

Efficiency Consequences of Affirmative Action in Politics Evidence from India

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Motivation

- Affirmative Action (AA) in electoral politics has proliferated across the world.
 - Quota for women: 100+ countries; for ethnicities: 24 countries.
- Debate on efficiency vs. equity trade-offs common with AA.
- Intuitively, the rationale for AA is easy to defend on distribution grounds: reallocation of resources to a “disadvantaged group”. *Efficiency?*

Motivation: Political Economy

- Efficiency/Performance = Function (Ability, Effort)
- While AA may (arguably) cause a decrease in ability, the level of effort is subject to the forces of political competition
- Hence, the over all effect on efficiency is an empirical question.

What do we do?

- We examine the question of efficiency in the context of *caste based quotas* in the election of Sarpanch (head) in village council (Gram Panchayats: GP) elections
 - Specific Context: Other Backward Caste (OBC) Reservations in Rajasthan (a northern state of India). Sample of *all* GPs that are in the pool for reservation
 - **OBC:** a mid ranking group in terms of affluence (Scheduled Castes/Tribes (SC/ST) are the poorest; What is termed the General category is on an average richer)
≈ 60 % of pop (85 % of Non SC/ST)

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 - **Efficiency** : public policy delivery (provision of work under one of the largest public workfare programs in the world: National Rural Employment Guarantee Scheme in India: NREGS)

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 - **Efficiency** : NREGS: : Universal: guarantee of 100 days of work to rural households on public projects within the village council area.

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 - Specific Context: Other Backward Caste (OBC) Reservations in Rajasthan (a northern state of India). Sample of *all* GPs that are in the pool for reservation
 - **Efficiency** : *NREGS: admittedly a narrow lens: but accounts for almost 80 % of funds that the local head controls*

Why this context?

- OBC Reservation is randomized
 - Once a certain proportion of seats (based on population share) is allocated to other disadvantaged castes (Schedule Caste: SC, Schedule Tribes: ST), the residual then form the pool of villages where reservation for the OBC is randomized
 - This approach to reservation is not universal in India: hence focus on the state of Rajasthan

Another Motivation

- The literature on public good provision and institutions often focuses on the impact of homogeneity of population (the large literature on ethnic fractionalization)

Another Motivation

- Here we shed light on how randomized change in the relative ethnic homogeneity of contestants can affect public provision outcomes
 - **Open elections:** at any given population share of OBC have a mixture of OBC and Non OBC contestants
 - Among top 2 candidates, when non SC/ST share is 0.75: in 48 percent of the cases one of the top 2 is not OBC

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 - Among top 2 candidates, when non SC/ST share is 0.75: in 48 percent of the cases one of the top 2 is not OBC
 - **Reserved Elections:** Only OBC contestants (nearly 75 % from two big caste sub-groups)

Another Motivation

- In particular, we examine the interaction of such exogenous variation in the ethnic homogeneity of contestants with the population share of ethnic groups

A 3rd Motivation

- Literature on India has studied impacts of Scheduled Caste and Schedule Tribe Reservations in various scenarios
- Relative less is known about reservations of a mid affluence group (OBC)

Preview of the Results

- The effect of Affirmative action (reservation for OBCs) on **per capita days of NREGS** work depends on the population share of OBC* in the GPs
 - When OBC* population share is at 0.75, the reserved GPs have 5.1 percent more work per capita : (*44 % of GPs have OBC* population share greater than 0.75*)
 - The negative impact of OBC reservation is also large with reserved village councils having almost 20 percent less work when OBC* population share is less than 35 percent (*3 % of GPs have OBC* pop share lesser than 0.35*)

Preview of Results

- Mechanism: The impact of reservation works through *relatively* closely fought elections in reserved seats as compared to open elections when OBC* population share is high.
 - Provide a rationale for that using a model
 - Voters have co-ethnic preferences and
 - *care about public good promises*
 - Implications for the public good promises when ethnics group population sizes vary
- Provide empirical support for the mechanism

Data

- The sample is constructed by triangulation of three different administrative data sets
 - Public policy outcome (NREGS): 2012-2013
 - Demographic characteristics as well as the infrastructure development of the village councils (Census 2011)
 - village council election records (State Election Commission: 2010 elections)
 - Online results as well manual digitization of records on all candidates *who stood for election*
- Data is a census of *all* Gram Panchayats in Rajasthan (9000)

