Political Competition 1

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A Theory of Democracy

• In order to understand the effect of political institutions on economic outcomes, we need to develop simple and tractable theories of the way social choices are made.

• Two institutional features play a particularly important role in democracies:
  • Majority voting: decisions are taken by vote of a majority of the people or their representatives, representatives also are elected.
  • Electoral Competition: Political parties are free to form and compete for power.
Outline

1. Majority Voting and Condorcet Winner
2. The Median Voter Theorems
3. Electoral Competition
4. Application 1: A Simple Model of Redistribution
5. Application 2: A Simple Model of Government Size
6. Comparative Statics and the Envelope Theorem
7. Application 3: Endogenizing the Distortions of Taxation
Majority Voting

• In full generality, it is hard to make predictions about the outcomes generated by majority voting.

Example

<table>
<thead>
<tr>
<th>Mr.1</th>
<th>Mr.2</th>
<th>Mr.3</th>
<th>Majority Voting:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
<td>c</td>
<td>a vs. b ⇒ a</td>
</tr>
<tr>
<td>b</td>
<td>c</td>
<td>a</td>
<td>b vs. c ⇒ b</td>
</tr>
<tr>
<td>c</td>
<td>a</td>
<td>b</td>
<td>a vs. c ⇒ c</td>
</tr>
</tbody>
</table>

• The outcome depends on the agenda i.e. the order in which alternatives are presented to the voters.

• In order to make predictions, we will need to make some restrictions on the preferences of voters.
Some Notations

- Let $\mathcal{A}$ be the set of alternatives and $\mathcal{I}$ the set of voters.
- Each voter $i$ has a rational (i.e. complete and transitive) preference ordering on $\succeq_i$ on $\mathcal{A}$. We assume that this ordering is strict (this is already a restriction).
- $\mathcal{P} = (\succeq_i)_{i \in \mathcal{I}}$ is the preference profile.
- Majority voting maps $\mathcal{P}$ to a complete order $\succeq^{MV}$ on $\mathcal{A}$ such that $a \succeq^{mv} b$ iff. $\# \{i \in \mathcal{I} | a \succ_i b\} \geq \# \{i \in \mathcal{I} | b \succ_i a\}$.
- $\succeq^{mv}$ is not transitive in general (see example).
- $\succeq^{mv}$ is a strict order if $\#\mathcal{I}$ is odd.
Condorcet Winner

**Definition**

\( a \in A \) is a Condorcet winner for \((A, P)\) if for every \( b \in A \)

\[ a \succ^\text{mv} b. \]

**Corollary**

*When a Condorcet winner exists it is unique.*

- When a Condorcet winner exists, it seems like a good prediction of the electoral outcome...

- We would like to identify conditions on \((A, P)\) that generate Condorcet winners.
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To keep the exposition simple, we assume that if $\mathcal{I}$ is finite, then $\#\mathcal{I}$ is odd.

We will also work with populations represented by a continuum $\mathcal{I} = [0, 1]$ to model large populations.
Ordering Alternatives

• The idea that political alternatives can be completely ordered along a single axis is old (Aristotle).
  • A natural example: Tax rates.
  • More generally it is common to think of policies on a “Left-Right” axis.

• This representation certainly fails to capture many things, but it is useful as a first approximation.

• We will assume that there is a total (strict) order $<$ on the space of alternatives $\mathcal{A}$.
  • For example, read $a < b$ as policy $a$ is to the left of policy $b$. 
• Starting from \((\mathcal{A}, <)\) we can define a similar relationship on voters. We say that \(l <_I r\), read voter \(l\) is to the left of voter \(r\), iff. for every policies \(L < R\)

\[
R \succ_l L \Rightarrow R \succ_r L \quad \text{and} \quad L \succ_r R \Rightarrow L \succ_l R.
\]

• If \(<_I\) is complete and transitive, we say that the preference profile \(\mathcal{P}\) satisfies the single-crossing property with respect to \((\mathcal{A}, <)\).

