

# Lecture 7: 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 individual utilities.

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

- 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  $u(\cdot)$  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.

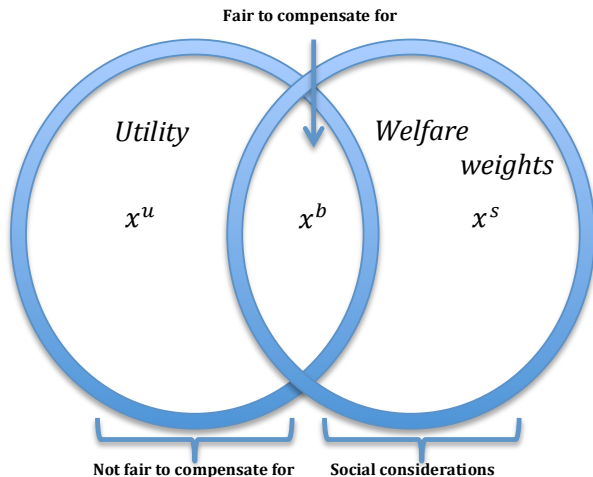
$$\text{Change in welfare: } - \int_i g_i \cdot \delta T(z_i) \text{ with } g_i \equiv g(c_i, z_i; x_i^s, x_i^b).$$

- 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

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

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



## 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

- 1 Outline of the Approach
- 2 Resolving Puzzles of the Standard Approach
- 3 Link With Alternative Justice Principles
- 4 Empirical Testing and Estimation Using Survey Data
- 5 Conclusion

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# 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

- $u(\cdot)$  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  $\varepsilon \rightarrow 0$ ]

- Small reform  $\delta T(z)$  affects individual  $i$  utility by  $\delta u_i$  and earnings by  $\delta z_i$
- 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  $\int_i [\delta T(z_i) + T'(z_i)\delta z_i] = 0$ .

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# 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.

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- 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  $(z_i - T(z_i), z_i, x_i^s, x_i^b)$ .

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- Reform only requires knowing  $g_i$  and responses  $\delta z_i$  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  $(z_i - T(z_i), z_i, x_i^s, x_i^b)$ .

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- 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  $T(\cdot)$ ]

### Definition

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

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

$\bar{g}(z)$  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  $zh(z)/[1 - H(z)]$ .

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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  $c_i = z_i \cdot (1 - \tau) + \tau \cdot \int_j z_j$  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:

$$\tau = \frac{1 - \bar{g}}{1 - \bar{g} + e} \quad \text{with} \quad \bar{g} \equiv \frac{\int_j g_j \cdot z_j}{\int_j g_j \cdot \int_j z_j}$$

$e$ : elasticity of  $\int_j z_j$  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  $(z, x^b) \rightarrow \bar{g}(z, x^b)$ .
  - ▶ 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  $\omega_i$  without *first* solving for optimum

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# 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.
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- 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:

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

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## Corollary

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

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- 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:  
$$\tilde{g}(c, z - c) = \text{Prob}(c_i \leq z_i - y_i' + E y_i' | c_i = c, z_i = z).$$
- 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,  $y_i'$  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  $\tau$  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  $\theta$ , 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  $\tau^*$ .
- 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  $g_i = g(\tau_m, \tau_n, \delta\tau_m, \delta\tau_n)$
- i)  $g(\tau_m, \tau_n, \delta\tau_m, \delta\tau_n) = 1$  and  $g(\tau_n, \tau_m, \delta\tau_n, \delta\tau_m) = 0$  if  $\tau_m > \tau_n$ .
- ii)  $g(\tau, \tau, \delta\tau_m, \delta\tau_n) = 1$  and  $g(\tau, \tau, \delta\tau_n, \delta\tau_m) = 0$  if  $\tau_m = \tau_n = \tau$  and  $\delta\tau_m > \delta\tau_n$ .
- iii)  $g(\tau, \tau, \delta\tau_m, \delta\tau_n) = g(\tau, \tau, \delta\tau_n, \delta\tau_m) = 1$  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  $\tau_1 \rightarrow \tau_1 \cdot \int_{i \in 1} z_i$ ,  $\tau_2 \rightarrow \tau_2 \cdot \int_{i \in 2} z_i$ , and  $\tau \rightarrow \tau \cdot (\int_{i \in 1} z_i + \int_{i \in 2} z_i)$  are single peaked.

