(Excerpts from) Resource Transfers to Local Governments: Political Manipulation and Voting Patterns in West Bengal

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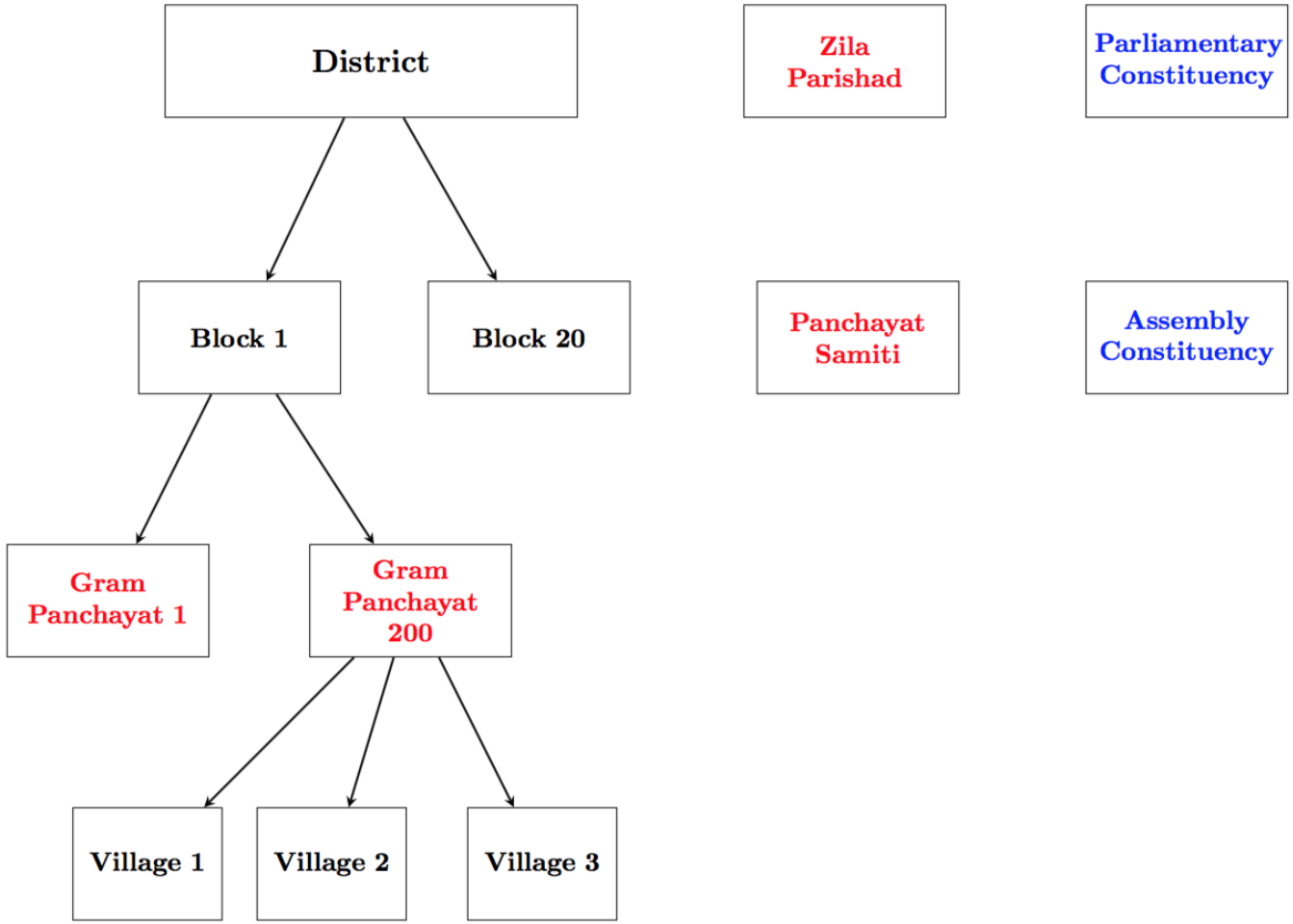
November 2018

Inter-Community Targeting

- Existing literature has largely ignored problem of accountability of elected officials in *upper level* governments that control flow of project resources down to local governments
- Significance of inter-community *vis-a-vis* intra-community allocations indicated in our earlier work on West Bengal (Bardhan-Mookherjee 2006)

Government Hierarchy



Black: administrative bodies, part of executive branch of the government.