• In this case, we can define the median voter \(m\) by

\[
\# \{i \in \mathcal{I} \mid i <_I m\} = \# \{j \in \mathcal{I} \mid m <_I j\}.
\]
The First Median Voter Theorem


**Theorem (MVT1)**

Suppose $\#I$ is odd. If there exists a complete and transitive strict order $<$ on $A$ such that $P$ satisfies the SCP with respect to $(A, <)$, then the favorite policy of the median voter $\pi_m \equiv \arg \max_{a \in A} u^m(a)$ is a Condorcet winner. Furthermore

$$\pi \succ^{mv} \pi' \iff \pi \succ_m \pi'.$$
Proof:

• Let $\pi^L < \pi_m$. Then every voter to the right of $m$ prefers $\pi_m$ to $\pi^L$, and hence $\pi_m$ defeats $\pi^L$.

• Symmetric argument for $\pi^R > \pi_m$.

• If $\pi' \succ_m \pi$. Either $\pi' > \pi$ and then every voter to the right prefers $\pi'$ to $\pi$, and $\pi'$ wins, or $\pi' < \pi$ and then every voter to the left of $m$ prefers $\pi'$ to $\pi$ and $\pi'$ wins.

QED
• $i$’s preference relation $\succ_i$ is **single peaked** if there exists some policy $a_i$ ($i$’s ideal point) such that for every $w <_A x <_A a_i <_A y <_A z$,

\[
    w \prec_i x \prec_i a_i
\]

and

\[
    a_i \succ_i z \succ_i z
\]

• The preference profile $\mathcal{P}$ is single peaked, if every $\succ_i$ is single peaked.

• Then we can order the voters according to their ideal policies. The **median voter** is the voter $m$ such that

\[
    \# \{ i \in \mathcal{I} | a_i <_A a_m \} = \# \{ j \in \mathcal{I} | a_m <_A a_j \}
\]
The Second Median Voter Theorem

Black (1948)

**Theorem (MVT2)**

Suppose \( \#I \) is odd. If there exists a complete and transitive strict order \( <_A \) on \( A \) such that \( P \) is single peaked with respect to \( (A, <) \), then the favorite policy of the median voter \( \pi_m \) is a Condorcet winner. Furthermore

\[
\pi^L < \pi^R < \pi_m \implies \pi^R \succ^mv \pi^L,
\]

and

\[
\pi_m < \pi^L < \pi^R \implies \pi^L \succ^mv \pi^R.
\]
Proof:

- Let $\pi^L < \pi_m$. Then every voter $i$ with $\pi_m < \pi_i$ prefers $\pi_m$ to $\pi^L$. Hence $\pi_m$ wins.

- Symmetric argument for $\pi^R > \pi_m$.

- If $\pi^L < \pi^R < \pi_m$, then every voter $i$ with $\pi_m < \pi_i$ prefers $\pi^R$ to $\pi^L$. Hence $\pi^R$ defeats $\pi^L$.

QED
Multiple Dimensions

• Grandmont (1978) [simplified]

• **Intermediate Preferences**: $P$ satisfies the intermediate preferences property if every preference $\succ_i$ can be represented by a utility function

$$U_i(a) = U(a, \theta_i) = G(a) + \theta_i H(a),$$

where $G$ and $H$ are common to all voters, and $\theta_i \in \mathbb{R}$.

**Theorem (MVT3)**

Suppose $\#I$ is odd. If $P$ satisfies the intermediate preferences property and with $\theta_i \neq \theta_j$, then the favorite policy of the median voter $\pi_m = \arg \max_{a \in A} U(a, \theta_m)$ is a Condorcet winner.
Continuum of voters

- All these theorems work when there is a continuum of voters \((\mathcal{I}, \mu)\).

- The properties studied allow us to reindex the voters according to a certain order \(<_{\mathcal{I}}\). We assume that \(\mathcal{I}\) has already been reindexed in that way.

- Then the median voter is the voter \(m\) such that

\[
\mu(\{j \in \mathcal{I} | j \leq_{\mathcal{I}} i\}) = \mu(\{j \in \mathcal{I} | i \leq_{\mathcal{I}} j\}) = 1/2.
\]
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Electoral Competition

• A simple way to model electoral competition is to assume that there are two parties or politicians who make policy proposals and are elected on the basis of these proposals.

• This corresponds to the presidential election in the U.S. or to the second round of the presidential election in France.