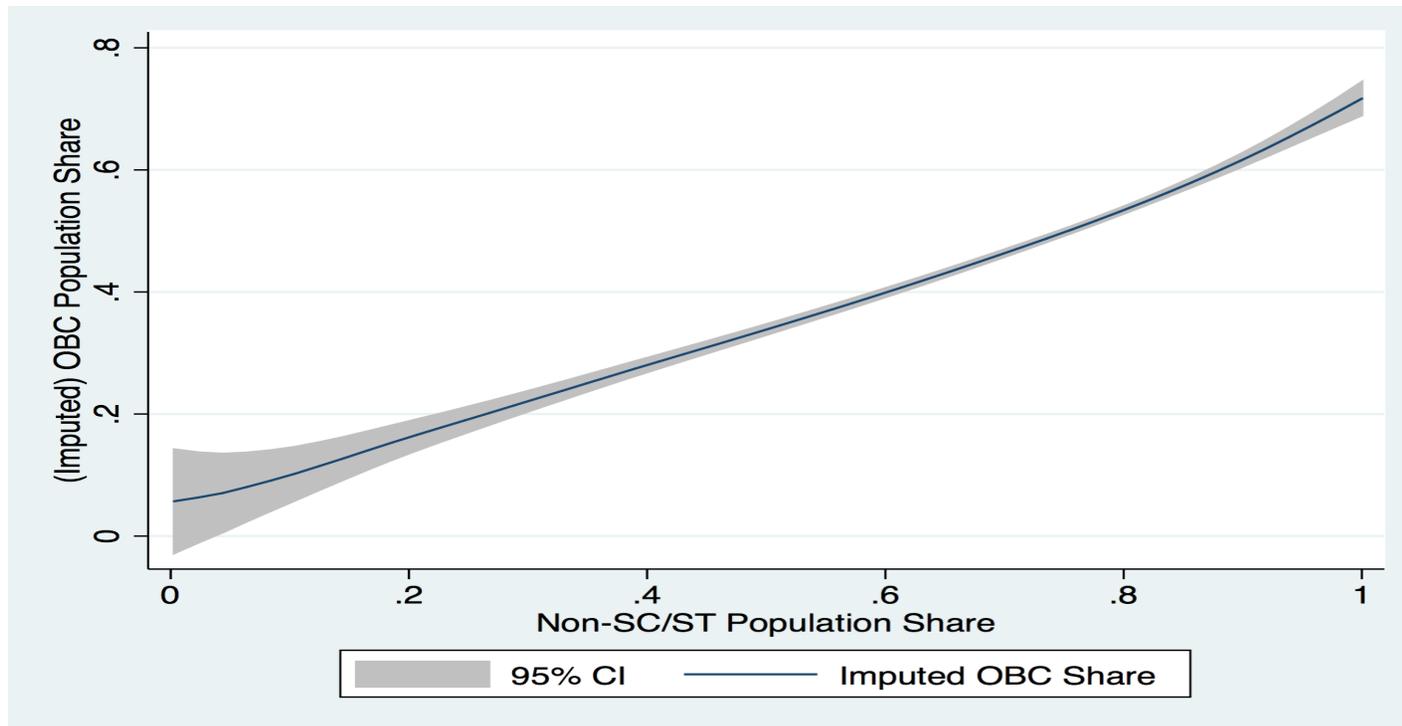
Empirical Model

$$Days\ pc_{vb} = \alpha_b + \beta_1 * S_{vb}^O + \beta_2 * D_{vb}^{RES} + \beta_3 * S_{vb}^O D_{vb}^{RES} + \gamma' Z_{vb} + \varepsilon_{vb} \quad (1)$$

- $S^O = OBC^* =$ Non SC/ST population share
 - Census reports SC/ST and others
 - 85% of non SC/ST population in Rajasthan is OBC (NSS)
 - NSS 2011: while 80 percent of SC/ST households demanded NREGS work the proportion of OBC households who demanded work was 66 percent, while the corresponding proportion for the general caste category was 54 percent.

Non SC/ST share and OBC Share

Figure: Correlation between population shares of OBC and Non SC/ST



- We use Non SC/ST population shares in the paper
- NON SC/ST between 0.75 to 1 \approx 0.5 to 0.8 OBC Population Share
 - This is the range when we say OBC group *is large*

Empirical Model

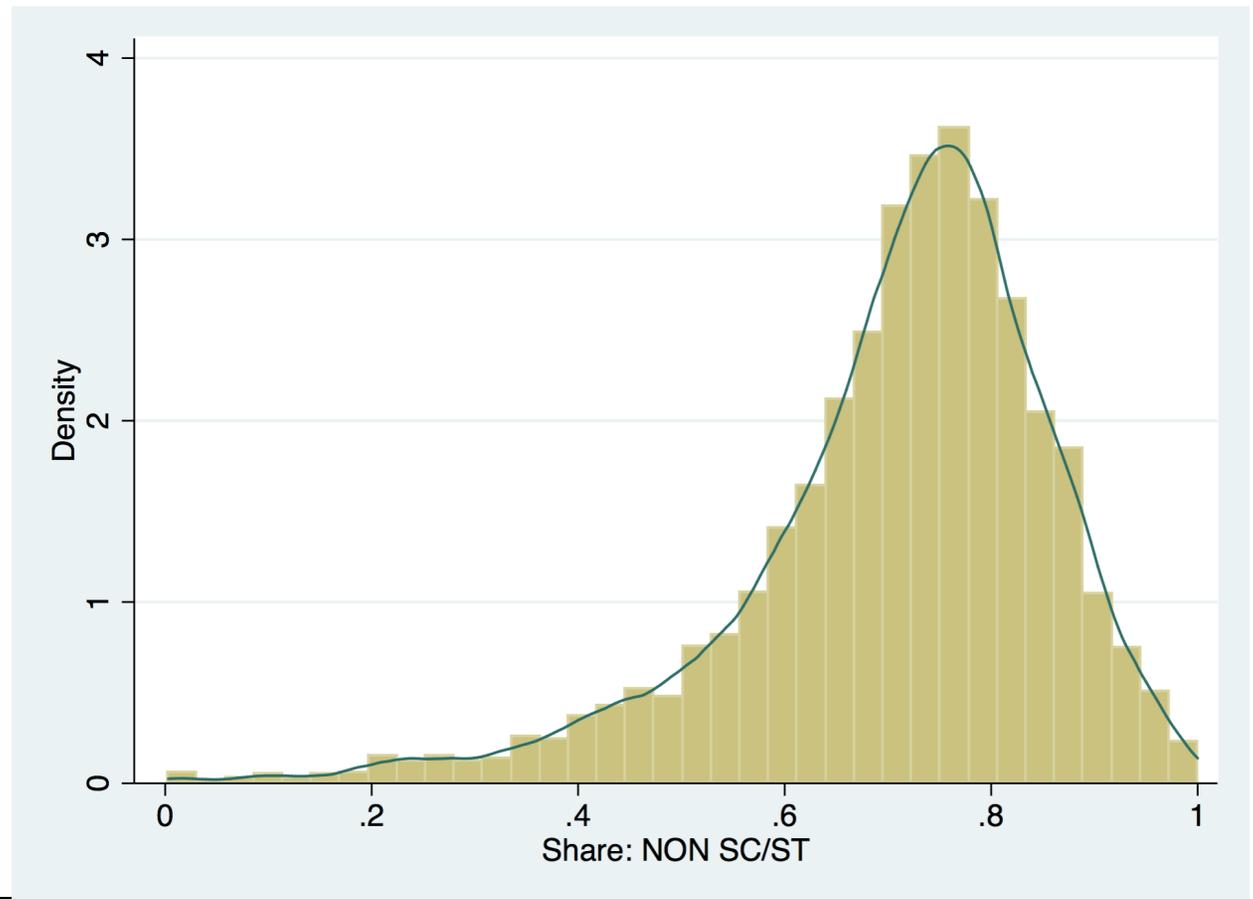
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- Z: Village level covariates: that co-vary with demand
 - NREGS is “in principle” demand based
 - Population
 - Proportion of females
 - Proportion of Illiterates
 - Panchayat Level Infrastructure indices (based on distance to amenities)

How OBC Reservation is done

- First SC / ST reservation is fixed and is a function of SC/ST population share for each block.

