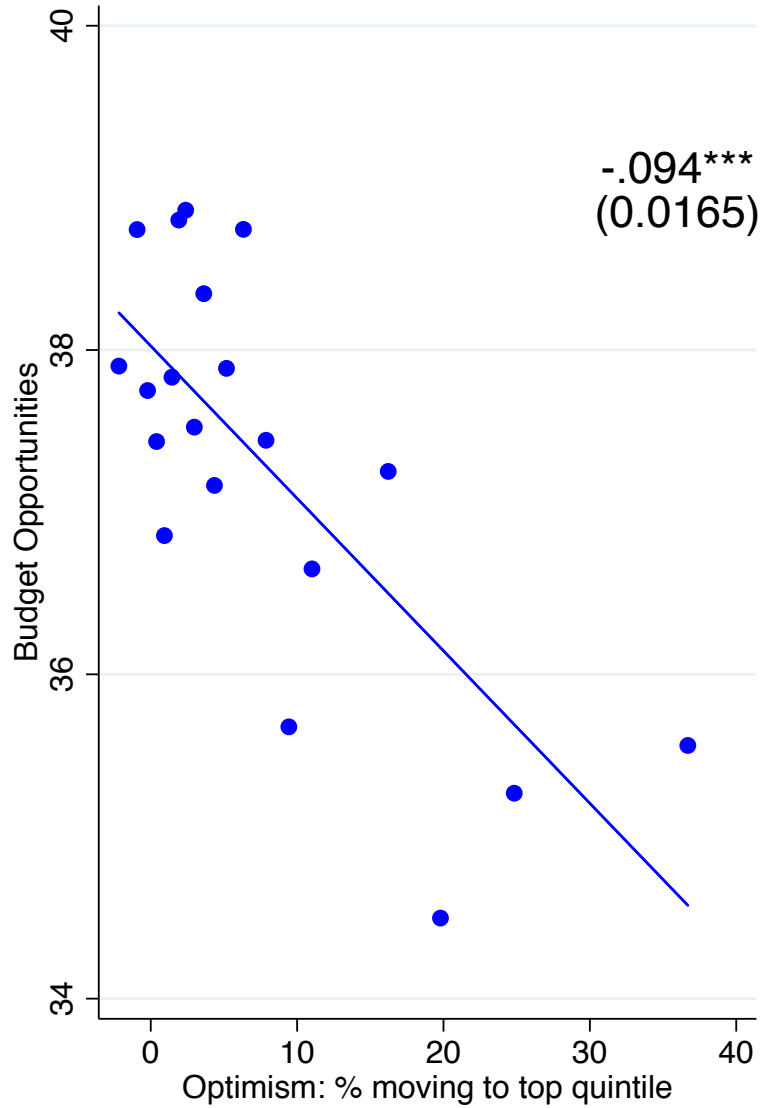
Pessimism, Optimism, and Bottom Tax Rate



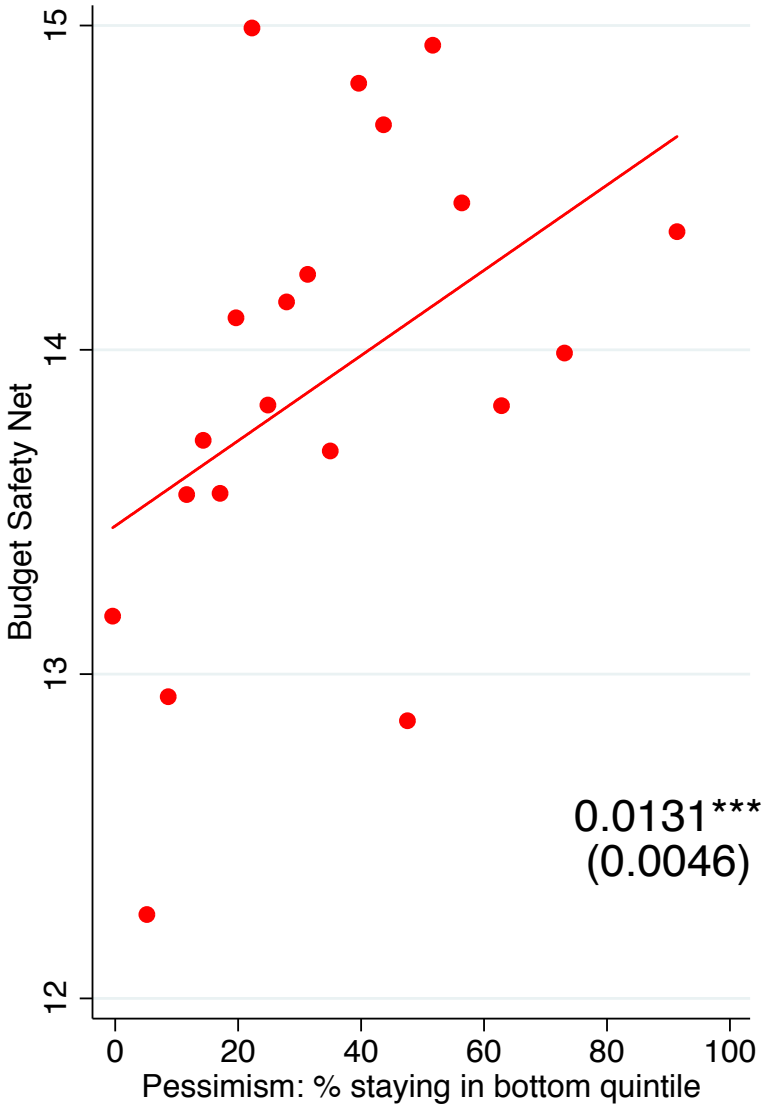


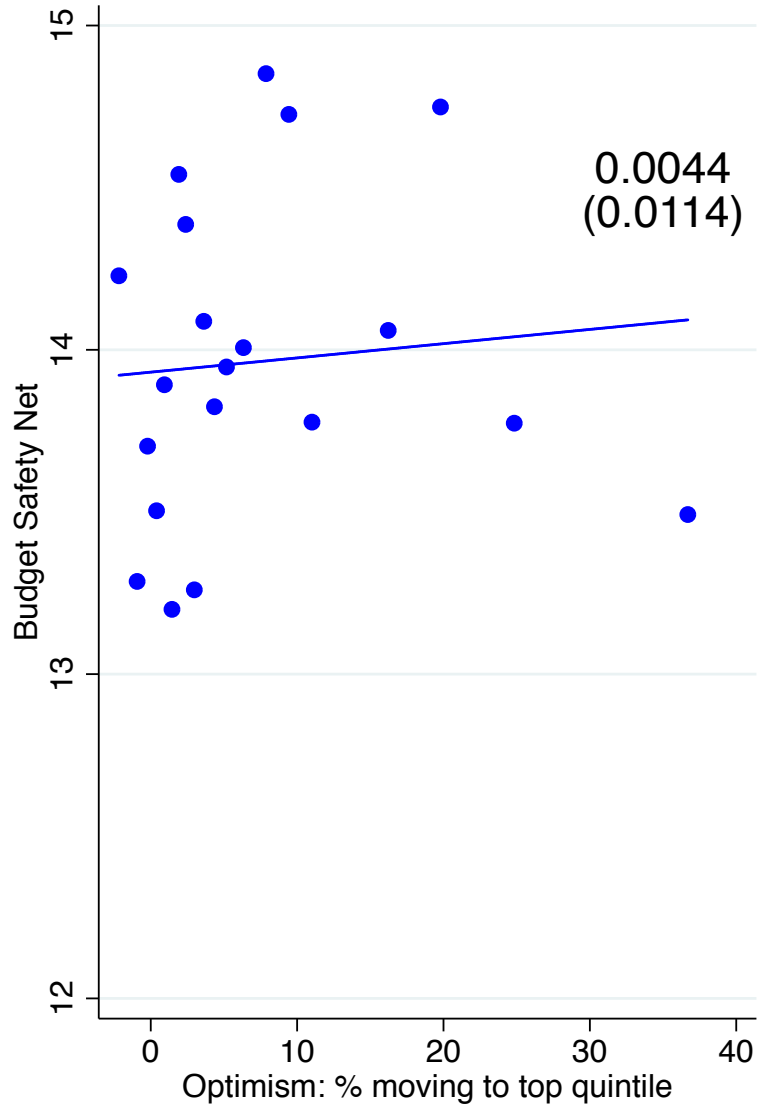
Strong Correlation with Equality of Opportunity Policies: Education and Health





Weaker Correlation with Safety Net Policies





Policy Preferences Strongly Related to Pessimism for Left-Wing Respondents..

	Budget Opp. (1)	Support Estate Tax (2)	Support Equality Opp. Policies (3)	Government Interv. (4)	Unequal Opp. Very Serious Problem (5)	Budget Safety Net (6)	Tax Rate Top 1 (7)	Tax Rate Bottom 50 (8)
A. Unconditional Beliefs								
Q1 to Q1 × Left-Wing	0.030***	0.001**	0.006***	0.004***	0.002***	0.020***	0.069***	-0.041***
	(0.011)	(0.000)	(0.001)	(0.001)	(0.000)	(0.008)	(0.020)	(0.011)
Q1 to Q1 × Right-Wing	0.019	-0.000	0.003**	0.003**	0.001**	0.003	0.039*	-0.033***
	(0.012)	(0.001)	(0.001)	(0.002)	(0.000)	(0.008)	(0.021)	(0.012)
p-value diff.	0.506	0.026	0.082	0.659	0.024	0.140	0.288	0.598

