EFFICIENCY AND WELFARE IN REPRESENTATIVE DEMOCRACY

- Can the form of political institutions affect type of public good provision/transfers?
  - Empirical evidence on what drives candidates’ policy choices, and how this is affected by political institutions
- Efficiency in dynamic games
POLICY COMMITMENT AND CANDIDATE IDENTITY

→ Key distinction in political economy models: Can party (candidate) commit to policies which are independent of party (candidate) own preferred policy?

→ Pande (2003): Can exploit existence of political institution which restricts identity of policy maker to examine whether policy commitment exists (also see Chattopadhyay and Duflo)

→ Mandated political representation:
  → Representative democracy ⇒ political under-representation of individuals belonging to minority groups who might vote in their own interest
  → Solution: majority minority districts; electoral lists; political reservation
  → Key feature of political reservation: change candidate identity without affecting voter composition
  → Practiced in favor of low castes
Basic Model

- $N$ individuals - each individual supplies one unit of labor, and depending on her/his earning potential either earns $y^r$ and is rich or earns $y^p$ and is poor, where $y^r > y^p$.
- Individuals also differ with respect to an unalterable attribute, caste, either high ($H$) or a low ($L$) caste.
- $\lambda^k_c$ denotes population share of individuals who belong to caste $c \in (H, L)$ and earn income $y^k$, where $k \in (r, p)$.
- Low caste citizens constitute a population minority ($\lambda_L < 1/2$), and are more likely to be poor, i.e. $\frac{\lambda^p_L}{\lambda^r_L} > \frac{\lambda^p_H}{\lambda^r_H}$. 
Tax rate \( t \); redistribution either via a general transfer \( T \) or targeted transfer \( \delta \) to low caste individuals (that is, \( \delta = 0 \) for high caste individuals).

\[ u_H^k = (1 - t)y^k + T \quad \text{and} \quad u_L^k = (1 - t)y^k + T + \delta. \]

Preferred redistribution?

Population divided into \( Z \) jurisdictions, with one legislator elected per jurisdiction. Model policy process via entry, voting and policy choice stage. Two parties field one candidate each

Assume policy influence of a legislator is proportional to, and increasing in, the group size of legislators which share her policy preferences.
VOTING

Fraction \( \alpha \) of individuals are rational voters, and remaining \((1-\alpha)\) fraction are noise voters. With two-party competition, sincere voting is rational.

A fraction \( \beta \) of noise voters vote for party \( P \) where \( \beta \) is a random variable with support \([0, 1]\) and cumulative distribution function \( G(\beta) \). The function is symmetric, such that \( G(\beta) = 1 - G(1 - \beta) \) for all \( \beta \). i.e. unbiased.

Electoral outcome =f( rational voters’ voting choices, and \( \beta \)). Let \( \varepsilon \) denote the difference between the number of voters who favor party \( P \), and those who favor party \( R \). The party \( P \) candidate wins if

\[
\alpha \varepsilon + (1 - \alpha) \beta > (1 - \alpha)(1 - \beta),
\]

or,

\[
\beta > \frac{1}{2} - \frac{\alpha \varepsilon}{2(1 - \alpha)}.
\]
Party $P$ candidate wins in every jurisdiction with probability $\phi(\varepsilon)$, where $\phi(\varepsilon) = 0$ if $\varepsilon \leq -\frac{1-\alpha}{\alpha}$; $\phi(\varepsilon) = 1$ if $\varepsilon \geq \frac{1-\alpha}{\alpha}$; and $\phi(\varepsilon) = 1 - G\left(\frac{1}{2} - \frac{a\varepsilon}{2(1-\alpha)}\right)$, otherwise.

Assume $\lambda_k^+ \lambda_k^+ - \lambda_k^{-} - \lambda_k^c < \frac{1-\alpha}{\alpha} \Rightarrow$ a party which only attracts a single demographic group's vote enjoys a positive probability of winning.

Probability of winning now a smooth function of party policy choice - avoid cycling in voting.
Candidate selection undertaken by two political parties, indexed by $J \in (R, P)$. Parties are ideologically differentiated on income – party $R$ favors the rich, and party $P$ the poor.

Party chooses fraction of low castes ($\pi$) to field to maximize average member’s utility

$$W_J = (1 - t) y^k + T + \xi_J \delta,$$

A political equilibrium is a pair of party entry decisions which constitute best responses. Every such equilibrium is associated with a probability distribution over policy outcomes. The probability that the policies associated with the election of a party’s candidates are implemented equals the party’s probability of electoral success.
Result 1 If the proportion of low caste members in each party is below their population share then an equilibrium with no low caste candidates and no targeted redistribution exists.

Result 2 If parties can commit their candidates to policies then political reservation does not affect policy outcomes. However, if such commitment is absent then, relative to an equilibrium with no low caste candidates, political reservation increases the likelihood of targeted redistribution.
Other ways of modelling
- Heterogenous costs of running: Chattopadhyay and Duflo
- Differences in ability
- Lobbying
EMPIRICAL TESTS OF POLITICAL RESERVATION

- Indian constitution: fraction jurisdictions reserved for scheduled castes (scheduled tribes) should equal, as nearly as possible, the population share of scheduled caste (scheduled tribe) in the state. Moreover, the only permissible basis for changes in the extent of reservation enjoyed by a group in a state is changes in the census estimates of the group’s population share in that state.

- Reservation is a non-linear function of the group’s population in the most recent census.

\[
Y_{st} = \alpha_s + \beta_t + \gamma R_{st} + \phi P_{st}^* + \delta P_{st} + \eta X_{st} + \varepsilon_{st}.
\]
FINDINGS

- Identity matters - Duflo finds similar evidence for women reservation in local governments.

- Policy commitment likely absent - suggests in static models one potential source of ‘welfare’ loss is from ‘candidate’ characteristics - however Pareto ‘inefficiency’ hard to find (Coordination failure examples).

- Dynamic context: Two period model sufficient to see main insights - absence of policy commitment and strategic (electoral) incentives can lead to inefficient outcomes.
  - Private capital accumulation decisions: \((s_1, \ldots s_N)\) and government capital decision \(g \in G\). State variables are determined in period 1.
  - Preferences of citizen \(i\) are additively separable:
    \[ V_1^i(x_1, g, s_i) + V_2^i(x_2, g, s_i) \]

- Feasible policies: For period one \((x_1, g) \in A^1(s)\) and period two
$x_2 \in A^2(s, g)$

→ Example: Income tax model
→ Policy Cum Investment Sequence (PCIS) denoted $x_1, g, s \pi_2$ where $\pi_2 s, g : A_2(s, g) \rightarrow [0, 1]$ is the probability distribution. Also define policy function