- Residual pool:
 - 5002 GPS
- OBC Res. randomized in this pool



Randomization

Table 2: Balance Table

	Non SC/ST Share (1)	Demand (2)	Population (3)	Fem. Share (4)	Lit. Share (5)	Dev Q2 (6)	Dev Q3 (7)	Dev Q4 (8)
OBC Res	-0.01** (0.00)	4.05 (12.32)	-0.00 (0.06)	-0.00 (0.00)	0.00 (0.00)	-0.01 (0.01)	0.02 (0.01)	0.00 (0.01)
Constant	0.71*** (0.00)	1,077.31*** (2.93)	5.51*** (0.02)	0.48*** (0.00)	0.52*** (0.00)	0.23*** (0.00)	0.26*** (0.00)	0.27*** (0.00)
Observations	5,002	5,002	5,002	5,002	5,002	5,002	5,002	5,002
R-squared	0.439	0.427	0.145	0.582	0.604	0.068	0.079	0.156
Block FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The dependent variables (column-wise) are (i) population share of non SC/ST, (ii) NREGA demand, (iii) population, (iv) female population share, (v) share of population that's literate, (vi - viii) Village Asset Index second quartile to fourth quartile. All regressions include block fixed effects and cluster the standard errors at the block level. *** p<0.01, ** p<0.05, * p<0.1.

Balance for each non SC/ST share

Table 3: Balance by Non SC/ST Share

	Demand (1)	Popultion (2)	Fem. Share (3)	Lit. Share (4)	Dev Q2 (5)	Dev Q3 (6)	Dev Q4 (7)	Wilks' Lamda (8)
Non SC/ST Share								
0-20 %	-59.54 (75.92)	-0.16 (0.60)	0.00 (0.01)	0.04 (0.07)	0.00 (0.00)	0.23 (0.34)	-0.38 (0.32)	0.78 (p val. : 0.38)
20-40 %	82.57 (54.41)	0.38 (0.33)	0.00 (0.00)	-0.00 (0.01)	0.01 (0.20)	0.17 (0.12)	0.00 (.)	0.95 (p val.: 0.52)
40-60%	-17.70 (41.82)	-0.07 (0.15)	-0.002** (0.001)	0.01 (0.01)	0.04 (0.06)	0.04 (0.06)	0.02 (0.05)	0.99 (p val.: 0.38)
60-80%	12.62 (18.30)	0.00 (0.09)	-0.00 (0.00)	-0.00 (0.00)	-0.01 (0.02)	0.00 (0.02)	0.01 (0.02)	0.99 (p val. : 0.85)
80-100%	23.25 (28.40)	0.04 (0.15)	-0.00 (0.00)	0.00 (0.00)	-0.02 (0.03)	0.05 (0.03)	-0.02 (0.03)	0.99 (p val.: 0.92)

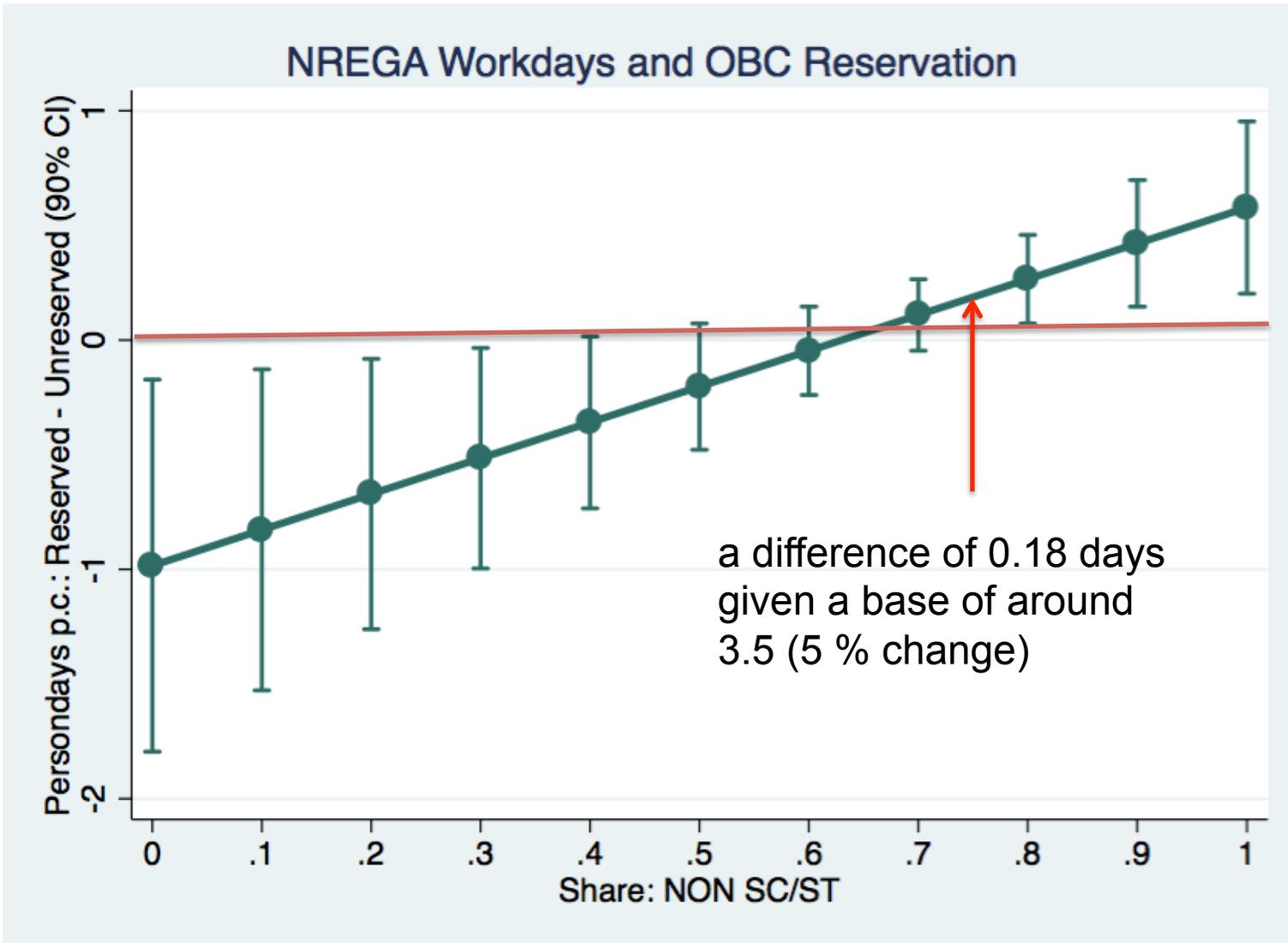
Notes: Each cell in the table is the coefficient on OBC reservation dummy estimated from a separate regression. The columns (except column (8)) represent the dependent variables of the regression and the row specifies the sample on which the regression is done. For example, column (1) - row (1) reports the result of regressing NREGA demand on OBC reservation for GPs with non SC/ST population share between 0 and 20 %. All regressions include block fixed effects and cluster the standard errors at the block level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Main Result