... but not for Right-Wing Respondents

	Budget Opp. (1)	Support Estate Tax (2)	Support Equality Opp. Policies (3)	Government Interv. (4)	Unequal Opp. Very Serious Problem (5)	Budget Safety Net (6)	Tax Rate Top 1 (7)	Tax Rate Bottom 50 (8)
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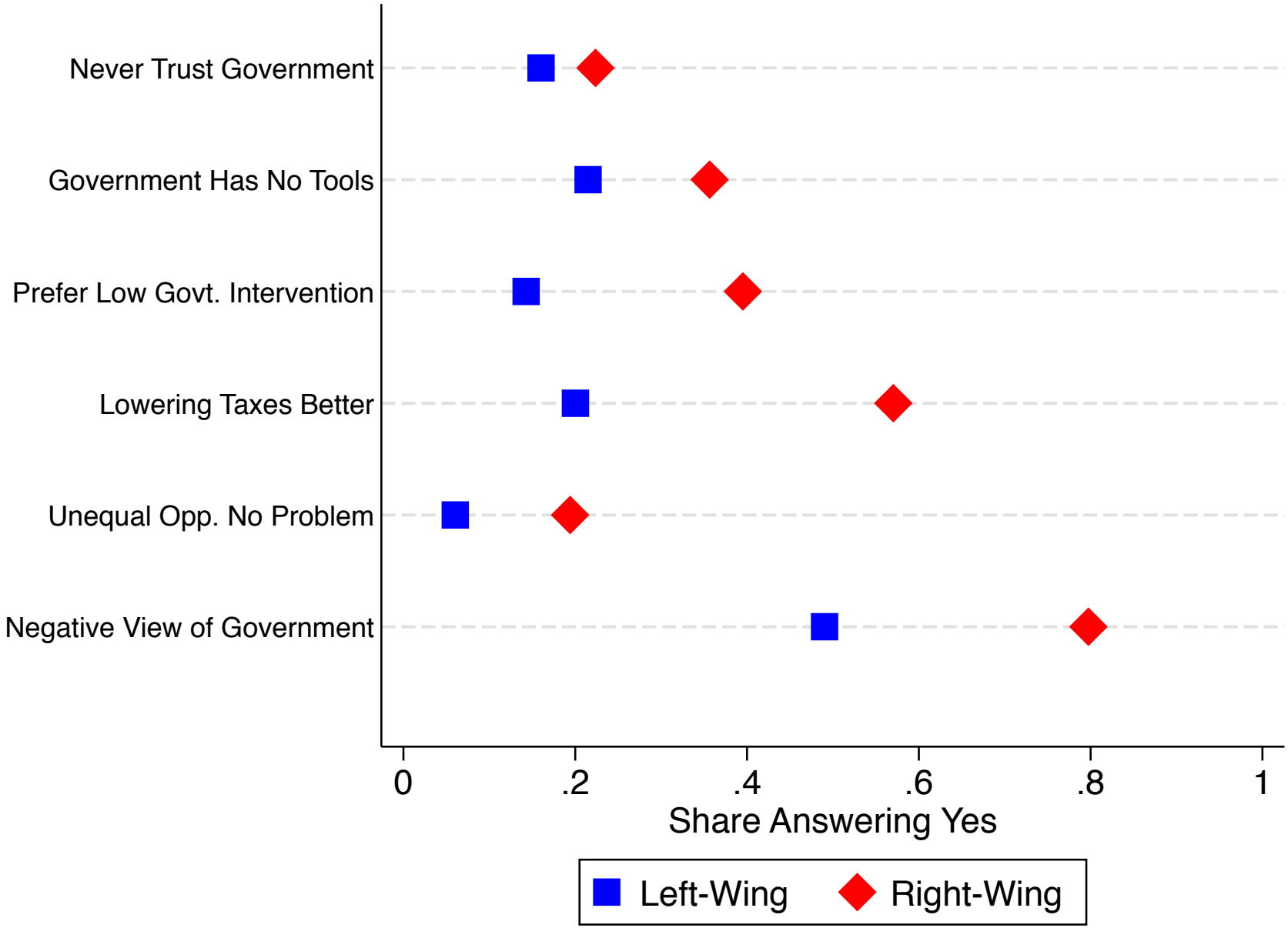
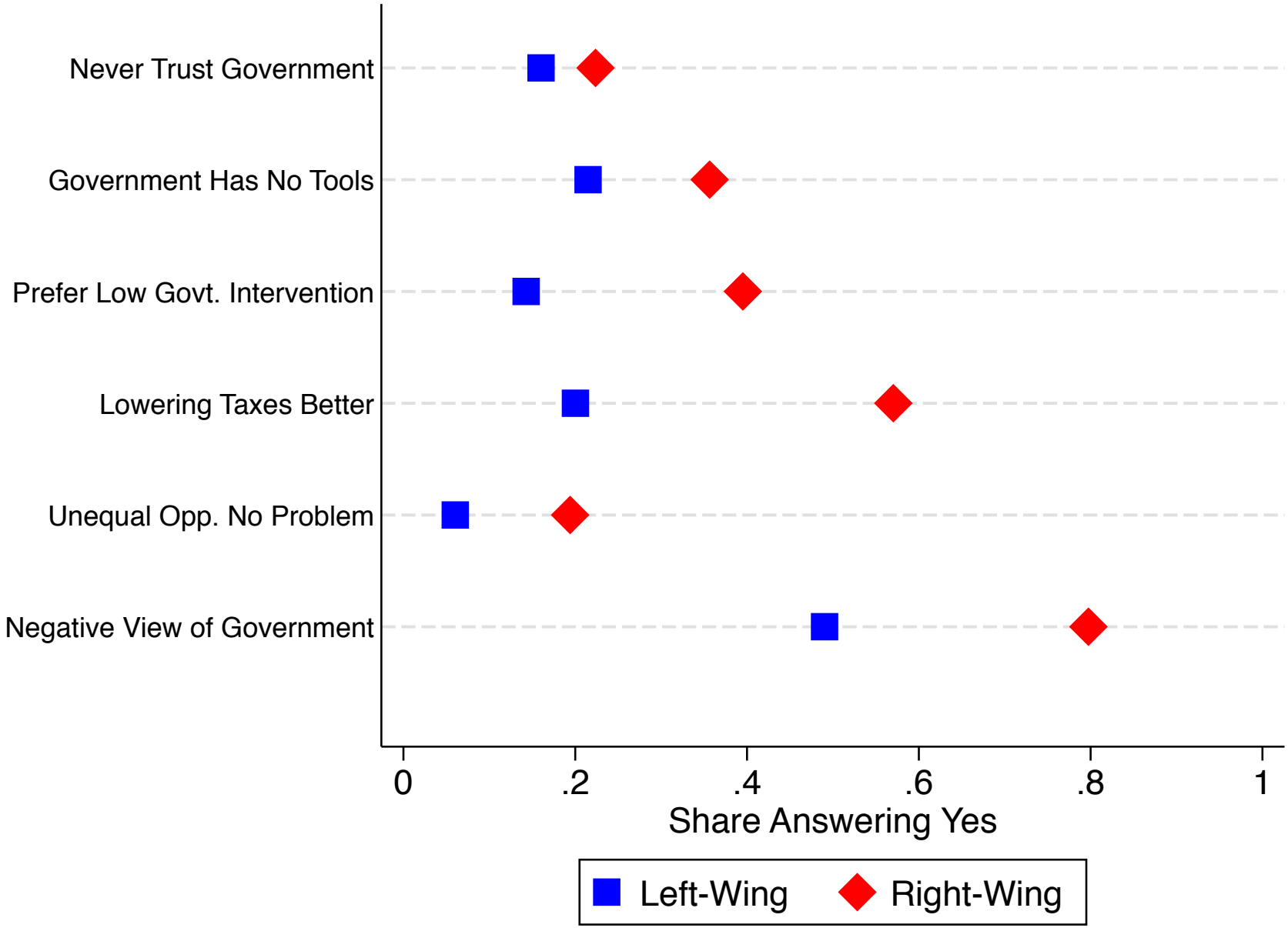
	(0.011)	(0.000)	(0.001)	(0.001)	(0.000)	(0.008)	(0.020)	(0.011)
Q1 to Q1 × Right-Wing	0.019	-0.000	0.003**	0.003**	0.001**	0.003	0.039*	-0.033***
	(0.012)	(0.001)	(0.001)	(0.002)	(0.000)	(0.008)	(0.021)	(0.012)
p-value diff.	0.506	0.026	0.082	0.659	0.024	0.140	0.288	0.598

Bad Views of Government by Left and Right



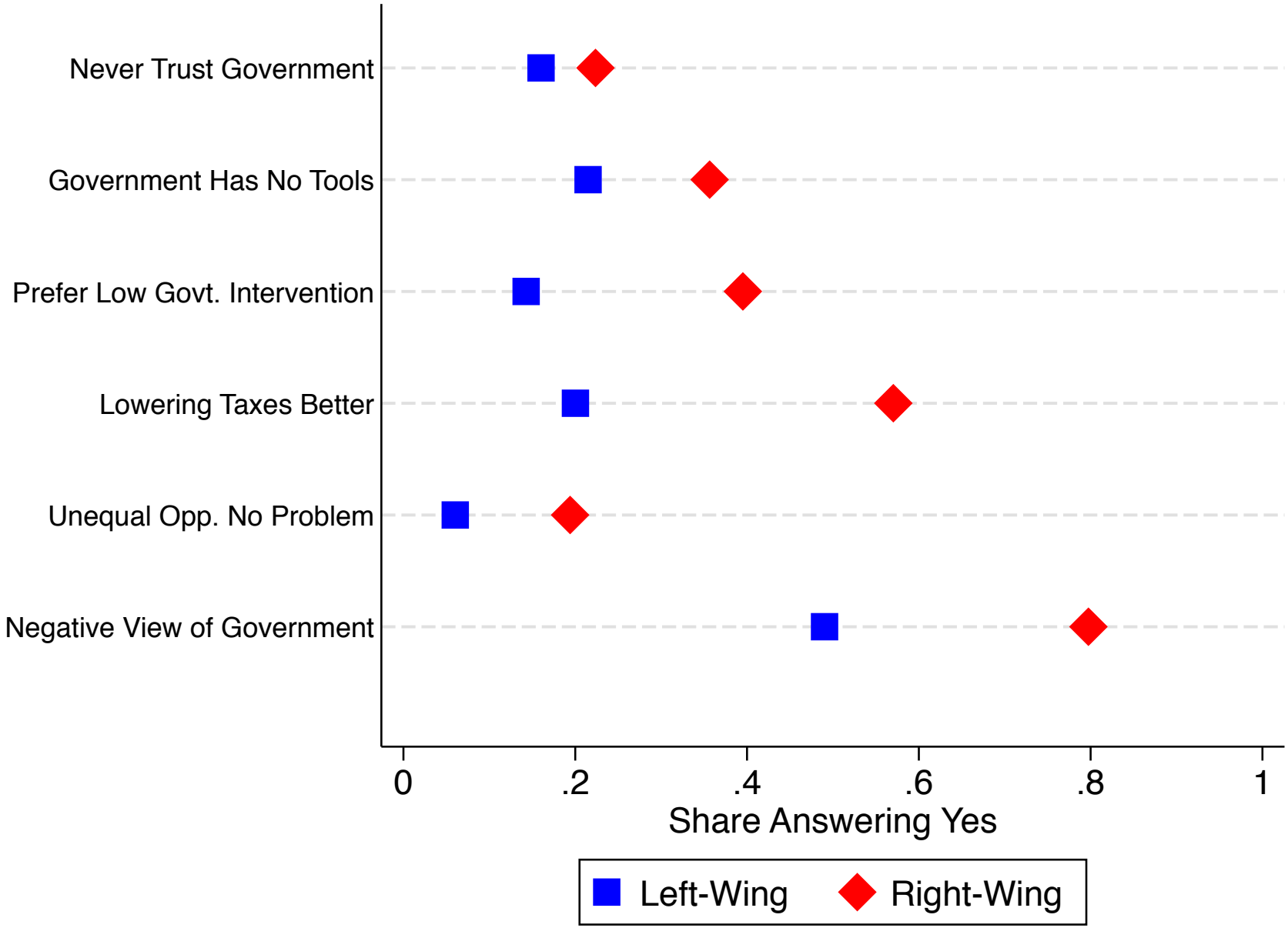
Important to take into account multidimensional perceptions.

Bad Views of Government by Left and Right



Left and Right distrust government, agree unequal opportunities are a problem,

Bad Views of Government by Left and Right



A composite measure of "against government" shows big contrast.

Randomized Perception Experiment

Randomized Perception Experiment

Causal relationship views on mobility $\rightarrow$ policy preferences?

Or simply individual characteristics (e.g.: political affiliation).

Cannot exogenously shift actual social mobility $\rightarrow$ shift perceptions instead.

Our randomized treatment satisfies four criteria:

1. Shift perceptions towards more pessimism (Treatment here)
2. Homogeneous across countries.
3. Does not allude to any policies or to government at all.
4. Accurate, not misleading.

First Stage Treatment Effect on Perceptions...