### Proposition

Let  $\tau^*$  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.”*

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# 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)
<b>Income percentile</b>					
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<sup>th</sup> percentile, stable representation, hence stable tax rates.  
 Optimal tax rate lower than in utilitarian case.

### 3. Poverty Alleviation: Setting

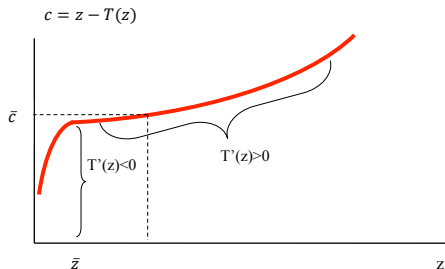
- Poverty gets substantial attention in public debate.
- Poverty alleviation objectives can lead to Pareto dominated outcomes:
  - ▶ Besley and Coate (1992) and Kanbur, Keen, and Tuomala (1994).
  - ▶ Intuition: disregard people's disutility from work.
- Generalized welfare weights can avoid pitfall 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

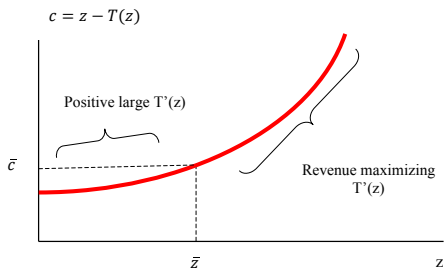
#### Proposition

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

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



(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,  $\theta_i$ : 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  $w_{\min}$ ).
  - ▶  $\tilde{g}(\cdot; w_i = w_{\min}, w_{\min}, T_{\max})$  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

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# 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

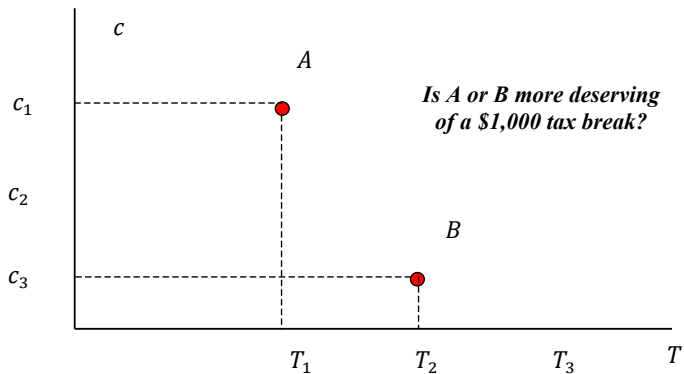
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Which of these two families is most deserving of the \$1,000 tax break?

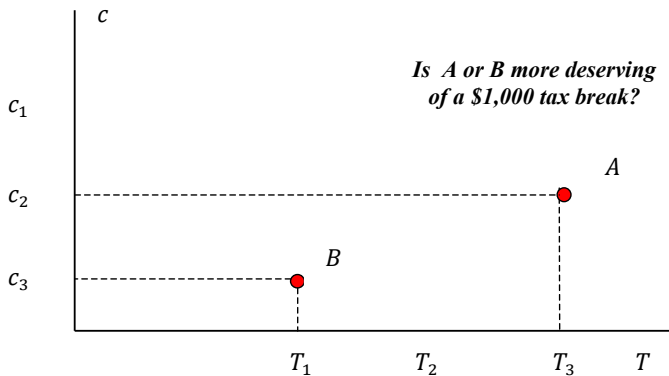
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- Family earns \$50,000 per year, pays \$2,500 in taxes, and hence nets out \$47,500
- Family earns \$500,000 per year, pays \$170,000 in taxes, and hence nets out \$330,000

# Eliciting Social Preferences



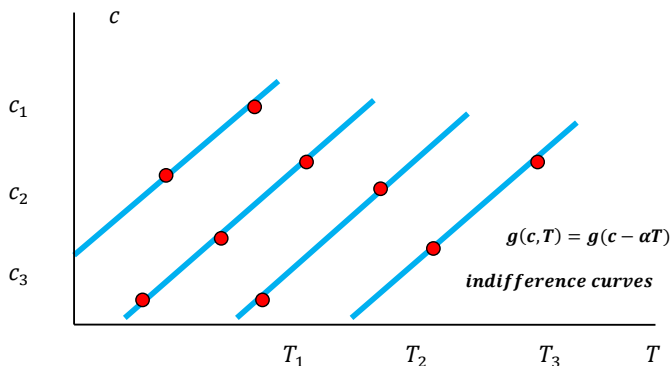
# Eliciting Social Preferences



## Eliciting Social Preferences

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

$$S_{ijt} = \beta_0 + \beta_T \delta T_{ijt} + \beta_c \delta c_{ijt} \quad \alpha = \left. \frac{\delta c}{\delta T} \right|_S = -\frac{\beta_T}{\beta_c} = -\text{slope}$$