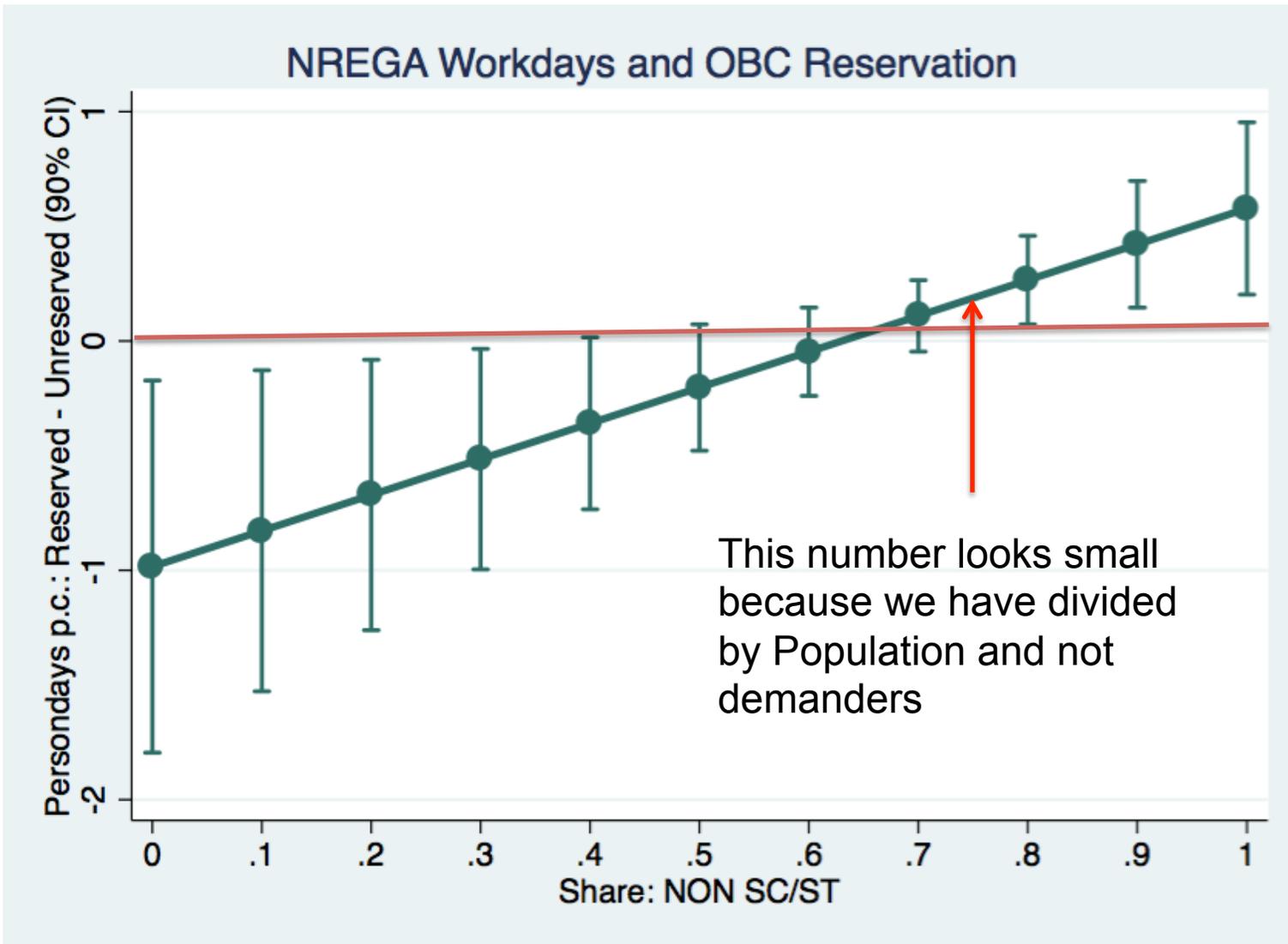
Table 4: Differential Effect of OBC Reservation on NREGA Work

	Person-days generated per capita			
	(1)	(2)	(3)	(4)
OBC Res (β_2)	0.13 (0.10)	0.12 (0.10)	-1.14** (0.51)	-0.98** (0.49)
NON SC/ST Share (β_1)		-1.26*** (0.40)	-1.61*** (0.44)	-0.90** (0.41)
OBC Res * NON SC/ST Share (β_3)			1.75** (0.72)	1.56** (0.69)
Observations	5,002	5,002	5,002	5,002
R-squared	0.577	0.578	0.579	0.599
Block FE	YES	YES	YES	YES