	Q1 to Q1 (1)	Q1 to Q2 (2)	Q1 to Q3 (3)	Q1 to Q4 (4)	Q1 to Q5 (5)	Q1 to Q4 (Qual.) (6)	Q1 to Q5 (Qual.) (7)	American Dream Alive (8)
A. Unconditional Beliefs								
Treated × Left-Wing	10.209***	-2.126***	-6.093***	-2.053***	0.063	-0.189***	-0.180***	-0.010
	(0.980)	(0.488)	(0.532)	(0.353)	(0.603)	(0.032)	(0.035)	(0.016)
Treated × Right-Wing	11.145***	-2.181***	-6.139***	-2.236***	-0.589	-0.225***	-0.236***	-0.045***
	(0.979)	(0.487)	(0.531)	(0.352)	(0.602)	(0.032)	(0.035)	(0.016)
p-value diff.	0.499	0.937	0.951	0.713	0.445	0.422	0.248	0.140
Cont. Mean Left	37.476	23.005	20.713	9.700	9.105	2.183	1.747	0.238
Cont. Mean Right	32.387	22.843	23.374	11.156	10.240	2.409	1.999	0.459
Observations	8585	8585	8585	8585	8585	8585	8585	8585

Homogeneous across left and right wing respondents (no significant difference).

.. Also Conditional on Effort

	Q1 to Q1 (1)	Q1 to Q2 (2)	Q1 to Q3 (3)	Q1 to Q4 (4)	Q1 to Q5 (5)	Q1 to Q4 (Qual.) (6)	Q1 to Q5 (Qual.) (7)
B. Beliefs Conditional On Effort							
Treated × Left-Wing	8.342***	0.837	-5.101***	-3.064***	-1.013	-0.172***	-0.172***
	(1.191)	(0.671)	(0.944)	(0.552)	(0.749)	(0.049)	(0.054)
Treated × Right-Wing	8.816***	0.819	-5.383***	-3.309***	-0.943	-0.209***	-0.151***
	(1.158)	(0.653)	(0.918)	(0.537)	(0.728)	(0.048)	(0.052)
p-value diff.	0.775	0.985	0.831	0.751	0.947	0.592	0.779
Cont. Mean Left	27.044	22.368	27.885	12.925	9.777	2.743	2.304
Cont. Mean Right	21.007	20.905	31.275	15.391	11.422	3.066	2.640
Observations	5118	5118	5118	5118	5118	5117	5117

Treatment Effects Persist One Week Later

	First Survey All Respondents (1)	First Survey Who Took Follow Up (2)	Follow up Respondents (3)
Q1 to Q1			
Treated	8.308***	9.254***	5.671***
	(0.899)	(1.748)	(1.675)
Q1 to Q2			
Treated	-1.731***	-1.428	-0.968
	(0.444)	(0.920)	(0.943)
Q1 to Q3			
Treated	-5.479***	-6.676***	-3.945***
	(0.491)	(1.019)	(1.013)
Q1 to Q4			
Treated	-1.733***	-1.879***	-1.417**
	(0.335)	(0.642)	(0.688)
Q1 to Q5			
Treated	0.636	0.729	0.659
	(0.582)	(1.243)	(1.069)
Q1 to Q4 (Qual.)			
Treated	-0.230***	-0.140**	-0.110*
	(0.030)	(0.062)	(0.066)
Q1 to Q5 (Qual.)			
Treated	-0.245***	-0.116*	-0.044
	(0.034)	(0.070)	(0.071)
Obs.	3354	815	815

No Significant Treatment Effect on Policies in Full Sample

	Budget Opp. (1)	Support Estate Tax (2)	Support Equality Opp. Policies (3)	Government Interv. (4)	Unequal Opp. Very Serious Problem (5)	Budget Safety Net (6)	Tax Rate Top 1 (7)	Tax Rate Bottom 50 (8)	Govt. Tools (9)	Redistribution Index (10)
A. Treatment Effects										
Treated	0.108	0.002	0.010	-0.020	0.046***	0.225	0.357	0.155	-0.017	0.013
	(0.227)	(0.010)	(0.022)	(0.030)	(0.013)	(0.160)	(0.398)	(0.226)	(0.013)	(0.009)
B. Treatment Effects for Left and Right Wing										
Treated X Left-Wing	0.823**	0.032*	0.078**	0.124**	0.103***	0.111	0.551	0.257	-0.008	0.052***
	(0.398)	(0.017)	(0.039)	(0.053)	(0.022)	(0.281)	(0.686)	(0.389)	(0.023)	(0.015)
Treated X Right-Wing	0.031	-0.001	-0.025	-0.020	0.018	0.200	0.661	-0.386	-0.049**	0.006
	(0.397)	(0.017)	(0.039)	(0.053)	(0.022)	(0.281)	(0.691)	(0.392)	(0.023)	(0.015)
p-value diff.	0.159	0.164	0.061	0.056	0.007	0.823	0.910	0.245	0.211	0.030
Observations	8585	8584	8585	8585	4281	8585	6851	6851	4281	8585

Redistribution Index: Kling, Liebman and Katz (2007).

Hides underlying Heterogeneity: Significant Treatment Effects on Policies Only For Left-Wing...

	Budget Opp. (1)	Support Estate Tax (2)	Support Equality Opp. Policies (3)	Government Interv. (4)	Unequal Opp. Very Serious Problem (5)	Budget Safety Net (6)	Tax Rate Top 1 (7)	Tax Rate Bottom 50 (8)	Govt. Tools (9)	Redistribution Index (10)
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Observations	8585	8584	8585	8585	4281	8585	6851	6851	4281	8585

Stronger treatment effects (and difference between left and right) on equality of opportunity policies.

... No Treatment Effects on Policies For Right-Wing

	Budget Opp. (1)	Support Estate Tax (2)	Support Equality Opp. Policies (3)	Government Interv. (4)	Unequal Opp. Very Serious Problem (5)	Budget Safety Net (6)	Tax Rate Top 1 (7)	Tax Rate Bottom 50 (8)	Govt. Tools (9)	Redistribution Index (10)
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Observations	8585	8584	8585	8585	4281	8585	6851	6851	4281	8585

For right-wing respondent, even negative effect on trust in government's ability.

Explaining the Treatment Effect: Polarization on Role of Government

Yet the message of the right is increasingly: It's not your fault that you're a loser; it's the government's fault.

J.D. Vance, Hillbilly Elegy: A Memoir of a Family and Culture in Crisis

- First stage effect present for both left and right wing, but no effect on policy preferences.
- Lack of causal effect mirrors lack of correlation for the right wing.
- Worse views with government are correlated with lower support for redistribution ..
- ... and right-wing respondents have (had) terrible views of government.

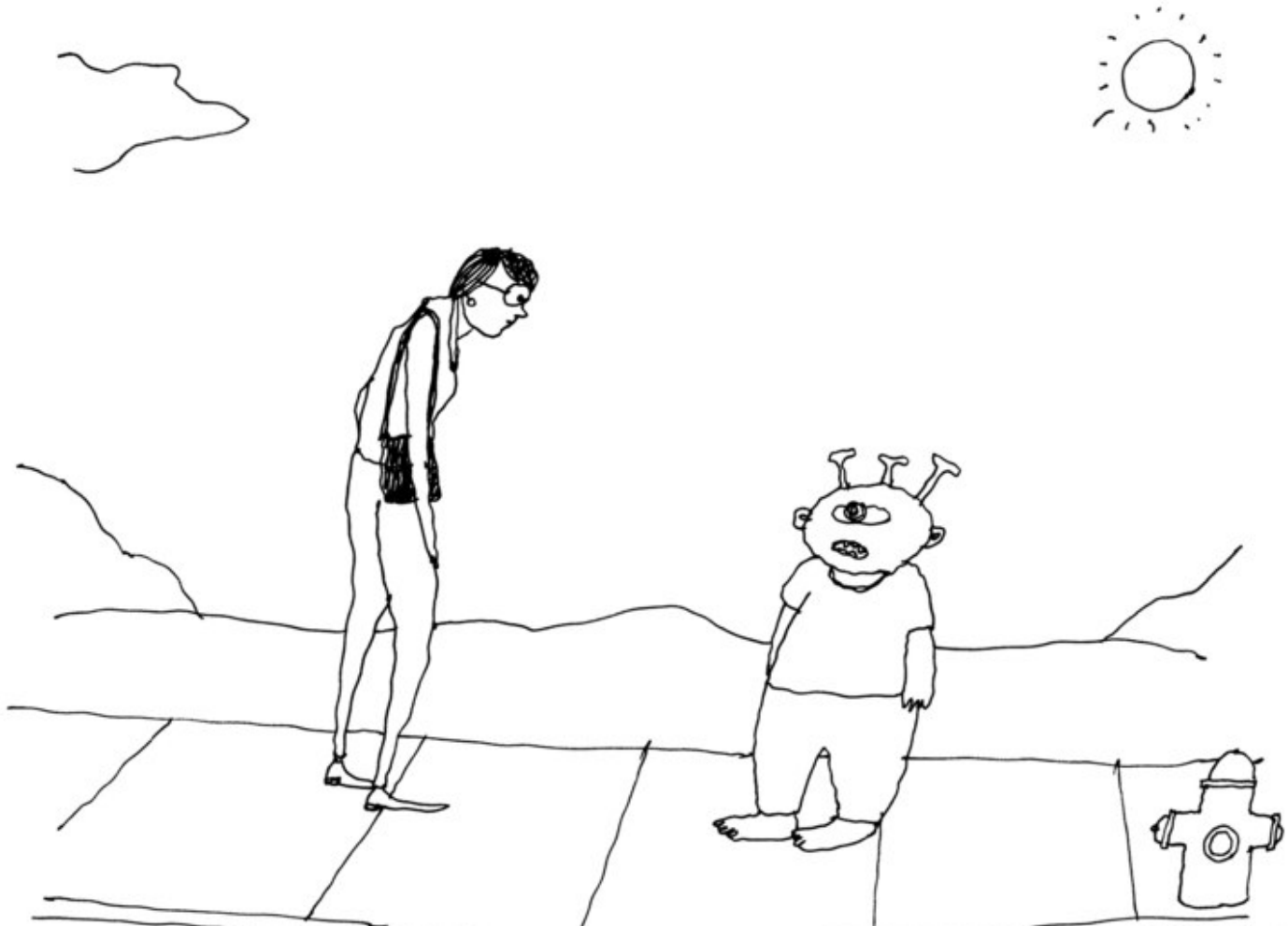
"Immigration and Redistribution" by Alberto Alesina, Armando Miano, and Stefanie Stantcheva.

https://scholar.harvard.edu/stantcheva/publications/immigration-and-support-redistribution

Immigration and Redistribution

Alberto Alesina, Armando Miano, and Stefanie Stantcheva

Well, I live in Atlanta, but I guess you are asking where I am from originally?



55% DES FRANÇAIS OPPOSÉS À L'ACCUEIL DES MIGRANTS

We Study Two Broad Questions

How do people (mis)perceive immigration?

Are perceptions of immigration, about the number, origin, religion, unemployment, education, poverty, correct amongst natives of the host countries?

What are natives' views on immigration policies?

What are perceptions of and views on immigration correlated with?

What is the link between immigration and redistribution?

Are perceptions of immigration and views about redistribution correlated? And do perceptions of immigrants "cause" preferences for redistribution?

Method and Setting

Large-scale surveys in 6 countries: France, Germany, Italy, Sweden, UK, and US, total of $\approx$ 22,500 respondents.

Done through commercial survey companies in Nov 2017-Feb 2018.

Sample sizes: 4,500 in US, 4,000 in FR, DE, IT, and UK, 2,000 in SE;

Survey components:

Background info, perception of immigrants (number, origin, religion, hard work, economic conditions, support), policy preferences (redistribution + immigration).

Randomized treatments:

Priming: "Order" treatment asks about immigration before redistributive policies.

Information (Facts) on 1) number, 2) origins of immigrants.

Anecdote on "hard-working" immigrant.