• However, most democracies are parliamentary democracies rather than presidential systems (England, Spain, Germany...)
Two-Party Competition

- Let $\Pi$ be the set of policies/social alternatives.
- There are two parties/politicians $i = 1, 2$, that select a policy position $\pi_i \in \Pi$.
- Politicians are office motivated: they get a VNM payoff of $u_i^+ > 0$ if they win and $u_i^- < 0$ if they lose the election.
- In case of a tie, each politician wins with probability $1/2$.
- Timeline:
  1. Politicians choose their positions.
  2. The election takes place.
  3. The winner’s policy position is put in effect.
Competition and Condorcet

**Theorem**

*If there is a Condorcet winner $\pi^* \in \Pi$, then there exists a unique pure strategy Nash equilibrium of the Two-Party Competition Game in which each politicians adopts the position $\pi^i = \pi^*$.***

- When there exists a Condorcet winner, electoral competition leads opportunistic politicians to converge to the same policy position.
Politicians

• What is the incentive of politicians?
  • Ideology.
  • Office seeking politicians (ego rents, monetary rents, power).

• How do democratic institutions interact with these incentives?
A model of electoral competition

- Policy Space: \( \Pi = [0, 1] \).
- Voters: \( I \) is finite with \( \#I \) odd, or a continuum.
- \( \mathcal{P} \) satisfies:
  - SP, or
  - SCP and the preferences of the median voter are single-peaked.
- \( \pi_m \) is the median voter’s favorite policy.
- Elections are held with a simple majority rule, with a dice roll in case of a tie.
A model of electoral competition

• The outcome of the election is $\omega \in \{L, R\}$.

•Politicians make policy announcements $\pi^L$ and $\pi^R$.

• Politician $p$’s utility is given by

$$U_p (\pi^p, \omega) = u_p (\pi^\omega, \pi^p) + R_p \mathbb{1}_{p=\omega}$$

• $\pi^p$ is politician $p$’s ideal policy ($\pi^L < \pi_m < \pi^R$), and $u_p (., \pi^p)$ is single peaked.

• $R_p \geq 0$ is the rent from office.
Policy Convergence

**Theorem**

There is a unique pure strategy Nash equilibrium of the electoral competition game in which both parties adopt the median voter’s position $\pi^p = \pi_m$.

- There is convergence even when politicians are (partially) ideologically motivated.
\[ \frac{\delta}{2} < \frac{\Delta}{2} \]
PARTIES
VOTERS

ETC...
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A Simple Model of Redistribution

• Acemoglu, Robinson (2006)

• A continuum of voters \( \mathcal{I} = [0, 1] \)
  - Income \( y_i \sim_{iid} F(.) \).
  - Average Income \( \bar{y} = \int y dF(y) \).
  - Median \( y^m = F^{-1}(1/2) \).
  - In a typical income distribution \( y^m < \bar{y} \).
  - Linear utility \( u(c_i) = c_i \).
• There is a uniform tax rate \( \tau \).

• There may be inefficiencies due to the use of a tax, either because it is costly to organize or because of distortions created by the tax system (e.g. tax evasion). This is captured by a cost \( c(\tau) \), with \( c'(.) > 0, c''(.) > 0, c'(0) = 0, c'(1) > 1 \) (so that no agent prefers \( \tau = 1 \)).

• The revenue collected is \( T = (\tau - c(\tau)) \bar{y} \).

• \( T \) is then used as a lump sum transfer to the agents to be used for private consumption.
Ideal Policies

• The utility an agent derives from a policy $\tau$ is

$$V(\tau, y_i) = (1 - \tau)y_i + (\tau - c(\tau))\bar{y}.$$ 

• $V(.)$ is strictly concave and hence single-peaked.

• The ideal policy of agent $i$ satisfies

$$\tau^*(y_i) = \begin{cases} 
[c']^{-1}\left(1 - \frac{y_i}{\bar{y}}\right) & \text{if } y_i < \bar{y} \\
0 & \text{if } y_i \geq \bar{y} 
\end{cases}.$$ 

• Hence richer individuals favor lower tax rates. ($c'(.)$ is increasing hence so is its inverse $[c']^{-1}(.)$)

• In particular every agent with an income higher than the average prefers $\tau = 0$
Political Outcome

• The MVT implies that the Condorcet winner is

\[ \hat{\tau} = \tau^*(y_m). \]

• With a typical income distribution such that \( y_m < \bar{y} \), we have \( \hat{\tau} > 0 \).