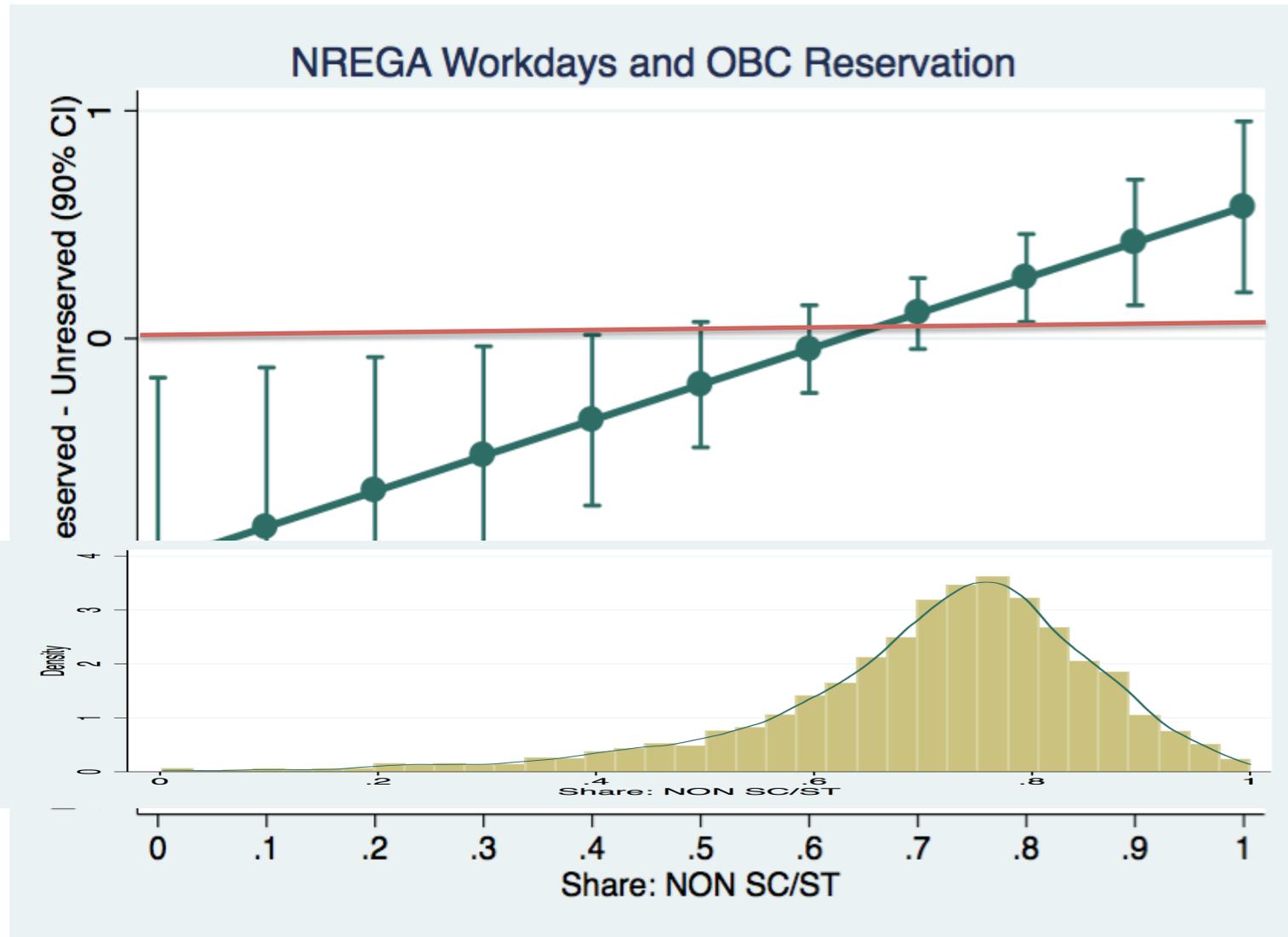
Impact of OBC Reservation on NREGS



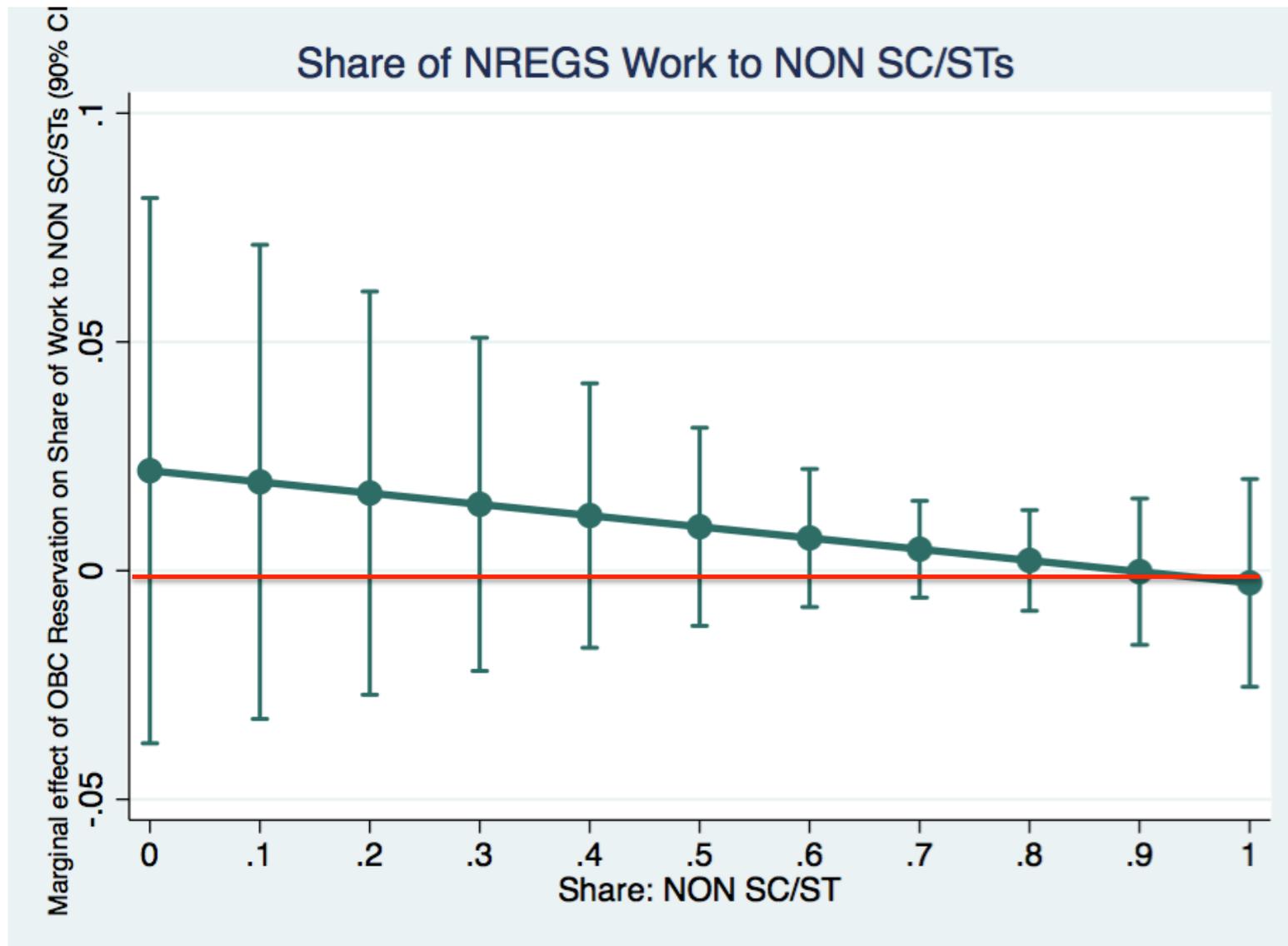
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Impact of OBC Reservation on NREGS



