Reservations and the Politics of Fear

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Introduction

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- Effects:
  1. Governance in interests of reserved group e.g. Chattopadhyay and Duflo (2004), Pande (2003), Bardhan, Mookherjee, Torrado (2010), Besley, Pande, Rahman and Rao (2004)
  2. Change in future representativeness (reversing stereotypes) Beaman et. al (2009)
  3. Worsening qualifications of leaders e.g. Chattopadhyay and Duflo (2004) Beaman et. al (2009)

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  2. Change in future representativeness (reversing stereotypes) Beaman et. al (2009)
  3. Worsening qualifications of leaders e.g. Chattopadhyay and Duflo (2004) Beaman et. al (2009)
- Why?:
  1. Marginalized group controls leadership (e.g.women leaders do things that women want, or targetting improves to disadvantaged)
  2. Change expectations about quality of leadership (women leaders govern well and get seen as leaders)
  3. Brings in neophyte/unqualified politicians (groups with low levels of education)

Our Contributions

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  - Reservations change things in expected ways
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  - Explain these effects using a "Politics of Fear" model

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  - Explain these effects using a "Politics of Fear" model
- Learn more about effects that reservations might have in India today:
  - Very policy relevant in Maharashtra right now
- Test the politics of fear model
  - Evidence consistent with model's auxiliary predictions

Who usually gets reservations

- Small groups
  - Applied to SC, ST
- Marginalized
  - Women, SC, ST, OBCs
- In many states
  - Large and sometimes powerful (village level) groups: OBCs
- In most states
  - Reservations proportional to district population frequencies
  - Rotational basis

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  - Reservations proportional to district population frequencies
  - Rotational basis
- Proportionality In Maharashtra
  - True for SC/STs
  - Not for OBCs
    - 27% of village level Pradhan positions are reserved for OBCs
    - Independent of village, ward, block, district frequencies

Our Data

Effects of Pradhan reservations on "governance" in Maharashtran rural villages

- Survey administered in 2007-08
- 310 villages
- 10,000 households
- Village size
- Non Tribal
- Non Konkan region
- Only study PRADHAN reservations

How We Proceed

Effects of reservations on "governance" in Maharashtran rural villages

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- What is it about OBCs?
  - They are large, sometimes powerful
- How does power interact with reservations?
  - Build a "politics of fear" model.
  - Model suggests the underlying "power" of a group will determine how reservations affect governance

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- What is it about OBCs?
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- How does power interact with reservations?
  - Build a "politics of fear" model.
  - Model suggests the underlying "power" of a group will determine how reservations affect governance
- We explore this and other implications of this model with the data

Making Sense of Findings

Politics of Fear model

- A la Padro-i-Miquel (2007)
  - Consider each jati as a coherent political group
- Can explain positive dependence on group size
  - 1. Limited (one period) commitment to governance by leader
  - 2. Leader has "incumbency advantage" contingent on continued group support
    - Chances of winning fall if leader deposed
  - 3. Incumbency advantage allows leader to extract rent (low quality governance)
  - 4. Reservation for group destroys particular leader's incumbency advantage
    - Chances of winning unaffected by leader being deposed (group will win anyway)
  - 5. Leader must commit to improved governance (or be deposed and replaced)

Back to the Data

Model hinges on fragility of reserved group's usual hold on power

- Model predicts non-linearity to effect
  - Small OBC groups having reservation – no effect
  - Larger OBC group having reservation – positive effect

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  - This is also found in the data
- Model predicts interaction with redistributional gains of leader's group
  - More that group benefits redistributionally from holding leadership, greater positive effect of reservations on governance
  - Also found

Contrasts

Relevant Theoretical/Empirical papers

- Banerjee and Pande (2009)
- "Parochial politics": larger groups (proportionately) end up selecting worse leaders
  - Pradhan elections
  - Even a terrible representative can get elected when a group is large (parochialism swamps competence considerations)
  - A small group, in contrast, has to put someone forward of more broad appeal
- Munshi and Rosenzweig (2015)
  - India wide ward level data
  - Similar (to Fear model) tension between competence and distribution
  - Threshold on sub-caste (jati) size above which (locally) group can discipline and commit leader to mix of policies (chooses most competent within group)
  - Threshold estimated at 50% of ward population
  - Identified via reservations (ward fixed effects)
    - i.e., comparing size of group effect
  - No efficiency rationale for reservations