• As \( \frac{y_m}{\bar{y}} \) decreases (more inequality), \( \hat{\tau} \) increases.

• Extending the franchise leads to a higher tax rate and bigger government.
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A simple model of government expenditures

- Persson Tabellini (2000)

- A continuum of voters \( \mathcal{I} = [0, 1] \)
  - Income \( y_i \sim_{iid} F(.) \).
  - Average Income \( \bar{y} = \int y dF(y) \).
  - Median \( y^m = F^{-1}(1/2) \).
  - In a typical income distribution \( y^m < \bar{y} \).
  - Quasi-linear utility \( u(c_i, g) = c_i + H(g) \).
  - \( H'(.) > 0, H''(.) < 0 \)
• There is a uniform tax rate $\tau$.

• The public good/size of the government is $g = \tau \bar{y}$.

• Let $\tau(g) = g/\bar{y}$.

• Hence a choice of policy can be identified to a choice of $g$. 
Ideal Policies

• The utility an agent derives from a policy $\tau$ is

$$V(g, y_i) = (1 - \tau(g))y_i + H(g).$$

• $V(.)$ is strictly concave and hence single-peaked.

• The ideal policy of agent $i$ satisfies

$$g^*(y_i) = H'^{-1}\left(\frac{y_i}{\bar{y}}\right)$$

• Hence richer individuals favor smaller government/lower tax rates. ($H'(.)$ is decreasing).
Social Optimum

• The social optimum satisfies

$$\max_g \int V(g, y_i) dF(y_i) = (\bar{y} - g) + H(g)$$

• Hence

$$g^{**} = H^{-1}(1).$$

• Hence individuals who are richer than average favor a government smaller than $g^{**}$ while people who are poorer than the average favor a government bigger than $g^{**}$.
Political Outcome

- The MVT implies that the political outcome is

\[ \hat{g} = H'^{-1} \left( \frac{y_m}{\bar{y}} \right) \]

- With a typical distribution \( \hat{g} > g^{**} \).

- \( g \) gets bigger as the franchise is extended, and as inequality increases as measured by \( \frac{y_m}{\bar{y}} \).
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Comparative Statics

• **Comparative Statics** (in engineering: sensitivity analysis) is the study of how the endogenous variables (e.g. consumption choices) of a model respond to changes in its exogenous parameters (e.g. prices).
  
  • “Statics” means that one is comparing two versions of the model rather than modeling a dynamic process of change.

• Endogenous variables are generally the result of an optimization problem or a fixed point problem (equilibrium).
The Problem

\[ F : X \times T \rightarrow \mathbb{R} : \]
\[ X^*(t) = \arg \max_{x \in X} F(x, t) \]

Question: How does \( X^*(t) \) depend on \( t \)?

- Typically, \( X \subseteq \mathbb{R}^n \), \( T \subseteq \mathbb{R} \) but there are more general results.
- We could also ask: how does \( X^*(t) \) depends on \( X \)?
- Or, if \( F(x, H) = \int_U g(x, u) dH(u) \), how does \( X^* \) depends on \( H(.) \)?
The One-Dimensional Problem

- Here we assume $X \subseteq \mathbb{R}$

**Definition (Increasing Differences)**

$F : X \times T \rightarrow \mathbb{R}$ (with $X, T \subseteq \mathbb{R}$) has (strict) increasing differences if for all $x' > x$ and $t' > t$

$$F(x', t') - F(x, t') \geq F(x', t) - F(x, t)$$

- If $\leq$, we can say (for example) that $F$ has increasing differences in $x$ and $-t$. 
Increasing Differences: Properties

- If $F(\cdot, \cdot)$ is sufficiently smooth, the following are equivalent
  1. $F$ has increasing differences.
  2. $F_x(x, t)$ is nondecreasing in $t$ for all $x$.
  3. $F_t(x, t)$ is nondecreasing in $x$ for all $t$.
  4. $F_{xt}(x, t) \geq 0$ for all $x$ and $t$.

- Increasing differences is the natural (ordinal) concept for the idea of complementarity.
Theorem (Topkis’ theorem)

Suppose that F has ID. Let t and t’ be two values t’ > t such that
X*(t) and X*(t’) are singletons.
Then X*(t) ≤ X*(t’).
The Multi-Dimensional Problem

• Here we assume $X = X_1 \times \cdots \times X_n$ where each $X_i$ is a real interval, and $T$ is a real interval.