No Distributional Effect



Mechanism

- We posit it is political economy that drives these results.
- An alternative story that is not true:
 - Alignment of a large OBC population with a reserved OBC candidate. (Munshi and Rosenzweig: 2016)

Not Alignment Effect

Table 8: Comparing OBC Sarpanches with the Same in Reserved GPs

	Person-days generated p.c. (Days pc)		
	(1)	(2)	(3)
OBC Res	-0.98** (0.49)	-1.33** (0.65)	-1.50** (0.68)
non SC/ST Share	-0.90** (0.41)	-0.86* (0.44)	-1.57** (0.75)
OBC Res * non SC/ST Share	1.56** (0.69)	1.95** (0.89)	2.11** (0.92)
OBC Sarpanch		0.45 (0.46)	
OBC Sarpanch * NON SC/ST Share		-0.44 (0.64)	
Observations	5,002	5,002	3,186
R-squared	0.599	0.600	0.620
Block FE	YES	YES	YES

Key components to model in theory

- Different preferences of groups: OBC's demand NREGS work less than SC/STs
- Static Model
 - Banerjee et al (2016): standing in two consecutive elections 5 % (Rajasthan); standing in 2 cycles (1 %)
- Political competition
 - Win-Margins
 - No of candidates who enter?

Number of candidates

Table: No Change in Number of Candidates due to OBC Reservation

	Total Number of Candidates			
	(1)	(2)	(3)	(4)
NON SC/ST Share	0.27 (0.46)	0.27 (0.46)	-0.48 (0.45)	-0.73 (0.47)
OBC Res		-0.04 (0.11)	-0.08 (0.11)	-1.00 (0.64)
OBC Res * NON SC/ST Share				1.27 (0.87)
Observations	4,352	4,352	4,352	4,352
R-squared	0.362	0.362	0.386	0.386
Block FE	YES	YES	YES	YES

Notes: The dependent variable is the total number of candidates running for Sarpanch election in 2010 in the state of Rajasthan. The variable “NON SC/ST Share” is the proportion of GP population that belongs to the non SC/ST groups. “OBC Res” is a dummy that takes value one when the GP sarpanch election is reserved for the OBC group. The first two columns do not have any village level controls. In column (3) and (4), village level characteristics such as population, literacy rate, occupation pattern, asset index etc have been included as controls. Standard errors are clustered at block level. *** p<0.01, ** p<0.05, * p<0.1.

Ability Proxy: Education of Candidates

Table: Effect on Candidate Education due to OBC Reservation

	Candidate education		
	Winner (1)	Top 2 (2)	Top 3 (3)
OBC Res	-1.98** (0.96)	-1.30 (0.84)	-1.08 (0.77)
NON SC/ST Share	-0.89 (0.72)	-0.28 (0.58)	-0.31 (0.55)
OBC Res * NON SC/ST Share	2.08 (1.30)	1.39 (1.14)	1.19 (1.04)
Observations	4,273	4,199	3,666
R-squared	0.099	0.121	0.126
Block FE	YES	YES	YES

Notes: The dependent variable for columns (1) - (3) are the (average) years of schooling of the winning candidate, top 2 candidates and top 3 candidates, respectively. The variable "NON SC/ST Share" is the proportion of GP population that belongs to the non SC/ST groups. "OBC Res" is a dummy that takes value one when the GP sarpanch election is reserved for the OBC group. In all regressions village level characteristics such as population, population share of women, literacy rate, village asset index etc have been included as controls. Standard errors are clustered at block level. *** p<0.01, ** p<0.05, * p<0.1.

Model

- Very Brief Sketch
 - Two ethnic groups (A, B)
 - Voters care about co- ethnicity and public good
 - Two candidates belonging to each ethnic group: one high ability (H) and one low ability (L)
 - Each group puts forth “their best” candidate
 - Candidates maximize their expected rents from office
 - Depend on public good provision (-)
 - Depends on probability of winning : endogenous
 - Nash Equilibrium