# Eliciting Social Preferences

Sample	Probability of being deemed more deserving in pairwise comparison					
	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*** (0.0003)	0.0052*** (0.0019)	0.016*** (0.0019)	0.015*** (0.0022)	0.00082*** (0.00046)	0.0032*** (0.00068)
d(Net Income)	-0.0046*** (0.00012)	-0.0091*** (0.00028)	-0.024*** (0.00078)	-0.024*** (0.00094)	-0.0048*** (0.00018)	-0.0042*** (0.00027)
Number of observations	11,450	8,368	5,816	3,702	5,250	2,540
Implied $\alpha$	0.37 (0.06)	0.58 (0.06)	0.65 (0.07)	0.64 (0.09)	0.17 (0.12)	0.77 (0.16)
Implied marginal tax rate	73%	63%	61%	61%	85%	57%

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

# Motivation: Rising inequality, no Demand for Redistribution

## Motivation: Rising inequality, no Demand for Redistribution

- Focus in media on growing income share of “one percent” (23% in 2012).

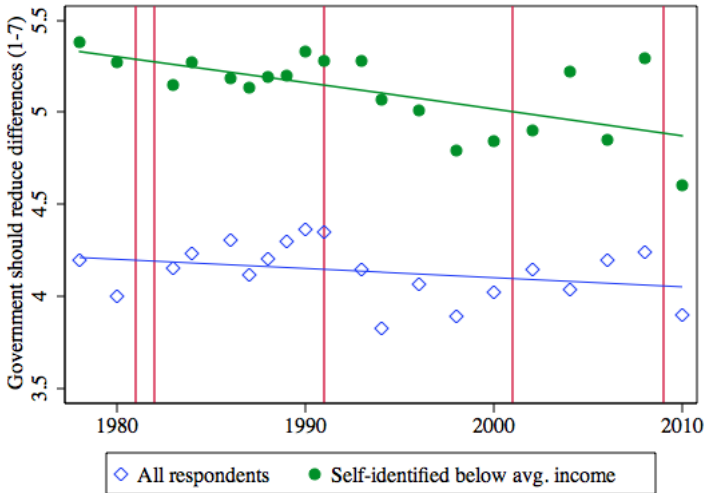
## Motivation: Rising inequality, no Demand for Redistribution

- Focus in media on growing income share of “one percent” (23% in 2012).
- More recent focus on *wealth* inequality increase (top 1% has 35% of wealth).

# Motivation: Rising inequality, no Demand for Redistribution

- Focus in media on growing income share of “one percent” (23% in 2012).
- More recent focus on *wealth* inequality increase (top 1% has 35% of wealth).
- Classic Richard-Meltzer model: demand for redistribution is increasing in inequality.
  - ▶ But: top income and inheritance taxes in US have fallen during period.
  - ▶ Voter demand for redistribution has been flat or falling during this period.
- Do Americans simply not care about inequality?
  - ▶ Newsweek (2001): *“If Americans couldn’t abide rising inequality, we’d now be demonstrating in the streets.”*

## Motivation: Lack of Support for Redistribution



The government should reduce income differences (scale from 1-7, GSS)

# 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.

## Summary of Main Results

- Main omnibus treatment ( $N = 4,000$ ):
  - ▶ Large “first stage” effects on perceptions of inequality.
  - ▶ Very small effects on policies: min wage, food stamps, EITC support.
  - ▶ Big exception: increases support for estate tax a lot.
  - ▶ Decreases trust in government.
- Follow-up with subset of respondents 1 month later: many treatment effects persist— estate tax effect remains very large.
- Real responses: treatment increases likelihood of sending petitions to raise estate tax to respondents’ Senator.
- Preferences about tax and transfer policies “stubborn” to info, preferences about estate tax “malleable” and persistent.
- Could be due to lack of trust in government and lack of connection to policies.