Contrasts

Here

- Maharashtra only
- Pradhan reservation (not ward representative)
- Effect of reservations relative to non-reserved
  - i.e., compares reservation by size of group effect
- Non-linearity of effect
- Efficiency rationale for reservations

Regressions

- Key governance outcome variables (in line with Anderson, Francois, Kotwal (2015)) program provision
  - GP measures (GP questionnaire), household questionnaire
  - 15 programs, targetted BPL 8 (and not), EGS, income generating (and not)
- No effects for reservations overall
- Significant effects if restricted to OBCs

Household Level Regressions

$$Y_{ik} = \beta_0 + \beta_1 RESOBC_k + \beta_2 RESERVED_k + S_k \psi_k X_{ik} + \gamma_k Z_k + \epsilon_{ik}. \quad (1)$$

- Y_{ik}, outcome of household i, residing in village k.
- X_{ik}, household controls (education, land ownership, and caste identity);
- Z_k, village level geographic, demographic, climate controls, caste population proportions, land ownership is dominated by Marathas.
- $RESOBC_k$, equal to 1 if Gran Pradhan reserved for an OBC caste member in village, 0 otherwise.
- $RESERVED_k$, equal to 1 if Gran Pradhan reserved for a SC/ST or a woman in village k.
- Also include region fixed effects.
- Comparison group is unreserved Gran Pradhans
  - Can Break up *RESERVED* variable further into SC, ST, and female dummy – no difference to results.
- ϵ_{ik} is a regression disturbance term clustered at the village level.

Village Level Regressions

$$Y_k = \beta_0 + \beta_1 RESOBC_k + \beta_2 RESERVED_k + \phi_k Z_k + \varepsilon_k. \qquad (2)$$

- Y_k village level GP outcome measure in village k.

Village Level Outcomes

Variable	Coefficient (β_1) *RESOBC*	Coefficient (β_2) *RESERVED*
All programs	0.91 (0.41)**	-0.30 (0.31)
BPL programs	0.30 (0.15)**	-0.07 (0.11)
Income programs	0.80 (0.39)**	-0.27 (0.29)
Revenue/capita	172.6 (69.4)***	14.0 (43.9)
Taxes/capita	102.9 (38.9)***	6.5 (28.4)
Funds/capita	69.7 (37.9)*	7.4 (20.6)
Expenses/capita	173.2 (73.9)**	7.3 (39.9)
Pradhan's education	0.51 (0.33)	-1.07 (0.25)***
Pradhan is large land owner	0.28 (0.07)***	-0.29 (0.06)***
Meetings with higher govt.	16.7 (10.1)*	-19.0 (13.3)
Observations	307	307

Household Level Outcomes

Variable	Coefficient (β_1) *RESOBC*	Coefficient (β_2) *RESERVED*
All programs	0.80 (0.40)**	-0.24 (0.30)
BPL programs	0.27 (0.14)*	-0.06 (0.10)
Program participation	0.30 (0.12)***	-0.06 (0.09)
Needy get benefits	0.48 (0.24)**	-0.20 (0.18)
Received what entitled to	0.21 (0.13)*	-0.12 (0.09)
More benefits if connected to GP	-0.13 (0.07)**	-0.05 (0.05)
Taxes paid	51.4 (32.0)*	7.9 (20.8)
Observations	9165	9165

Politics of Fear Model

- Elaborate on key assumption of the model
- Groups divided and want to have their own as leader for distributional reasons
- Do we see evidence of such distributional effects?