Intuition

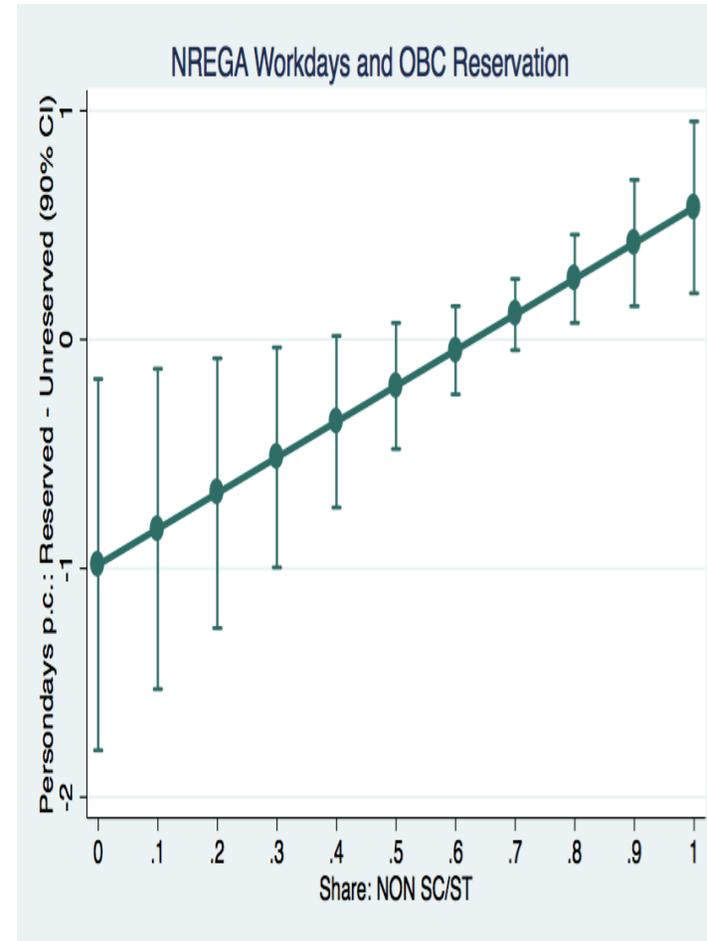
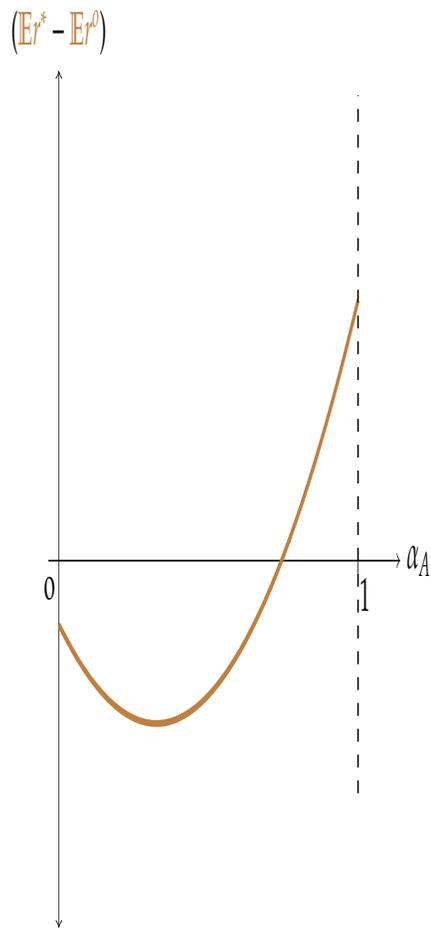
Case: α_A high

Proportion of OBC High

- Assume candidate AH wins for sure in open election.
- In open election, AH slacks off (i.e., promises less r) as he gets co-ethnicity advantage. Hence, $r_{AH} < r_{BH}$.
- In restricted election, both candidates are from the same group, and hence no co-ethnicity advantage.
- Both compete with announcements on r leading to relatively high r_{AH} .
- Since the other candidate is low type, r_{AH}^* is dampened.
- If $\gamma_A < \frac{0.25}{\theta_H - \theta_L}$, competition effect dominates selection effect.
- Hence, $r_{AH}^* > r_{AH}^0$.

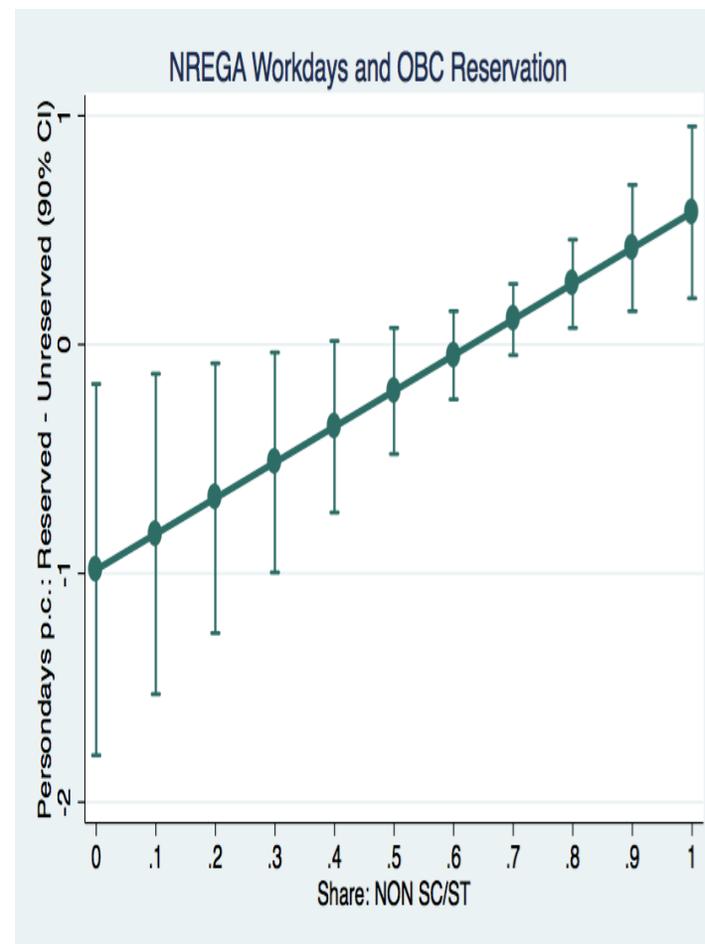
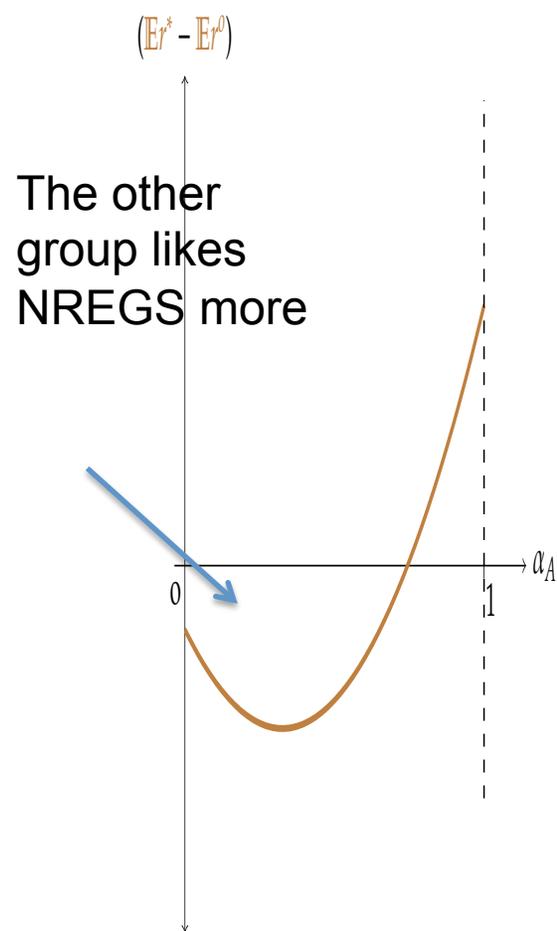
Compare Theory to Empirical Result