**Definition (Supermodularity)**

$F : X \times T \rightarrow \mathbb{R}$ is supermodular if

(i) For all $\hat{x}_{-k}$, $F(x_k, t, \hat{x}_{-k})$ has ID in $(x_k, t)$.

(ii) For all $(\hat{t}, \hat{x}_{-j,k})$, $F(x_j, x_k, \hat{x}_{j,k}, \hat{t})$ had ID in $(x_j, x_k)$. 
Theorem (Topkis’ theorem)

Suppose that $F$ is supermodular. Let $t$ and $t'$ be two values $t' > t$ such that $X^*(t)$ and $X^*(t')$ are singletons in $\mathbb{R}^n$. Then $X^*(t) \leq X^*(t')$. 
A Connection

- Considers a population of individuals $\mathcal{I}$ with preferences over policies $\Pi \subseteq \mathbb{R}$ given by $U_i(\pi) = u(\pi, \theta_i)$ where $\theta_i \in \mathbb{R}$.

**Theorem**

*If $u(\pi, \theta)$ has ID in $(\pi, \theta)$, then the profile of preferences satisfies SCP with respect to $\Pi \subseteq \mathbb{R}$.***

**Proof:**

Let $\pi_L < \pi_R$ and $\theta_\ell < \theta_r$. The ID property implies

$$u(\pi_R, \theta_r) - u(\pi_L, \theta_r) \geq u(\pi_R, \theta_\ell) - u(\pi_L, \theta_\ell).$$

Hence $u(\pi_R, \theta_\ell) - u(\pi_L, \theta_\ell) > 0 \Rightarrow u(\pi_R, \theta_r) - u(\pi_L, \theta_r) > 0.$

And $u(\pi_R, \theta_r) - u(\pi_L, \theta_r) < 0 \Rightarrow u(\pi_R, \theta_\ell) - u(\pi_L, \theta_\ell) < 0.$

QED
Let

\[ V(p) = \max_{x \in X} F(x, p). \]

where \( F \) is continuously differentiable.

**Theorem (Envelope Theorem)**

*If \( x^*(. \) is singleton-valued on an open neighborhood of \( p \), then*

\[ V'(p) = F_p(x^*(p), p). \]
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Taxation: Endogenizing the Distortions


- Static economy with a single consumption good and a single input (labor).

- A continuum $[0, 1]$ of individuals.

- Each of them has one unit of time that they can use for work $\ell_i$ or leisure $x_i$ so that $x_i = 1 - \ell_i$.

- Individual productivity $\theta_i \sim_{i.i.d.} F(\cdot)$ is the unique source of heterogeneity $y_i = \theta_i(1 - x_i)$.

- Redistribution program: lump sum redistribution $b$ per individual financed by a proportional income tax $\tau$. 
Timing

1. Two exogenous office seeking parties each propose a platform \((\tau_p, b_p)\) that satisfies budget balance.

2. Elections take place. The winning redistribution program \((\tau, b)\) is applied.

3. Citizens choose how much to work and consume taking \((\tau, b)\) as given. If budget is not balanced, the leader is executed.
Individual Preferences

• We assume quasi-linear preferences:

\[ u(c, x) = c + v(x) \]

• \( v'(.) > 0, \ v'(0) > 1 \) and \( v''(.) < 0 \).

• The quasi linearity assumption is important.

• The budget constraint of individual \( i \) is

\[ c_i \leq \theta_i (1 - \tau)(1 - x_i) + b \]

• It is binding.
Individual Behavior

• Hence the program of the consumer/worker is:

\[ V(b, \tau, \theta_i) \equiv \max_{x_i \in [0,1]} b + \theta_i (1 - \tau)(1 - x_i) + v(x_i). \]

• Topki’s theorem \( \Rightarrow x^* \uparrow \tau \downarrow \theta_i \), independent of \( b \) (quasi-linearity).
  
  • More productive individuals work more.
  
  • Individuals work less when taxes are higher.