## Related Literature

- Public fails to connect concern for inequality with public policy preferences, which are “sticky” (Bartels, 2005, Luttmer and Singhal, 2011)
- Determinants of social preferences from political science, sociology, economics and psychology (Alesina and Glaeser, 2004, Alesina and La Ferrara, 2005, Luttmer, 2001, Singhal 2008)
- Effects of framing and priming on policy preferences (Hite and Roberts, 1991, McCaffery and Baron, 2004, 2005, 2006, Savani and Rattan, 2012)
- Randomized info treatments’ effects on policy preferences (Sides, 2011, Cruces et al., 2013, Kuklinski et al., 2003)

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# 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:

\$

**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** .

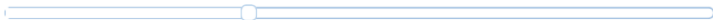
[https://hbs.qualtrics.com/SE/?SID=SV\\_77fSvTy12ZSBihn](https://hbs.qualtrics.com/SE/?SID=SV_77fSvTy12ZSBihn)

# 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](https://hbs.qualtrics.com/SE/?SID=SV_77fSvTy12ZSBihn)

# 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.



[https://hbs.qualtrics.com/SE/?SID=SV\\_77fSvTy12ZSBihn](https://hbs.qualtrics.com/SE/?SID=SV_77fSvTy12ZSBihn)

# 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](https://hbs.qualtrics.com/SE/?SID=SV_77fSvTy12ZSBihn)

## Strong First Stage on Inequality Perceptions

	Ineq. v. serious		Ineq. increased		Rich deserving	
	(1)	(2)	(3)	(4)	(5)	(6)
Treated	0.102*** [0.0154]	0.104*** [0.0144]	0.119*** [0.0130]	0.120*** [0.0128]	-0.0500*** [0.0119]	-0.0526*** [0.0114]
Cont gp. mean	0.285	0.285	0.738	0.738	0.180	0.180
Scaled Effect	0.357	0.365	0.539	0.540	0.173	0.182
Covariates?	No	Yes	No	Yes	No	Yes
Obs.	3703	3703	3704	3704	3690	3690

- Knowledge about inequality and concern for inequality seems very malleable.

## Weak Effects on Income Taxes, But Very Strong Effect on Estate Tax

	Top tax rate	Millionaire tax	Estate tax	Petition, est. tax
	(1)	(2)	(3)	(4)
Treated	0.931* [0.549]	0.0463*** [0.0125]	0.357*** [0.0140]	0.0648*** [0.0156]
Cont gp. mean	30.21	0.745	0.171	0.234
Scaled Effect	0.0914	0.106	2.043	0.394
Obs.	3741	3741	3673	3060

- Estate tax result very strong: 40% of cons-lib gap.
- Translates into real effect: Treatment increases likelihood of sending petition to Senator.

## Very Weak Poverty Reduction Policy Effects

	<u>Min. wage</u>	<u>Food stamps</u>	<u>EITC</u>
	(1)	(2)	(3)
Treated	0.0325** [0.0141]	0.0149 [0.0141]	0.0212 [0.0151]
Cont gp. mean	0.690	0.686	0.611
Scaled Effect	0.0995	0.0369	0.0698
Obs.	3690	3690	3690

- Direct transfer policies (e.g.: min wage) seem different than direct transfer policies (e.g.: Food stamps, EITC).
- Could be explained by distrust in government (below).

## Views of Government are Complicated but Trust Decreases

	<u>Trust gov.</u>	<u>Scope gov.</u>	<u>Plan to vote Democrat 2012</u>
	(1)	(2)	(3)
Treated	-0.0253** [0.0112]	0.132*** [0.0339]	0.0152 [0.0125]
Cont gp. mean	0.155	3.076	0.529
Scaled Effect	1.105	0.110	0.0246
Obs.	3739	3704	3703

- Very low baseline trust in government.
- Treatment makes people see more areas where government intervention may be needed
- But also makes them trust government less (110% of lib-cons gap).