Politics of Fear Model

- Check in the data for distributional effects – assumption of POF framework. Estimate

$$Y_{ink} = \beta_0 + \beta_1 SHAREJATI_k + \psi_k X_{ik} + \gamma_k Z_k + \epsilon_{ik}. \quad (3)$$

- Y_{ink} is an outcome of household i, residing in nieghbourhood n, in village k.
- X_{ik} includes household controls (education, land ownership, and caste identity);
- Z_k includes village level geographic, demographic, and climate controls (latitude, longitude, elevation, distance to natural water sources, distance to railways and national roads, soil quality measures, rainfall levels, as well as caste population proportions and whether the land ownership is dominated by Marathas).
- $SHAREJATI_k$ is our key variable of interest, which is equal to 1 if the household shares the same jati as the Gram Pradhan in a village k.

Neighbourhood goods (CORRELATION!)

Table 1 - Public Goods in Caste Neighbourhood - Low Castes

Variable	$SHAREJATI_k$
Public goods in caste neighbourhood:	
Drinking water problems	-0.08 (0.03)***
Electricity problems	-0.04 (0.02)**
Percent of households with electricity	6.3 (2.2)***
Per capita drinking wells	0.04 (0.01)***
Perceptions of Gram Pradhan:	
Honest	0.08 (0.04)**
Provides public goods	0.08 (0.04)**
Does not disciminate by caste	-0.20 (0.06)***
Caters to my caste	0.09 (0.05)**
Caters to my caste neighbourhood	0.08 (0.05)*
Observations	5008

Politics of Fear Model

- Two castes – A and B
- Each caste group has a leader
- Each leader contests elections
- There is an incumbency advantage in elections:
  - A Ruler needs "support" of his caste group to maintain power
    - If supported probability of reelection equals γ^A
  - Ruler replacement "not support" increases likelihood of a switch of power to another caste group
  - If not supported, group chooses another leader to contest election
    - If not supported probability of winning election equals $\gamma^a \leq \gamma^A$.

Politics of Fear Model

- Ruler in office chooses:
  - allocation of total resources, η across the groups and
  - effort put in to governance – governance, a public good,: P
  - Linear production function
    - assume producing P units of governance costs P units of effort (net of governance benefit)
- Suppress differentiation on taxes and transfers in Padro-i-Miquel

Politics of Fear Model

- Politicians can commit to level of transfers and governance effort provision prior to election. But only for period of office
  - Limited commitment important
- Politician decisions
  - Transfers are trivial – give all η to own group
  - Denote group I incumbents level of governance by I, $I = A$ or B.
- Let I^C denote (potentially different) level of governance promised under a challenger to an I incumbent

Timing

- Incumbent leader in place at time 0.
- Random allocation of reservations is decided by nature, village either has leadership reserved for A or unreserved leader
- All eligible individuals who choose to contest election announce policies they would implement for term of office.
- If incumbent leader's group eligible, group decides "support" or not.
- If not eligible support irrelevant.
- Without reservations incumbent is reelected with probability γ^I if supported, and probability $\gamma^i \leq \gamma^I$ if not supported.
- With reservations, member of reserved group is appointed leader with probability 1.
- Leader undertakes promised policies and is incumbent for next electoral cycle.

Politics of Fear Model

- Recall γ^I denote incumbent probability of reelection if in group $I = A, B$,
- Recall γ^i denote lower challenger probability reelection, i = A, B,
- Let π denote per period rents from office for a leader.
- Recall η is per period return that everyone in group gets if leader from own group
- Let 1-δ denote probability of death (discounting).

Reservations

- Probability p a reservation occurs for the pradhan position in a village.
- Assume that reservations can only go to group A.
  - Marathas never receive reservations.
- R is amount of governance produced under reservation.