Figure: Expected Policy and Population Share when $\gamma_A < \frac{0.25}{\theta_H - \theta_L} < \gamma_B$

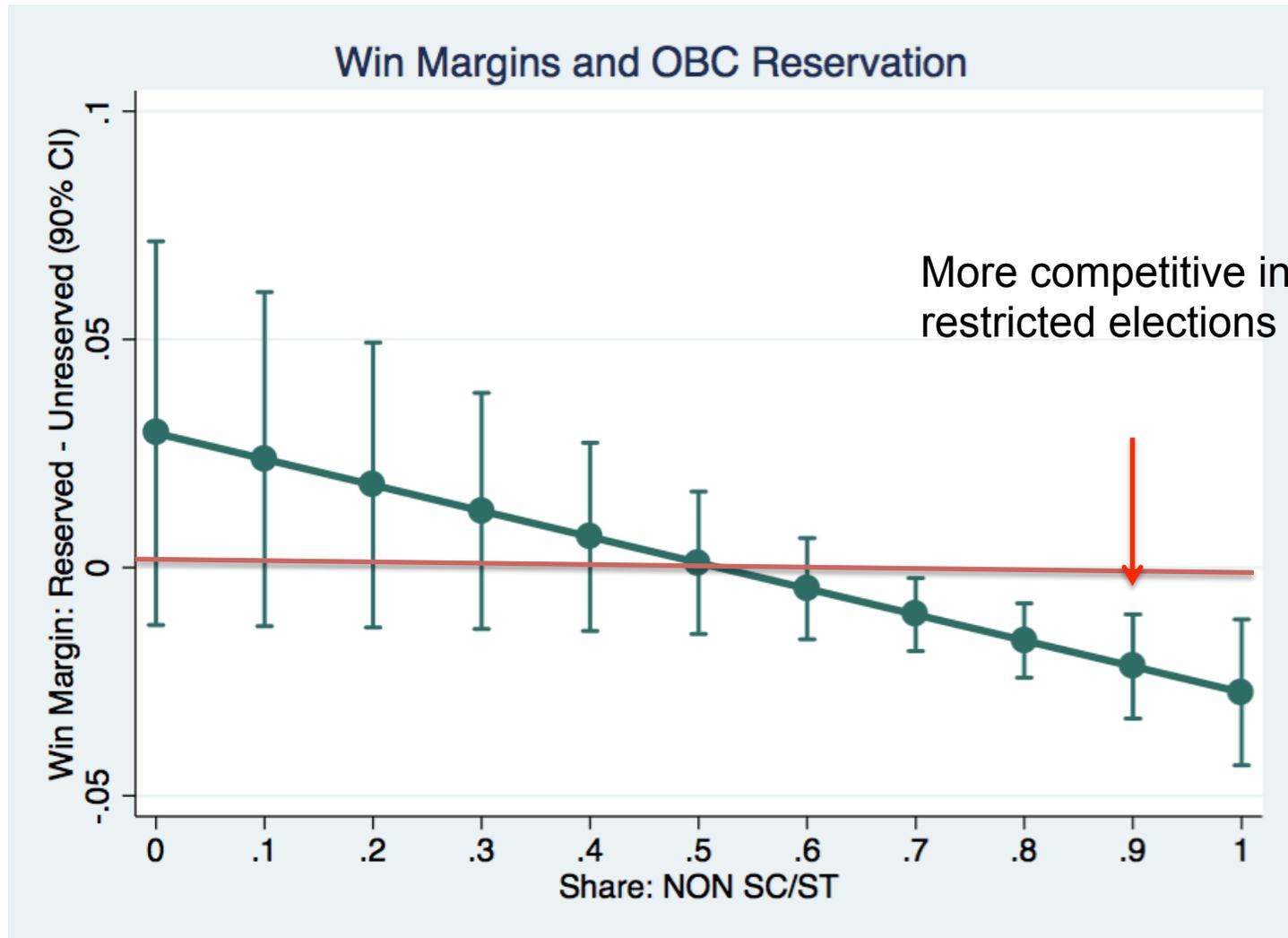


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Empirical Evidence: Political Compt.



Robustness

- We show this is not all corruption using a household survey at the same time that reports actual work done
- Results go through if
 - We control for other village occupation profile
 - Control for the number of candidates (over all, social group wise)
 - Control for Female reservation
 - Political Economy Results go through with other measures like Herfindahl Index

Discussion

- An effect of reservation that may be true more generally (though SC population shares are typically not very large, ST shares are)
- OBCs are relatively a more privileged group than SCs and STs, but nothing in our mechanism relies on this superior position
- We have focused on Caste Category group rather than Jati. But the structure not too dissimilar between SCs and OBCs

What this paper is NOT

- Not a defense for reservation for OBCs
 - But use the randomization to learn about forces at play in restricting entry and leading to a homogeneous group of contestants

Conclusion

- Homogeneity of candidates may improve over all public provision
 - when groups are asymmetric
 - and coethnic preferences play a large role
- This effect is mediated through increases in political competition with group based restrictions
- Efficiency concerns of restricting candidates may need to be re-evaluated