# Persistence of Effects in Follow-up One Month Later

	Increase Estate Tax		Govt scope		Trust govt		Ineq v. Serious		(9) First
	(1) First	(2) Follow-up	(3) First	(4) Follow-up	(5) First	(6) Follow-up	(7) First	(8) Follow-up	
Treated	0.295*** [0.0878]	0.177** [0.0845]	0.329* [0.187]	0.365* [0.186]	-0.0490 [0.0576]	-0.0339 [0.0532]	2.213 [3.169]	3.373 [3.239]	-0.0071 [0.0708]
Cont gp. mean	0.181	0.184	2.995	2.874	0.123	0.126	32.61	29.99	0.288
Obs.	168	168	168	168	168	168	167	167	169

- No differential selection into follow-up survey. [▶ Selection](#)
- Relatively low take-up, better technology developed by us later.

[▶ Full Results 1](#)

[▶ Full Results 2](#)

## Bounding the Effects of Attrition

- Assuming Attriters Answer like the Average C = Conservative or L= Liberal

	Ineq. v. serious		Increase Mill. Tax		Increase Estate Tax		Trust Gov	
	(1) C	(2) L	(3) C	(4) L	(5) C	(6) L	(7) C	(8) L
Treated	0.0666*** [0.0129]	0.0980*** [0.0128]	0.0194 [0.0118]	0.0518*** [0.0117]	0.284*** [0.0122]	0.310*** [0.0121]	-0.00692 [0.00979]	-0.0198** [0.00970]
Cont gp. mean	0.267	0.293	0.717	0.744	0.170	0.192	0.172	0.161
Obs.	4547	4547	4546	4546	4519	4519	4546	4546

- Estate Tax Result completely robust to attrition.
- Other Results highly consistent, despite extreme bounding assumption.

▶ Diff. attrition

▶ Attrition

# 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).

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# Explaining the Very Robust Estate Tax Result

- Breaking off estate tax part from inequality info leaves effects unchanged.
- Stripped down “Neutral” version: mentions only tax incidence, no moralistic framing, but still has very large effect. ▶ Neutral ▶ Emotional.
- Effects persist almost unchanged one month later.
- Is widespread misinformation the source of strong effects?
  - ▶ Documented previously as well.
  - ▶ Only 12% of control group answered correctly (random guessing yields 14% correct).
  - ▶ 16% of liberals versus 6% of conservatives answered correctly.
- Potentially important policy implications given recent emphasis on wealth taxation (Piketty 2014).

## Results of the Estate Tax Treatment

	<u>Ineq</u> <u>v. serious</u> (1)	<u>Ineq</u> <u>inc.</u> (2)	<u>Deserving</u> <u>rich</u> (3)	<u>Estate</u> <u>increase</u> (4)	<u>Petition</u> <u>.</u> (5)	<u>Trust</u> <u>Govt</u> (6)	<u>Correct</u> <u>Estate Tax</u> (7)
Treated	0.0381 [0.0258]	-0.00239 [0.0243]	-0.0312 [0.0328]	0.289*** [0.0258]	0.0313 [0.0208]	-0.0164 [0.0205]	0.316*** [0.0263]
Neutral T	0.0511** [0.0259]	-0.0501** [0.0244]	-0.0429 [0.0329]	0.109*** [0.0259]	0.0239 [0.0209]	-0.00558 [0.0205]	0.375*** [0.0264]
Cont mean	0.307	0.771	1.997	0.210	0.132	0.153	0.120
Scaled T	0.118	0.0106	0.0818	1.085	0.265	0.235	3.386
Scaled N	0.159	0.223	0.113	0.408	0.202	0.0803	4.014
Obs.	1777	1777	1777	1777	1762	1756	1773

- Separating estate tax info from inequality info: effects unchanged.
- Stripped down “Neutral” version still has very large effect.

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# 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

# First Stage Effects of Negative Trust Treatment

	<u>Trust Govt</u>	<u>Scope Govt</u>	<u>No waste</u>	<u>Ineq. v. serious</u>	<u>Ineq. inc.</u>	<u>Pov. v. ser.</u>
	(1)	(2)	(3)	(4)	(5)	(6)
Treated	-0.0582*** [0.0203]	0.0236 [0.0688]	-0.0278 [0.0346]	0.0547* [0.0311]	0.0119 [0.0289]	-0.00257 [0.0313]
Cont. mean	0.125	3.031	1.423	0.343	0.755	0.383
Scaled Effect	1.730	0.0170	0.109	0.182	0.341	0.00828
Obs.	899	899	898	899	899	899

- Successful in devising treatment that isolates effect of trust.
- Other first stages insignificant or very small.