Survey Structure

- **Background** socio-economic questions, sector, immigrant parents, political experience.
- **Treatments** about immigration. [Randomized]
  - T1: Number, T2: Origin, T3: Hard work of immigrants.
- **Immigration Block:** [Randomized]
  - **Perceptions of Immigrants**. Number, origin, effort, "Free Riding", economic conditions (education, poverty, unemployment, transfers).
  - **Immigration Policies:** Citizenship, when to receive benefits, whether govt should care equally, when are immigrants "truly" American.
- **Redistribution Block:** [Randomized]
  - **Redistributive Policies:** Overall involvement, income support policies, income taxes, budget + Donation question.
  - **Role of Government:** Trust, tools to reduce inequality, is inequality a problem, scope for government to intervene in redistribution.

Eliciting Perceptions with Financial Incentives

Respondents are randomly offered financial incentives for correct responses.

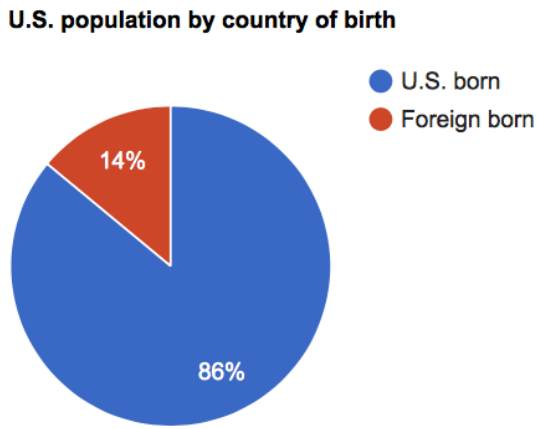
Amount of financial incentive is also randomized.

Turns out: incentives do not improve the accuracy of responses. Suggests people truly "don't know."

This info is not so easy to find online (we also warn them not to google).

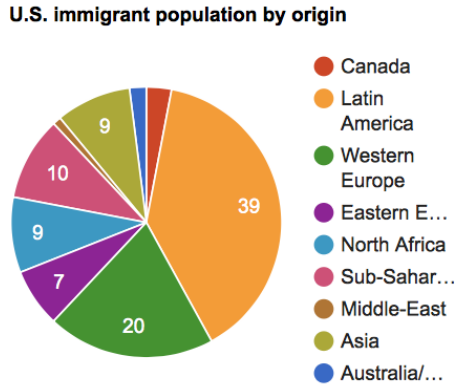
Eliciting Perceptions on Number of Immigrants

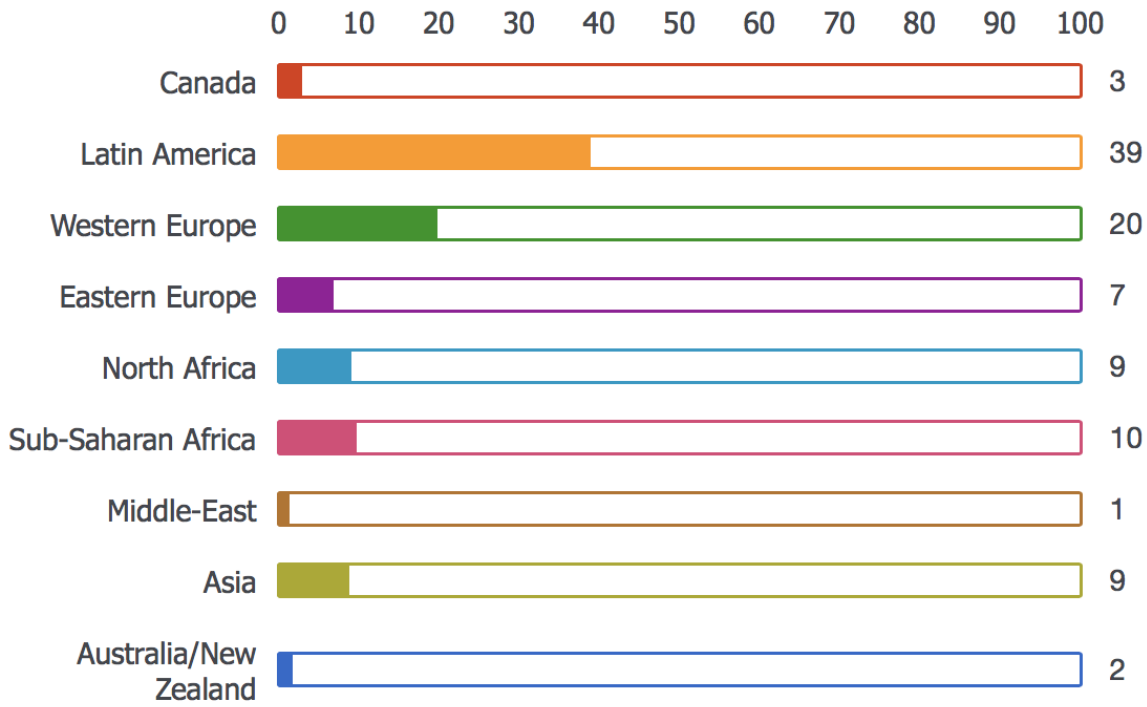
The pie chart below represents all the people currently living in the U.S. Out of all these people currently living in the U.S., how many do you think are legal immigrants? Move the slider to indicate how many out of every 100 people you think are legal immigrants.



0 10 20 30 40 50 60 70 80 90 100

Eliciting perceptions on Origin of Immigrants





Eliciting Perceptions on Effort of Immigrants

Which has more to do with why an immigrant living in the U.S. is poor? [Lack of effort on his or her own part; Circumstances beyond his or her control]

Which has more to do with why an immigrant living in the U.S. is rich? [Because she or he worked harder than others; Because she or he had more advantages than others]

Economic Conditions of immigrants

Out of every 100 people born in the U.S. how many are currently unemployed? By "unemployed" we mean people who are currently not working but searching for a job (and maybe unable to find one).

Now let's compare this to the number of unemployed among legal immigrants. Out of every 100 legal immigrants how many do you think are currently unemployed?

Out of every 100 people born in the U.S., how many live below the poverty line? The poverty line is the estimated minimum level of income needed to secure the necessities of life.

Let's compare this to poverty among legal immigrants. Out of every 100 legal immigrants in the U.S. today, how many do you think live below the poverty line?

U.S. born residents receive government transfers in the form of public assistance, Medicaid, child credits, unemployment benefits, free school lunches, food stamps or housing subsidies when needed. How much do you think each legal immigrant receives on average from such government transfers? An average immigrant receives... [No transfers/.../More than ten times as much as a US born resident]

Are people "Biased" Against Immigrants?

Imagine two people, John and Mohammad, currently living in the U.S. with their families. John is born in the U.S., while Mohammad legally moved to the U.S. five years ago. They are both 35, have three children, and earn the same low income from their jobs.

In your opinion does Mohammad pay more, the same, or less in income taxes than John? [A lot more; more; the same; less; a lot less]

In your opinion does Mohammad, who is an immigrant, receive more, the same, or less government transfers (such as public assistance, Medicaid, child credits, unemployment benefits during unemployment spells, free school lunches, food stamps or housing subsidies) than John? [A lot more; more; the same; less; a lot less]

Donation Question

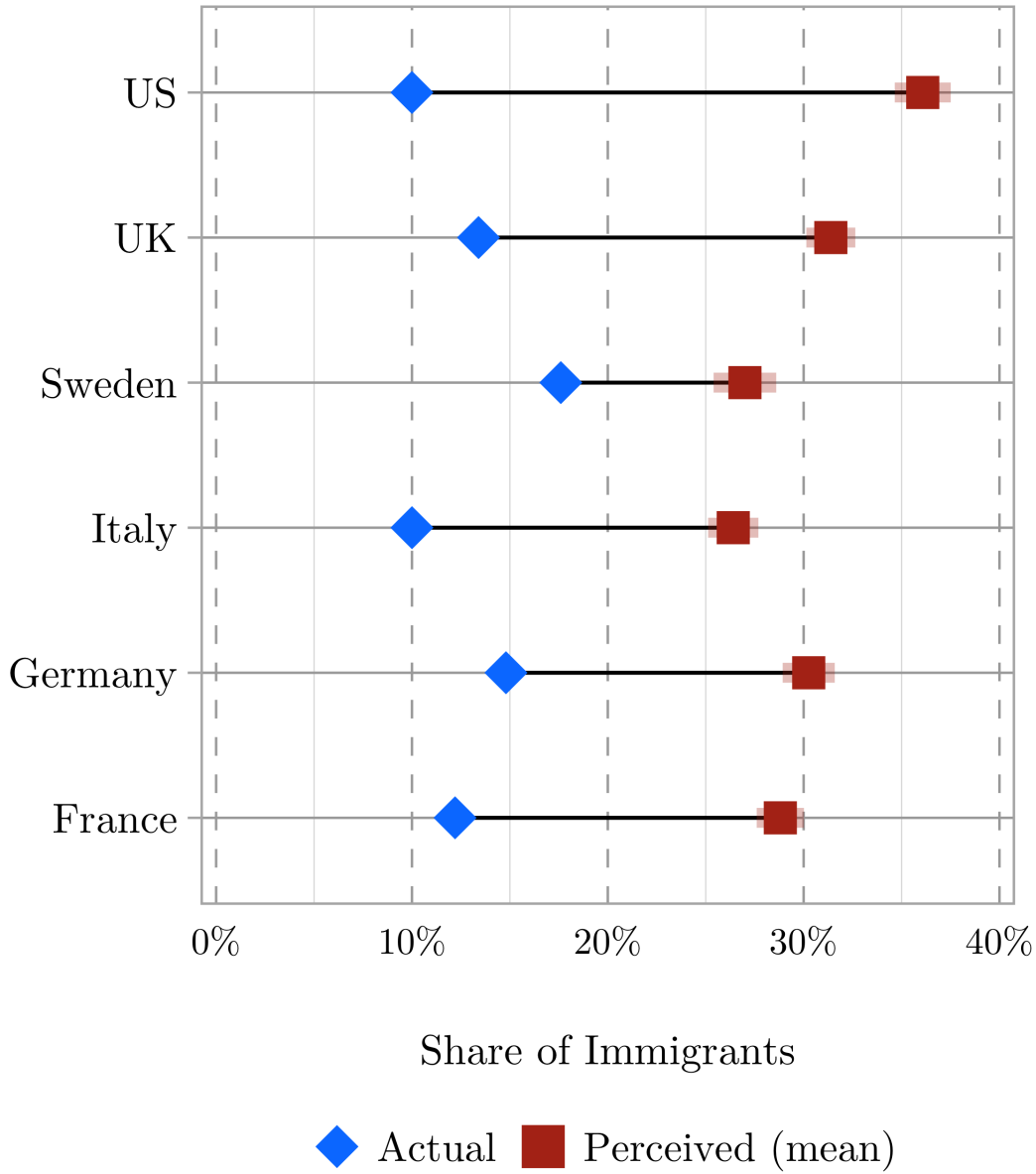
*By taking this survey, you are automatically enrolled in a **lottery to win $1000**. In a few days you will know whether you won the $1000. The payment will be made to you in the same way as your regular survey pay, so no further action is required on your part. In case you won, would you be willing to **donate part or all of your $1000 gain for a good cause**? Below you will find 2 charities which help people in the U.S. deal with the hurdles of everyday life. You can enter how many dollars out of your $1000 gain you would like to donate to each of them. If you are one of the lottery winners, you will be paid, in addition to your regular survey pay, $1000 minus the amount you donated to charity. We will directly pay your desired donation amount to the charity or charities of your choosing.*

Charities:

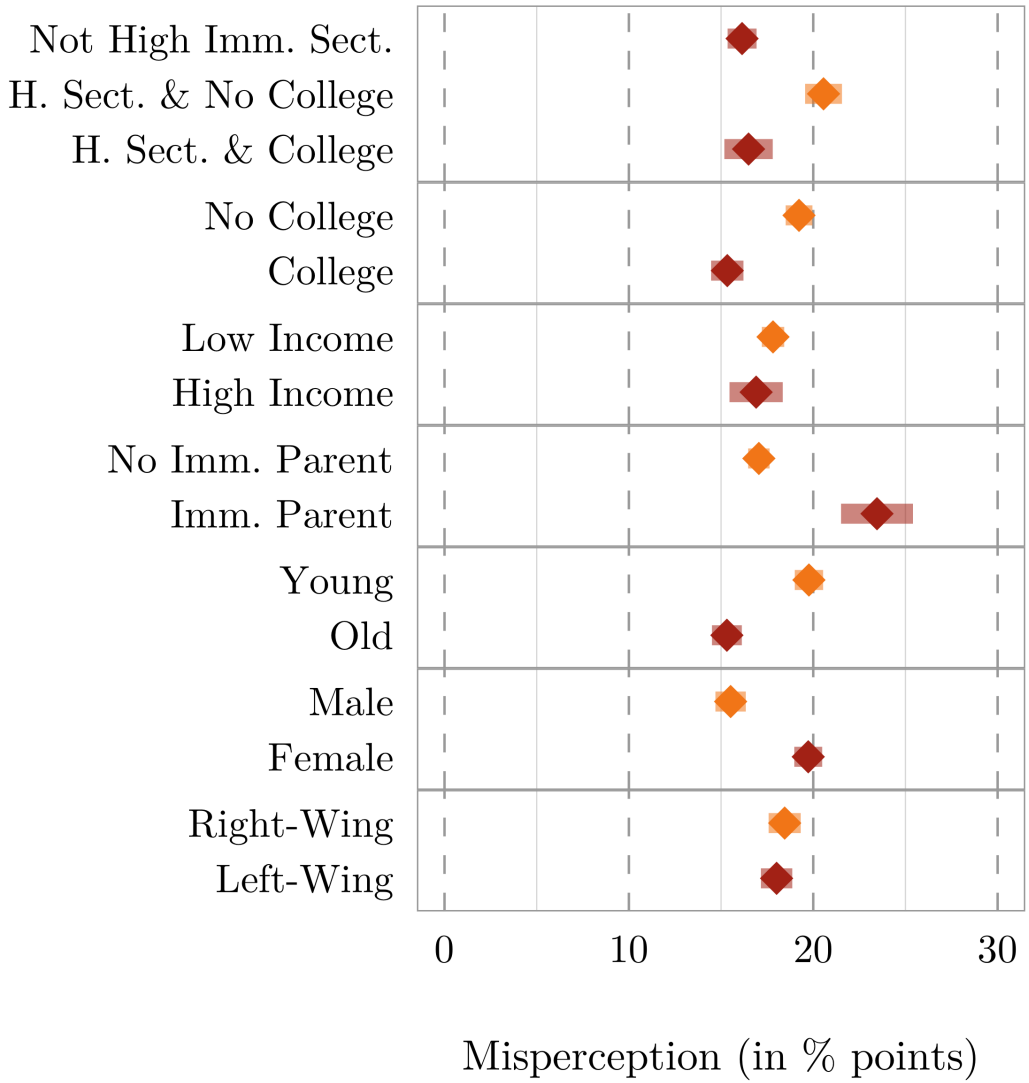
- US: Feeding America, The Salvation Army
- France: Les restos du cœur, Emmaüs
- Germany: SOS Kinderdorf, Tafel
- Italy: Caritas, Save the Children Italia
- Sweden: Frälsningsarmén, Majblomman
- UK: Save the Children U.K., The Salvation Army

Perception of Immigrants

Perceived vs. Actual Number of Immigrants (By Country)

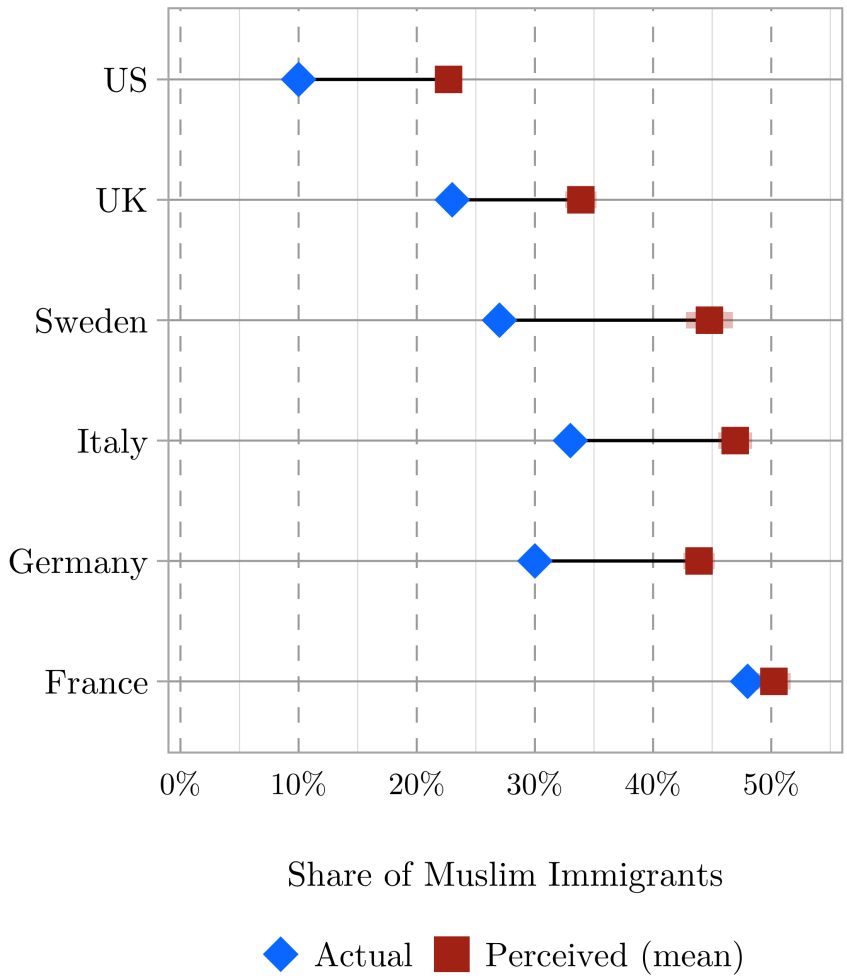


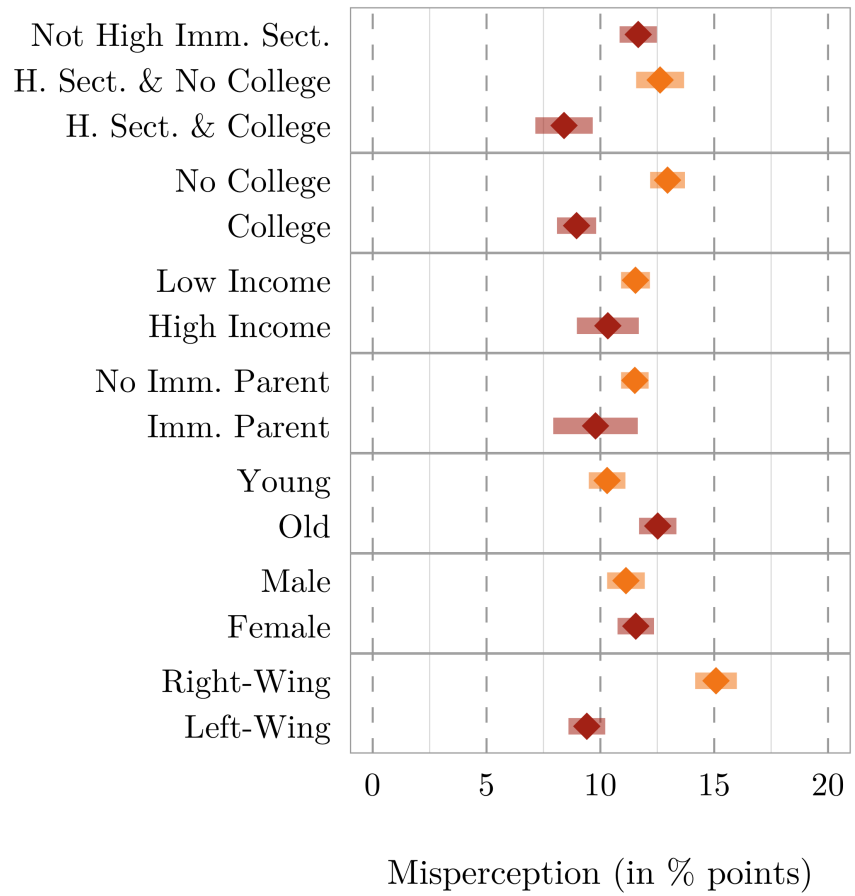
Misperception of Number of Immigrants



Who misperceives more? Those 1) in high immigration sectors with low education, 2) without college, 3) who are young, 4) who have an immigrant parent, 5) women. ▸ US Sectors

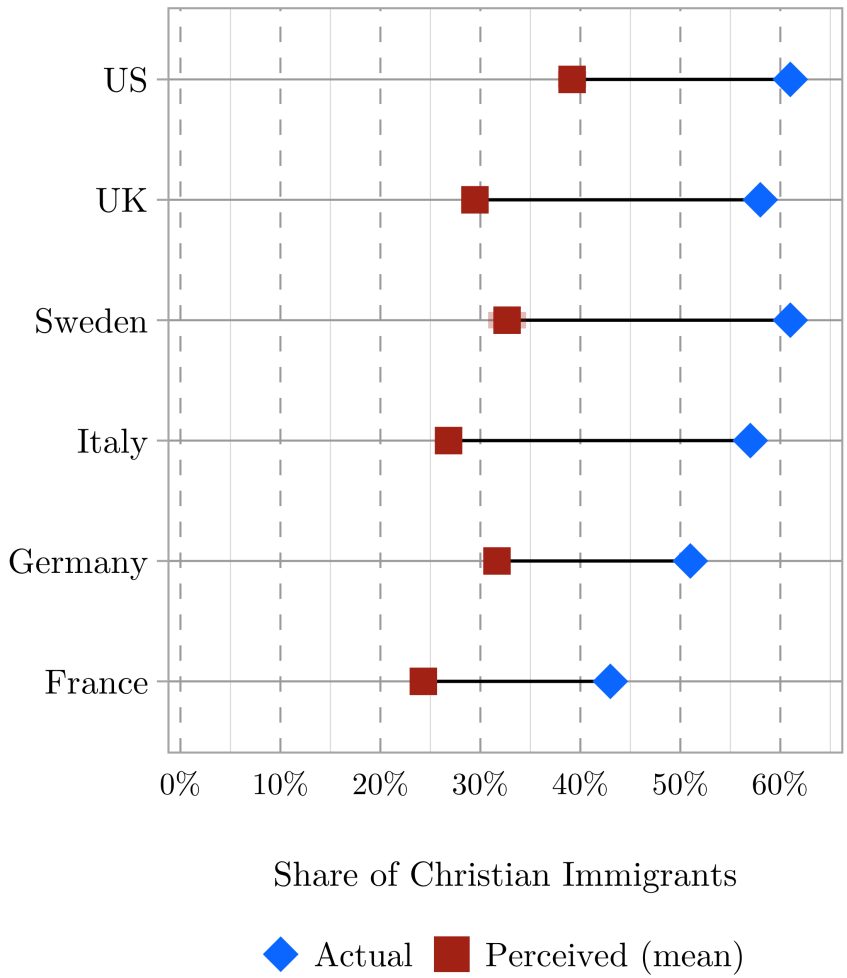
Perceived vs. Actual Share of Muslim Immigrants