Value Functions

For leaders:

$$V_L^A = \pi - A + \eta + \delta\left(pV_L^R + (1-p)\left(\gamma^A V_L^A + (1-\gamma^A)V^{AB}\right)\right)$$

$$V_L^B = \pi - B + \eta + \delta\left(pV^{BA} + (1-p)\left(\gamma^B V_L^B + (1-\gamma^B)V^{BA}\right)\right)$$

$$V_L^R = \pi - R + \eta + \delta\left(pV_L^R + (1-p)\left(\gamma^A V_L^A + (1-\gamma^A)V^{AB}\right)\right)$$

Value Functions

For citizens (if leader is from own caste and leadership unreserved):

$$V^{AA} = A + \eta + \delta(pV^{AR} + (1-p)\left(\gamma^{A}V^{AA} + (1-\gamma^{A})V^{AB}\right)$$

$$V^{BB} = B + \eta + \delta(pV^{BR} + (1-p)\left(\gamma^{B}V^{BB} + (1-\gamma^{B})V^{BA}\right)$$

For citizens (if leader from other caste and leadership unreserved):

$$V^{AB} = B + \delta(pV^{AR} + (1-p)\left(\gamma^{B}V^{AB} + (1-\gamma^{B})V^{AA}\right)$$

$$V^{BA} = A + \delta(pV^{BR} + (1-p)\left(\gamma^{A}V^{BA} + (1-\gamma^{A})V^{BB}\right)$$

For citizens in reserved villages:

$$V^{AR} = R + \eta + \delta(pV^{AR} + (1-p)\left(\gamma^{A}V^{AA} + (1-\gamma^{A})V^{AB}\right)$$

$$V^{BR} = R + \eta + \delta(pV^{BR} + (1-p)\left(\gamma^{A}V^{BA} + (1-\gamma^{A})V^{BB}\right)$$

Challenger Entry (citizens)

Deposing an incumbent costly to citizens since non-incumbent more likely to cede leadership.

- Citizens only accept a challenger if rewarded by improved governance.

Challenger offers A^c for an A group, B^c for a B group, challenger such that:

$$\gamma^a \left(A^C + \eta + \delta \left(pV^{AR} + (1-p)(\gamma^A V^{AA} + (1-\gamma^A)V^{AB})\right)\right) + (1-\gamma^a)\, V^{AB} \geq \gamma^A V^{AA} + (1-\gamma^A)V^{AB} \quad (4)$$

And

$$\gamma^b \left(B^C + \eta + \delta \left(pV^{BR} + (1-p)(\gamma^B V^{BB} + (1-\gamma^B)V^{BA})\right)\right) + \left(1-\gamma^b\right) V^{BA} \geq \gamma^B V^{BB} + (1-\gamma^B)V^{BA} \quad (5)$$

If reserved for an A, As win for sure. Then:

$$R + \eta + \delta \left(pV^{AR} + (1-p)(\gamma^A V^{AA} + (1-\gamma^A)V^{AB})\right) \quad \geq \quad V^{AA} \quad (6)$$

Challenger Entry (challenger)

Offering $A^c(B^c)$ challenger must weakly prefer being leader to remaining a regular group member(internalizes negative effect on probability of re-election):

$$\gamma^a\left(\pi - A^C + \eta + \delta\left(pV_L^R + (1-p)\left(\gamma^A V_L^A + (1-\gamma^A)V^{AB}\right)\right)\right) + (1-\gamma^a)V^{AB} \geq \gamma^A V^{AA} + (1-\gamma^A)V^{AB} \quad (7)$$

$$\gamma^b\left(\pi - B^C + \eta + \delta\left(pV^{BR} + (1-p)\left(\gamma^B V_L^B + (1-\gamma^B)V^{BA}\right)\right)\right) + (1-\gamma^b)V^{BA} \geq \gamma^B V^{BB} + (1-\gamma^B)V^{BA} \quad (8)$$

When reserved, A assured to win, so A challenger condition:

$$\pi - R + \eta + \delta\left(pV_L^R + (1-p)\left(\gamma^A V_L^A + (1-\gamma^A)V^{AB}\right)\right) \geq V^{AA} \quad (9)$$

Equilibrium

- Along the equilibrium path challengers in unreserved villages must be defeated for support (weakly) by incumbents so that equations conditions (4) and (5) bind.
- Free entry of challengers necessitates that equations (7) to (9) also bind.
- These 5 conditions plus 9 value functions yields a system of fourteen equations in the model's fourteen unknowns:
  $\{V_L^A, V_L^B, V_L^R, V^{AA}, V^{BB}, V^{AB}, V^{BA}, V^{AR}, V^{BR}, A, A^c, B, B^c, R\}$

Equilibrium

Proposition

There exists a solution to this system of equations. It is unique.