## Effects of the Negative Trust Treatment

	<u>Mill. tax</u>	<u>Estate tax</u>	<u>Petition</u>	<u>Priv. Charities</u>	<u>Educ. Pol.</u>
	(1)	(2)	(3)	(4)	(5)
Treated	-0.0421 [0.0275]	-0.00168 [0.0266]	-0.0602** [0.0236]	0.187** [0.0791]	0.0615 [0.0885]
Cont gp. mean	0.722	0.204	0.174	1.800	3.732
Scaled Effect	0.0949	0.00728	0.580	0.169	0.265
Obs.	899	895	899	850	874

- Decreases willingness to write to Senator.
- Increases reliance on private charities to redistribute.

## Effects of the Negative Trust Treatment (cont.)

	<u>Min wage</u>	<u>Aid to Poor</u>	<u>Food stamps</u>	<u>Public Housing</u>
	(1)	(2)	(3)	(4)
Treated	-0.00428 [0.0902]	-0.139** [0.0616]	-0.153** [0.0673]	-0.163*** [0.0614]
Cont gp. mean	2.673	2.675	2.454	2.581
Scaled Effect	0.00531	0.128	0.119	0.133
Obs.	899	899	899	899

- Decreases respondents' support for direct govt transfer programs.
- No real effect on min wage, which is indirect transfer.
- Recall omnibus treatment didn't increase support for direct transfers, but did for min wage.

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# Will emotional appeals produce larger changes?

- Omnibus treatment extensive, interactive and personalized, but:
  - ▶ factual and numeric info.
  - ▶ focus on relative inequality, not absolute poverty.
- New treatment to create empathy between respondent and low-income families:
  - ▶ *Think about a family of X1 with X2 parent(s) working full time at low pay and X3 kids... What would be the minimal monthly expenses that such a family would have to make to afford living where you live? (Rent, food, utilities, transportation, child expenses).*
  - ▶ X1, X2, X3 are customized to respondent's own family situation (without him knowing it).
  - ▶ Program computes surplus or deficit relative to poverty line.

# Effects of Emotional Poverty Treatment

	<u>Inequality v. serious</u>	<u>Poverty v. serious</u>	<u>Min. wage</u>	<u>Aid to Poor</u>
	(1)	(2)	(3)	(4)
Treated	0.0778*** [0.0278]	0.0971*** [0.0315]	0.0280 [0.0993]	0.147 [0.0936]
Cont. mean	0.307	0.316	2.529	2.127
Scaled Eff.	0.211	0.293	0.0283	0.0689
Obs.	1825	1204	899	899

	<u>Food stamps</u>	<u>Public Housing</u>	<u>Trust Government</u>
	(1)	(2)	(3)
Treated	0.189* [0.101]	0.0473 [0.0944]	-0.0132 [0.0215]
Cont. mean	1.811	2.064	0.144
Scaled Eff.	0.0973	0.0249	0.264
Obs.	899	899	1825

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## Draw Very Explicit Link between Low-Income and Policies

- Ask respondents to estimate budget of family earning min wage for basic needs such as rent, food, utilities, transportation, child care.
- Family composition customized to fit the respondent's own situation.
- Program shows surplus or deficit relative to budget of a min wage earning family.
- Respondents are also told that *"The Food stamps program helps many low income families, such as those earning only minimum wage. It provides \$150/month per person to help with food expenses."*
- Highly explicit prime in favor of these poverty reduction policies.

## Effects of Policy Treatment

	<u>Min. wage</u>	<u>Aid</u>	<u>Food st</u>	<u>Housing</u>	<u>Charities</u>	<u>Trust</u>
	(1)	(2)	(3)	(4)	(5)	(6)
Treated	0.304*** [0.0960]	0.149 [0.0909]	0.299*** [0.0977]	0.244*** [0.0906]	-0.130* [0.0704]	-0.0349* [0.0206]
Cont. mean	2.529	2.127	1.811	2.064	2.026	0.144
Scaled Eff.	0.308	0.0698	0.154	0.128	0.0731	0.698
Obs.	906	906	906	906	1266	1835

- No first stage on poverty, inequality (not shown)
- Policy preferences react, although economically small effects. Still min wage strongest.
- Treatment does not increase support for actually sending money to Washington (no effect on income or estate tax) (not shown).
- Effect on trust remains negative: respondents still blame govt after thinking about challenged for low-income families, but less so now.

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## 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.