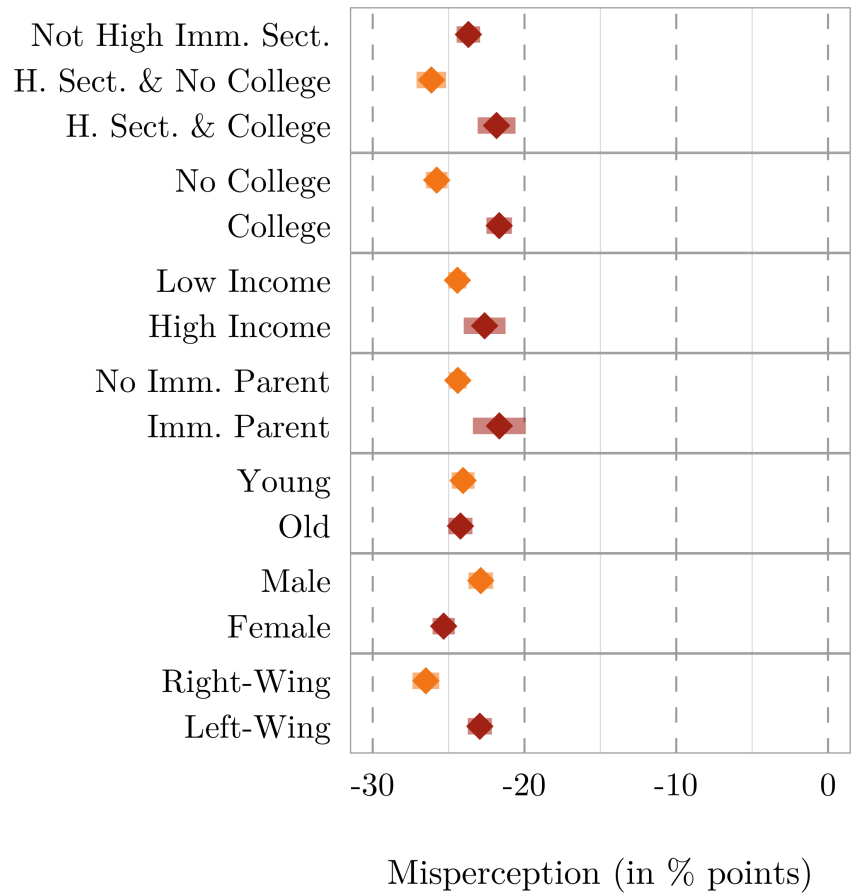




▸ Middle East ▸ North Africa

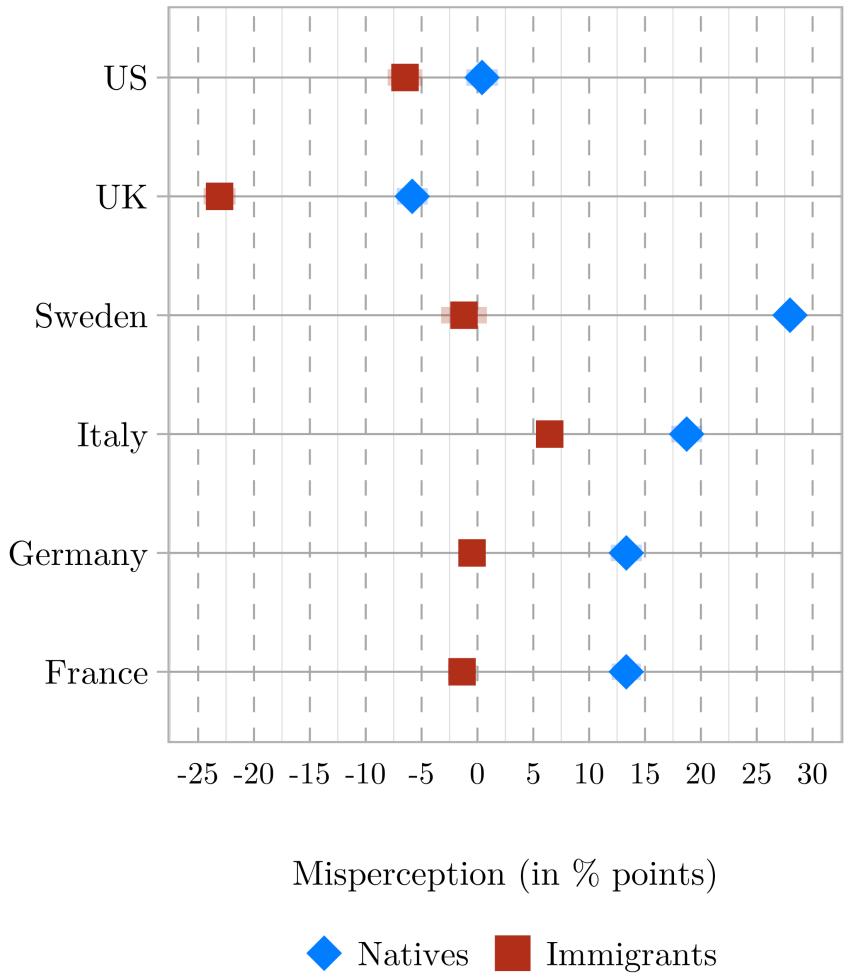
Perceived vs. Actual Share of Christian Immigrants