Reservations

Proposition

Reservations (weakly) raise governance effort provided by the leader. That is:

$R - A = \frac{(\gamma^A - \gamma^a)\Theta\eta}{\Lambda} \geq 0$, *where* $\Theta, \Lambda > 0$.

Reservations

Corollary

- *If* $\gamma^A - \gamma^a = 0$, *then reservations have no effect on governance. That is:* $R - A = 0$.
- *If* $\gamma^A - \gamma^a > 0$, *then reservations have more impact on governance, the greater is the own group distributional benefit to holding the leadership,* η. *That is:* $R - A$ *is increasing in* η *for* $\gamma^A - \gamma^a > 0$.

Empirical Predictions

1. If caste group extremely small, i.e., only obtains leadership position via reservation, or rare random events, $\gamma^A \to 0$, then $(\gamma^A - \gamma^a) \to 0$, and reservations have no impact on governance.
2. If caste group so large that it almost always win elections in non-reserved villages, then support has little impact, i.e., $\gamma^a \to 1$ and $(\gamma^A - \gamma^a) \to 0$. Reservations have no impact on governance.
3. Reservations have an effect on governance if caste groups large enough to contest for leader's position, but no so large as to be assured to win it. Then $(\gamma^A - \gamma^a) > 0$.
4. Where reservations have effects, the magnitude of their impact should be larger, the greater are the distributional benefits, η, to the group from holding the leadership position.

Empirical Tests

Household Regressions

$$Y_{ik} = \beta_0 + \beta_1 RESERVED_k + \psi_k X_{ik} + \gamma_k Z_k + \epsilon_{ik}. \quad (10)$$

- Y_{ik} is an outcome of household i, residing in village k.
- X_{ik} includes household controls (education, land ownership, and caste identity);
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- $RESERVED_k$ equal to 1 if the Gram Pradhan is reserved for a (OBC, SC, ST) member in village k and equal to 0 otherwise.
  - Comparison group is unreserved Gram Pradhans.
- ϵ_{ik} regression disturbance term clustered at village level.

Village Regressions

$$Y_k = \beta_0 + \beta_1 RESERVED_k + \phi_k Z_k + \varepsilon_k. \quad (11)$$

Cut-off determination

- Cut-offs determined via non-reserved villages
  - Jatis with less than 25% very unlikely to provide pradhan in unreserved village
  - Jatis exceeding 50% almost always provide pradhan in unreserved village
- Robustness 20-60% (most variables)

When Reservations Improve Governance

Variable	25% $\leq$ Jati Prad$\leq$ 50% $RESERVED_k$	Jati Prad<25%/Jati Prad>50% $RESERVED_k$
All programs	2.01 (0.90)**	-0.55 (0.39)
BPL programs	0.81 (0.30)***	-0.16 (0.14)
Income programs	1.81 (0.82)**	-0.54 (0.36)
EGS	0.13 (0.07)**	-0.02 (0.04)
Revenue/capita	793.9 (246.1)***	51.9 (89.3)
Taxes/capita	459.4 (192.3)**	21.8 (47.7)
Funds/capita	298.5 (128.8)**	30.2 (44.4)
Expenses/capita	706.6 (386.8)**	95.5 (87.9)
No. of.Comtees	1.56 (0.71)**	-0.05 (0.25)
Observations	65	179