• Envelope theorem \( \Rightarrow \)
  
  - \( V_b = 1 > 0 \)
  - \( V_{\tau} = -\theta_i (1 - x^*(\tau, \theta_i)) \leq 0 \)
  - \( V_{\theta_i} = (1 - \tau)(1 - x^*(\tau, \theta_i)) \geq 0. \)
Voters’ Preferences

• Politicians propose budget-balanced platforms:
  $$b \leq \tau \int \theta \left(1 - x^*(\theta, \tau)\right) dF(\theta)$$

• What are the preferences of the voters over feasible platforms?

• Program of the voter:
  $$\max_{(\tau, b)} V(b, \tau, \theta) \quad \text{s.t.} \quad b \leq \tau \int \theta \left(1 - x^*(\theta, \tau)\right) dF(\theta)$$

• If $$(b, \tau)$$ and $$(b', \tau)$$ are feasible with $$b > b'$$, then $$(b, \tau) \succ^\text{mv} (b', \tau)$$ (because $$V_b = 1 > 0$$).

• Hence office seeking only propose platforms such that the budget constraint is binding (other policies are dominated).
Voters

• Hence the program of the voters over undominated policies is

\[ \text{max}_{\tau \in [0,1]} \ V \left( \tau \int \theta \left( 1 - x^*(\theta, \tau) \right) dF(\theta), \tau, \theta_i \right) = W(\tau, \theta_i). \]

• \( W_{\theta_i} = V_{\theta_i} + V_b \times \frac{d\theta}{d\theta_i} = V_{\theta_i} = (1 - \tau)(1 - x^*(\tau, \theta_i)) \downarrow \tau. \)

• Hence \( W(\tau, \theta_i) \) has ID in \((\tau, -\theta_i)\)

• Topkis theorem \( \Rightarrow \tau^* \downarrow \theta_i. \)

• And MVT1 \( \Rightarrow \) both parties propose \( \hat{\tau} = \tau^*(\theta_m) \) where \( \theta_m = F^{-1}(1/2) \), and \( \hat{b} = \tau \int \theta \left( 1 - x^*(\theta, \tau) \right) dF(\theta). \).
Lessons

• The size of redistribution reflects the preferences of the “middle class” (the median voter).

• Note that the median voter is also the voter with median pre-tax income $y^*(\theta_i) = \theta_i(1 - x^*(\theta_i)) \uparrow \theta_i$.

• Extending the franchise leads to higher taxes/larger redistribution programs.
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A Two-Group Model

- Back to the first model of redistributive politics.
- Two Groups: the poor $y_p$ and the rich $y_r > y_p$.
- A fraction $\rho < 1/2$ of the population is rich.
- $y_m = y_p < \bar{y} = \rho y_r + (1 - \rho) y_p$
- Let $\theta = \frac{\rho y_r}{\bar{y}} > \rho$ be the fraction of total income accruing to the rich (measures inequality).
Results

• Then

\[ \hat{\tau} = \tau^*(p) = c'^{-1} \left( 1 - \frac{y_p}{\bar{y}} \right) = c'^{-1} \left( \frac{\theta - \rho}{1 - \rho} \right) > 0. \]

• Then \( \hat{\tau} \) increases with inequality as measured by \( \theta \).

• The net redistribution away from the rich at a given tax rate \( \tau \) is

\[ Burden(\tau) = c(\tau)\bar{y} + \tau \left( \frac{\theta}{\rho} - 1 \right) \bar{y}. \]

• It increases with inequality \( \theta \) at any given \( \tau \)
Targeted Transfers

• Suppose the political process also determines the transfers accruing to each group $T_p$ and $T_r$.

• The budget constraint is $\rho T_r + (1 - \rho) T_p = (\tau - c(\tau)) \bar{y}$.

• The indirect utility of an individual is

$$V_i(\tau, T) = (1 - \tau)y_i + T_i$$
Political Outcome

• In this two-group model, the preferred policy of the poor is a Condorcet winner.
• Hence $T_r = 0$.
• Then the poor choose $\tau$ to maximize

$$(1 - \tau)y_p + \frac{(\tau - c(\tau))\bar{y}}{1 - \rho}$$

• Finally $\hat{\tau}^T = c'^{-1}(\theta) > \hat{\tau}$. 
Conclusions

- Hence the tax rate is higher with targeted transfers.
- Furthermore

\[ \text{Burden}^T(\tau) = \tau \frac{\theta}{\rho} \bar{y} > \text{Burden}(\tau) \]
Thanks!