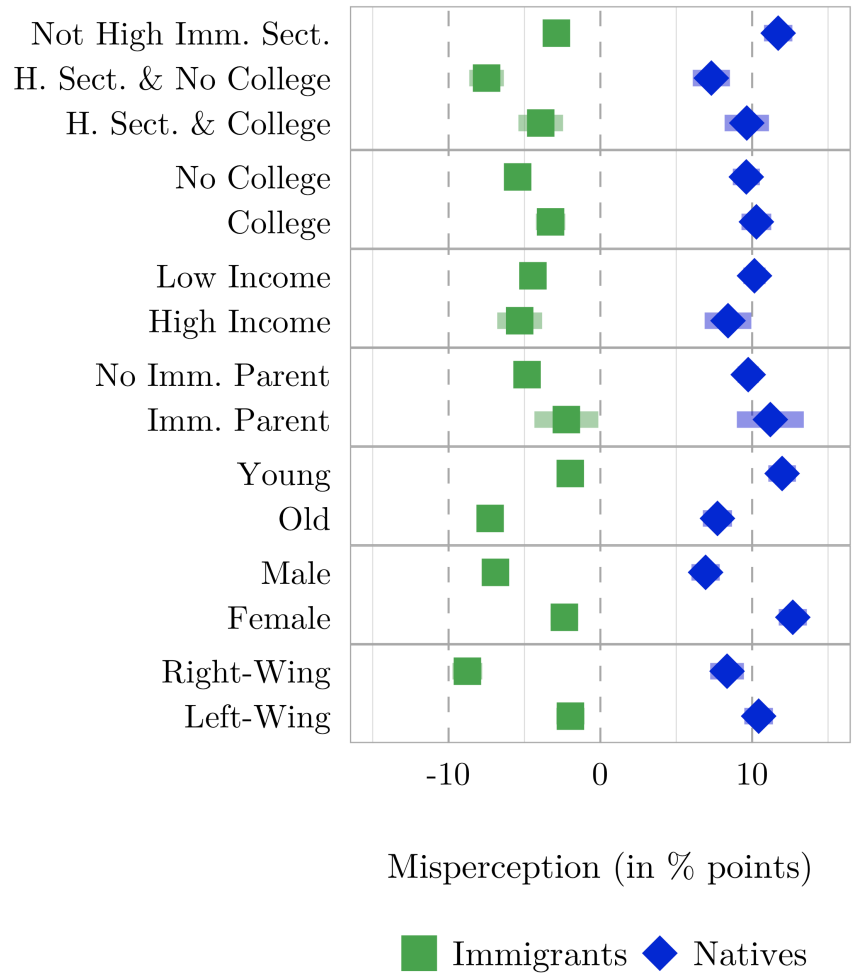




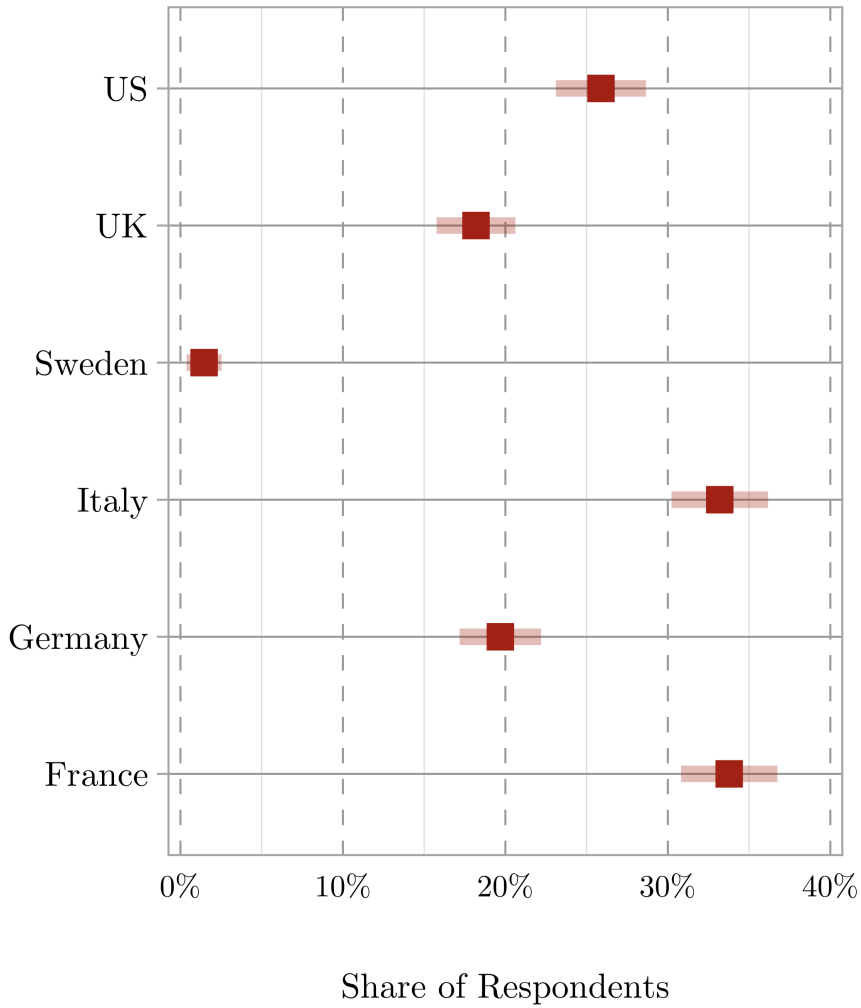
▸ Latin America

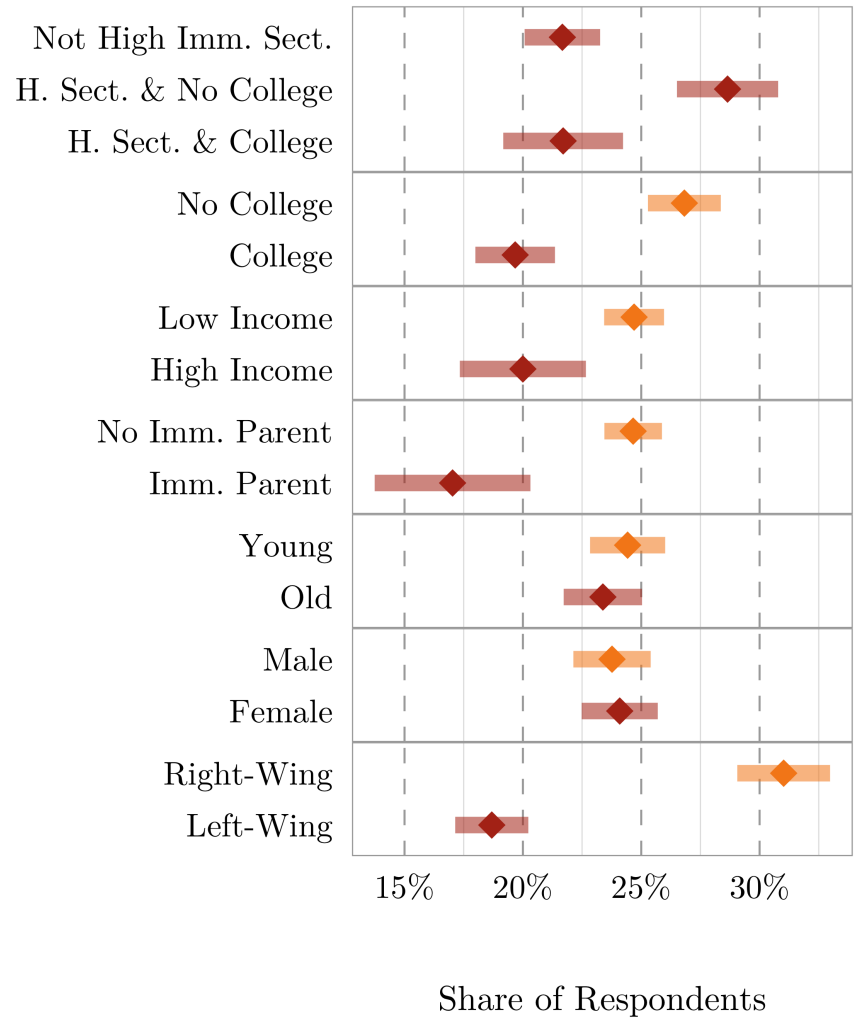
Misperceptions of Share of High-Educated - Immigrants vs. Natives





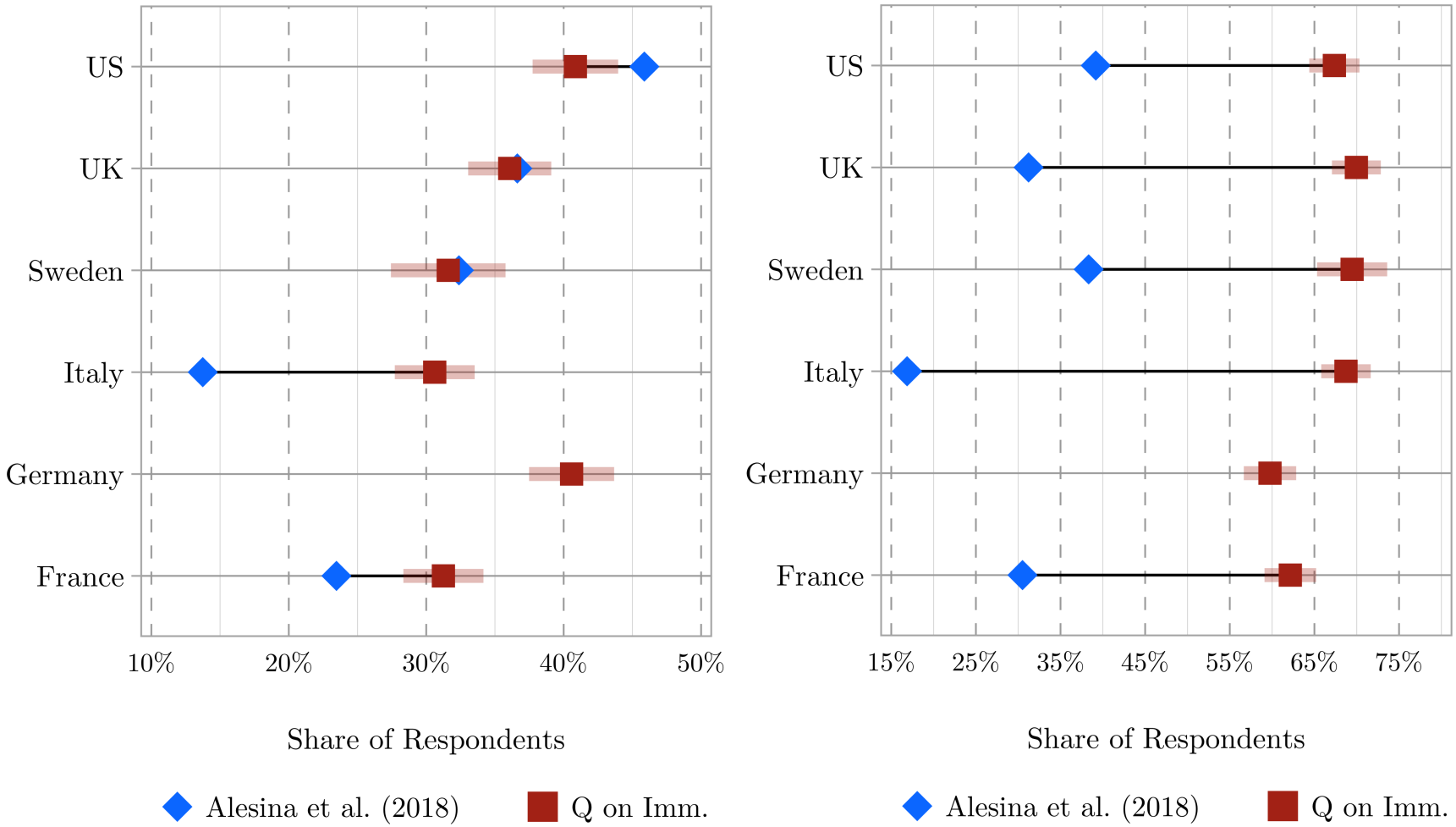
"Bias": Does Mohammad Get More Transfers and Pay Less Taxes all Else Equal?





Across all countries, and respondent characteristics, a non trivial share think all else equal Mohammad gets more transfers and pays less taxes. France and Italy are most "biased." Low educated in high immigrant sectors, non college educated, the poor, and right wing are most biased.

% of Respondents who Think Poor Immigrants Don't Put in Effort and that Rich Immigrants Worked Hard



Countries vary on whether they think poor immigrants or poor natives are most likely to be lazy. U.S. is an outlier (also thinks poor are lazy in general). All countries agree that IF an immigrant got rich, they must have worked hard (IT & FR – sticky social classes, inherited advantages?)

Willingness to Pay to Receive Correct Info about Immigrants

	Willing To Pay (1)
Misperception Index	-0.101***
	(0.0322)
Republican	-0.0741**
	(0.0333)
Female	-0.0615*
	(0.0322)
H. Imm. Sector and No College	0.0770
	(0.0502)
H. Imm. Sector and College	0.0722*
	(0.0419)
No College	-0.106**
	(0.0445)
Rich	-0.0253
	(0.0405)
Young	-0.0767**
	(0.0323)
Immigrant parent	0.0896*
	(0.0524)
Constant	0.595***
	(0.0512)
Observations	956

▸ Question

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Observations	956

Willingness to Pay to Receive Correct Info about Immigrants

	Willing To Pay (1)
Misperception Index	-0.101***
	(0.0322)
Republican	-0.0741**
	(0.0333)
Female	-0.0615*
	(0.0322)
H. Imm. Sector and No College	0.0770
	(0.0502)
H. Imm. Sector and College	0.0722*
	(0.0419)
No College	-0.106**
	(0.0445)
Rich	-0.0253
	(0.0405)
Young	-0.0767**
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Immigrant parent	0.0896*
	(0.0524)
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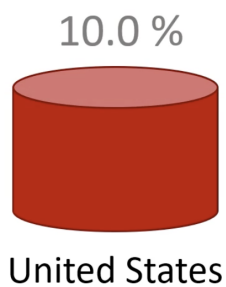
▸ Extended Misperceptions

Salience Treatment: "Order of the Questions"

1. **Immigration Block:** [Randomized]
   - **Perceptions of Immigrants**. Number, origin, effort, "Free Riding", economic conditions (education, poverty, unemployment, transfers).
   - **Immigration Policies:** Citizenship, when to receive benefits, whether govt should care equally, when are immigrants "truly" American.
2. **Redistribution Block:** [Randomized]
   - **Redistributive Policies:** Overall involvement, income support policies, income taxes, budget + Donation question.
   - **Role of Government:** Trust, tools to reduce inequality, is inequality a problem, scope for government to intervene in redistribution.

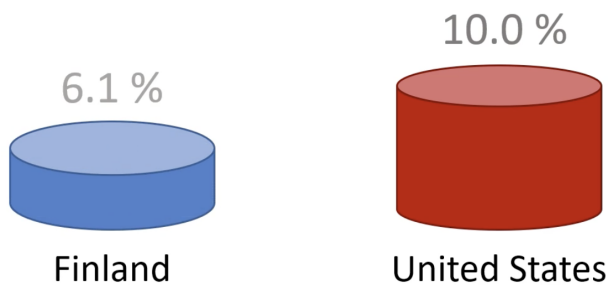
Information Treatment: Number of Immigrants

Today, legal immigrants make up 10.0 % of all people in the United States.



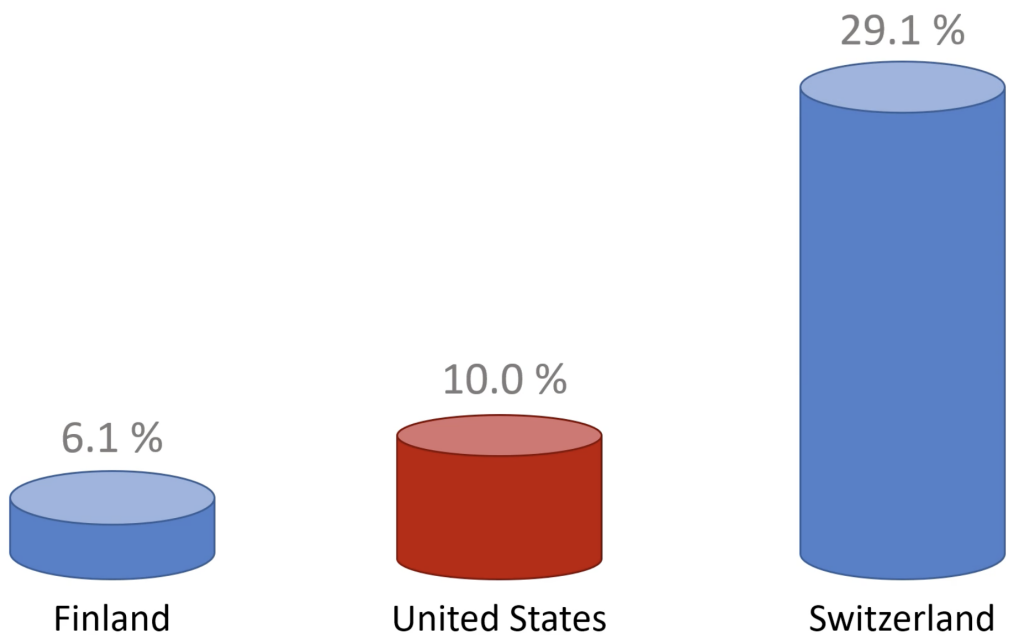
Information Treatment: Number of Immigrants

For comparison, among rich countries, the lowest share of legal immigrants is 6.1 %.