Jati level analysis

Table 3 - Estimations - Household Level Data

Variable	25%≤Jati Prad≤ 50% $RESERVED_k$	Jati Prad<25%/Jati Prad>50% $RESERVED_k$
All programs	1.69 (0.74)**	-0.50 (0.38)
BPL programs	0.71 (0.26)***	-0.16 (0.13)
EGS	0.11 (0.06)*	-0.02 (0.04)
Prog participation	0.50 (0.23)**	-0.08 (0.12)
Needy get benefits	1.37 (0.66)**	-0.13 (0.33)
Received entitled to	0.68 (0.34)**	-0.05 (0.17)
+ if GP connected	-0.29 (0.12)**	0.02 (0.09)
Paid taxes	0.05 (0.03)*	0.02 (0.02)
Voted on promises	0.08 (0.04)**	0.01 (0.02)
Observations	1869	4990

Computing η

- s_j is the number of households who share the same jati as the Gram Pradhan in neighbourhood j, divided by the number of households who share the same jati as the Gram Pradhan in the entire village.
- Index $H = \sum_{j=1}^{n} s_j^2$ higher the more concentrated is the jati in the village.
  - E.g. if all Gram Pradhan jati members in a single neighbourhood: $j = 1$, then $s_1 = 1$, and $s_j = 0$ for all other neighbourhoods and $H = 1$, upper bound
    - Easy to target benefits
  - Alternatively, if Gram Pradhan's jati are spread equally across all neighbourhoods, then $s_j = \frac{1}{n}$ for all j and $H = \frac{1}{n}$, which is the lower bound
    - Harder to target benefits

Testing η prediction

Household level regressions:

$$Y_{ik} = \beta_0 + \beta_1 RESERVED_k + \beta_2 RESERVED_k * H_k + \beta_3 H_k + \psi_k X_{ik} + \gamma_k Z_k + \epsilon_{ik} \quad (12)$$

where H_k is index respresenting degree of concentration of Gram Pradhan's jati in village k

- Theory predicts β_2 positive

Analogous village level regression:

$$Y_k = \beta_0 + \beta_1 RESERVED_k + \beta_2 RESERVED_k * H_k + \beta_3 H_k + \phi_k Z_k + \varepsilon_k \quad (13)$$

Village Level

Table 4 - Estimations of GP Measures - Villages with 25% $\leq$ Jati Pradhan $\leq$ 50%

Variable	$RESERVED_k$	$RESERVED_k * H_k$
All programs	0.43 (0.94)	3.3 (2.0)*
BPL programs	0.24 (0.32)	1.2 (0.65)*
Income programs	0.37 (0.88)	2.99 (1.81)*
Employment Guarantee Scheme	0.02 (0.08)	0.26 (0.14)*
Revenue/capita	388.2 (319.9)	826.4 (469.1)*
Taxes/capita	305.7 (199.8)	380.5 (247.1)†
Funds/capita	82.5 (161.5)	445.9 (261.9)*
Expenses/capita	353.1 (300.1)	735.1 (470.4)†
Number of.Committees	1.21 (0.91)	0.39 (1.20)
Observations	65	65

Individual Level

Table 5 - Estimations - Household Level Data - Villages with 25% $\leq$ Jati Pradhan $\leq$ 50%

Variable	$RESERVED_k$	$RESERVED_k * H_k$
All programs	0.75 (0.77)	2.68 (1.53)*
BPL programs	0.26 (0.34)	1.03 (0.63)*
Employment Guarantee Scheme	0.004 (0.08)	0.26 (0.14)*
Program Participation	0.11 (0.27)	0.84 (0.54)†
Needy get benefits	0.40 (0.68)	2.26 (1.38)*
Received what entitled to	0.09 (0.48)	1.26 (0.76)*
Receive more benefits if connected to GP	-0.03 (0.16)	-0.55 (0.25)**
Paid taxes	-0.003 (0.04)	0.11 (0.05)***
Voted on promises	0.05 (0.06)	0.07 (0.07)
Observations	1815	1815

Conclusions

Reservations can improve governance

- First evidence of such an effect anywhere (AFAWK)
- Consistent with a "Politics of Fear" model:
  - Only if the reserved group are a large, but not too large.
  - Effect more pronounced the greater distributional benefits of holding leadership
- Reservations under attack by Marathas in Maharashtra
  - Marathas want reservations too
  - Distributional benefits aren't there for Marathas
  - Clientelism and a divided jati