Information Treatment: Number of Immigrants

For comparison, among rich countries, the lowest share of legal immigrants is 6.1 %. The largest share of legal immigrants is 29.1 %.



Information Treatment: Origin of Immigrants

Think about all the immigrants legally residing in the U.S. today

Link to video: https://youtu.be/-603kdm_GkA

Information Treatment: Origin of Immigrants

Think about all the immigrants legally residing in the U.S. today

Where do they come from?

Information Treatment: Origin of Immigrants

Information Treatment: Origin of Immigrants

The number of little stick men is proportional to the true number of immigrants coming from each region

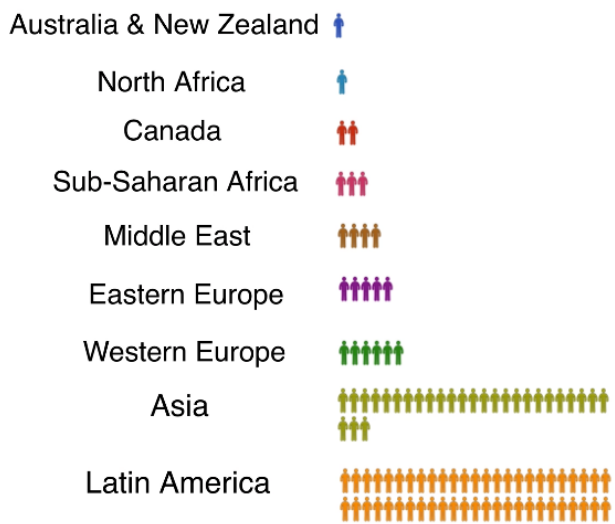
Latin America 

Information Treatment: Origin of Immigrants

Asia

Latin America

Information Treatment: Origin of Immigrants



"Anecdote" Treatment: Hard Work of Immigrants

Emma legally came to the U.S. at age 25.

She lives with her husband - a construction worker - and two small children in a one-bedroom apartment.

For the past 5 years, she has been working in a retail store.

Link to video: https://youtu.be/_1SoLYX8OyE

"Anecdote" Treatment: Hard Work of Immigrants

She starts work at 5 am every day of the week, earning the minimum wage for such tasks as restocking the shelves, helping customers, mopping the floor and cleaning the bathrooms.

"Anecdote" Treatment: Hard Work of Immigrants

When her day shift at the store ends at 3 pm, Emma starts her second job as a cleaning lady.

She takes two buses to get to her clients.

"Anecdote" Treatment: Hard Work of Immigrants

She finishes around 7 pm and gets home by 8 pm.

"Anecdote" Treatment: Hard Work of Immigrants

She then makes dinner for her family and sometimes helps the children with their homework before they go to bed.

"Anecdote" Treatment: Hard Work of Immigrants

Emma takes online courses.
She stays up until midnight to work on her courses.

She cannot take out a loan to go to a full-time college.

"Anecdote" Treatment: Hard Work of Immigrants

Emma and her husband have no free time, no weekends, and haven't taken any holidays since arriving in the U.S..

Despite working two jobs and barely making ends meet, Emma is very happy to be in the U.S..

She hopes that thanks to her hard work she will one day be able to start her own small business.

Experimental Findings

Simply making think of immigrants ("Order/Salience Treatment") decreases support for redistribution, including actual donatiosn to charity.

Information about true shares and origins of immigrants mainly acts as a prime (makes people think about immigrants) and slightly also reduces support for redistribution.

Anecdote about "hard work" is somewhat more effective.

Salience and narratives seem to matter more than hard facts.

“How Elastic Are Preferences for Redistribution: Evidence from Randomized Survey Experiments” Kuziemko, Norton, Saez and Stantcheva (2015).

Our project explores what drives redistributive preferences

- Use online experiments ($\geq$ 10,000 obs) to examine how info affects redistributive demand.
  - Income tax rates, transfer policies, and inheritance taxes.
  - General structure: treatment group sees info, control doesn't.
  - Info highly salient and customized (upper bound?)
- Main "omnibus" experiment documents effects of comprehensive info (ineq & taxes).
- Then, series of experiments teasing out mechanisms.

Structure of the Omnibus Experiment

- Common structure of all our surveys:
  1. background socio-economic questions
  2. randomized info treatment
  3. questions on views on inequality, tax and transfer policies, government.

- Treatment, comprehensive customized:
  - Interactive info on current income distribution with sliders ▸ Ineq1
  - Counterfactual income distribution if growth equally spread. ▸ Ineq2
  - Redistributive policies: income taxes and econ growth. ▸ Taxes
  - Estate tax: only top 0.1% of estates pay it. ▸ Estate

Where are you in the income distribution?

Please enter your annual household income* in the box below:

$ 25000

39% of US households earn less than your household

We now encourage you to move the blue slider above (by clicking on the line) to explore the US income distribution on your own and to answer the questions below.

79% of households earn less than **$73,000** .

https://hbs.qualtrics.com/SE/?SID=SV_77fSvTy12ZSBihn

Back to Main

Where would you have been in the income distribution?

Income Inequality has increased dramatically in the United States since 1980.
Incomes of poorer and middle-income families have grown very little while top incomes have grown a lot.

How would YOU be doing if inequality had not increased?

The slider below shows how much each group would make if incomes had grown by the same percentage since 1980 for all groups: the poor, the middle class, and the rich. Use the slider to answer the questions below.

A household making **$25,800** today would instead be making
$35,200 if inequality had not changed since 1980.
In other words, if growth had been evenly shared, this household would have earned
37% more.

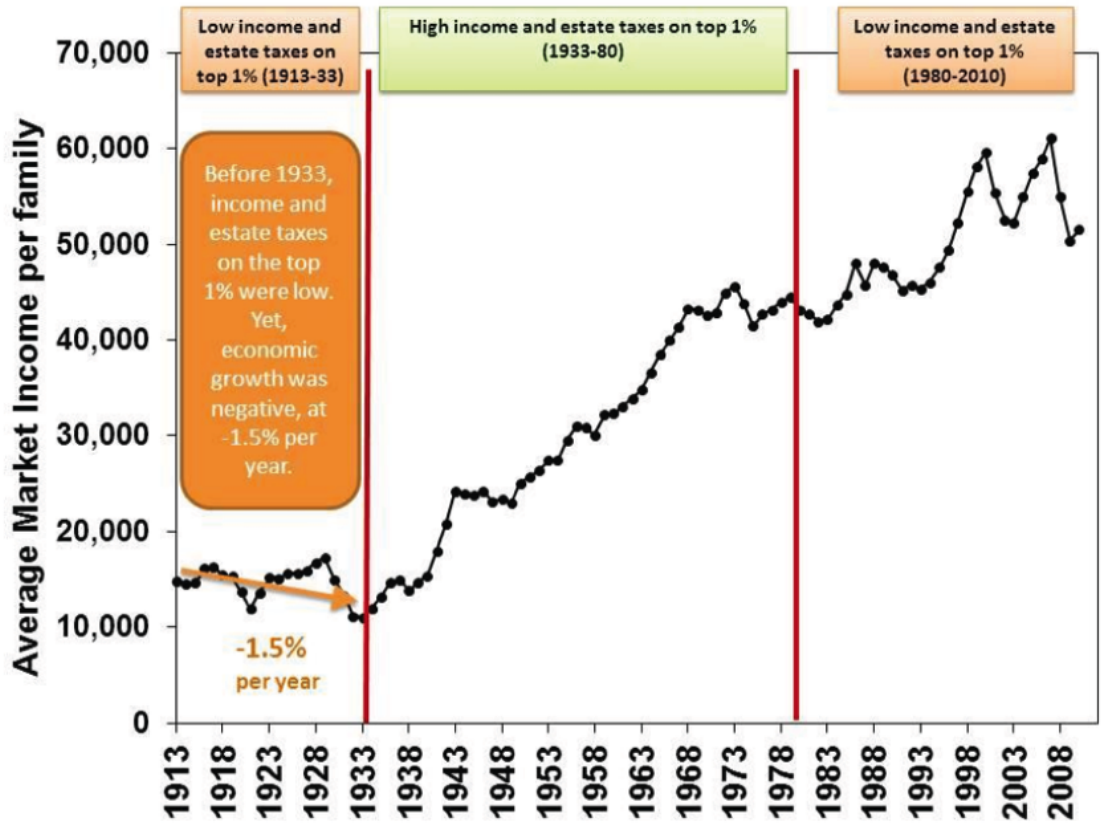
https://hbs.qualtrics.com/SE/?SID=SV_77fSvTy12ZSBihn

Back to Main

Correlation Taxes and Growth

Increasing the federal income tax rate and the estate tax rate on very high incomes can raise tax revenue without hurting economic growth.

The following slides describe both income and estate taxes on high incomes and economic growth over three historical periods: (1) Before the New Deal of 1933, (2) Between 1933 and 1980, (3) Since 1980.
Economic growth is measured as the growth in the average family market income.



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Estate Taxes

Besides the income tax, the government can also level the playing field with **the federal estate tax.**

The **Federal Estate Tax** (also known as the **Death Tax**) applies when a deceased person leaves **more than $5 million** in wealth to his or her heirs. Wealth left to a spouse or charitable organizations is exempt from estate tax.

Only 1 person out of 1000 is wealthy enough to face the estate tax.

Average Americans do not have anything close to $5 million in wealth, so the estate tax does not affect them and they can pass on their property to their children tax-free.

Eliminating the estate tax would allow the very richest families to pass down all of their wealth to their children tax-free. Hence, children of rich people would also start off very rich themselves.

Increasing the estate tax is a way to level the playing field between the children of wealthy parents and children of middle-class parents.

https://hbs.qualtrics.com/SE/?SID=SV_77fSvTy12ZSBihn

Main Finding

Strong first stage on inequality perceptions.

Knowledge about inequality and concern with it seem strongly malleable.

Weak effects on support for higher, more progressive income taxes.

Weak effects on policies for low-income households and anti-poverty programs.

Very strong effect on support for the estate tax.

Decreases trust in government.

Subsequent Surveys Tease Out Mechanisms

- Same structure as omnibus.

- Isolate particular treatment and develop new single treatment to test hypotheses.
  - Do respondents think ineq is a problem but don't trust govt to fix it?
  - Will emotional appeal to "plight of the poor" work better?
  - Do respondents not connect concerns with actual policies to address ineq?

- New, detailed outcome questions added (present only outcome questions of main interest for each survey – complete results in paper).

Negative Treatment to Directly Decrease Trust in Govt

- Negative trust treatment consisting of several multiple choice questions making respondents reflect on negative aspects of government:
  - Is govt "effective in limiting fraud, waste and abuse" in its programs? (88% disagree).
  - Do you agree that "Politicians in Washington work to enrich themselves and their largest contributors, instead of working for the benefit of the majority of citizens."? (90% do).
  - Aso: Foreign Aid, Wall Street bailout, Citizens United campaign financing.

- Show results from ranking of OECD countries in terms of government transparency (U.S. is in bottom quartile). ▸ Treatment

Conclusion

- Series of mTurk online experiments ($\geq 10,000$ obs) to explain disconnect between historic inequality rise and lack of support for redistribution.
- Greater info increases concerns and perceptions, but not necessarily support for policies.
- Reducing (the already low) trust in govt reduces support for policies.
- Showing concrete link to poverty policies improves support, still largely for programs that do not involve govt collecting and redistributing tax dollars.
- Estate tax is big exception: widespread misinformation or different moral implications?
- Online Appendix has methodological material for online surveys.