Red: elected bodies, part of Panchayti Raj institution.

Blue: elected bodies, part of legislative branch of the government.

Inter-Community Targeting, contd.

- Findings in our earlier work:
  - Negligible effects of elite capture proxies (landlessness, land inequality or proportion of low castes) on within-village targeting
  - Significant effects on inter-village allocations (e.g., 2.5% rise in landlessness associated with 18% decline in program grants from above)

- Reasons for this are not well-understood: political discretion/incentives of upper level government officials (e.g., rather than relevant information)?

- If so, it would suggest the need to consider formula-bound vertical fiscal transfers (as in Bolivia, Indonesia, S. Africa) which reduce scope for discretion by political intermediaries

This Project

- Examines targeting and voting patterns in local government/elections in West Bengal, India
- Random sample of 89 villages in 59 GPs, with 25 households within each village selected by stratified random sampling
  - Covers 15 main districts of rural WB
- Household Panel: Two rounds of surveys (2004, 2011)
  - 2402 households
  - Attrition rate $< 1\%$

Main Findings

*1 Upper level (district/block) governments manipulate flows of development projects to village-level governments for political (re-election) motives

2 Voters response to delivery of benefits provides evidence of clientelistic biases:

- private versus local public goods
- short-term, recurring benefits versus long-term, one-time benefits

3 The lower level voting patterns match/rationalize the upper level fund flow patterns

*This presentation will focus only on topic 1

Empirical Strategy

- Key problem: establishing causality; need exogenous sources of variation in political motives of upper-level officials in allocating project resources across village level governments (GPs), and of benefits received by households

- For the former, we use changes in assignment of villages to state legislature electoral constituencies by electoral redistricting in 2007, and examine impacts on resources allocated to GPs

- For the latter: use redistricting in combination with state-level funds and household characteristics as an instrument for benefits received by households, and examine impacts on voting patterns

Summary Statistics: Household Demographics

Agri Land Owned 2004 (*Acres*)	No. of HHs	Age HoH	% HoH Males	Max Education (*Years of Schooling*)	% SC/ST	% HoH Agri Occupation
Landless	1214	45	88	6.6	37.4	26
0-1.5	658	48	88	7.8	38.9	65
1.5-2.5	95	56	92	10.8	22.4	82
2.5-5	258	58	93	11.1	27.1	72
5-10	148	60	89	12.5	26.1	66
$>$ 10	29	59	100	13.9	30.9	72
All	2402	49	89	8.0	35.4	47

GP Disbursed Benefits

- In each round of survey, the head of household (HoH) reports benefits received from GP in past 7 years
- **Public benefits:** Roads
- **One-time private benefits:** Ration Card, House, Toilet, Drinking Water Tap access
- **Recurring private benefits:** public works employment (MNREGA, MPLAD), low interest loans, agri-minikits (subsidized seeds, fertilizers)

Table 4: Summary Statistics: GP Disbursed Benefits Received by Households

	(2003 - 2006)	(2007-2011)	(2003-2011)
	% HoH Reporting	% HoH Reporting	% HoH Reporting
Any Benefit	46.00	33.89	60.20
Any Private Benefit	35.43	32.06	52.87
Credit	1.58	0.62	2.21
Minikit	6.49	4.29	10.53
Employment*	17.82	20.69	35.55
BPL Cards	4.41	10.12	14.53
House or Toilet	7.66	3.33	10.32
Drinking Water	7.28	5.87	12.57
Road Programs	21.27	7.83	24.89

* Includes panchayat provided employment, MNREGA and MPLAD employment.

Political Competition

- Two main contesting parties in West Bengal since 2000: Left Front coalition (LF), Trinamool Congress (TMC)
- LF held an absolute majority in state legislature and in ZP/PS/GP elections since 1977
- Has been losing vote share to TMC since the latter was formed in the late 90s: intense competition since then
- LF lost control of state assembly and most ZP/GPs in 2011

4. Natural Experiment: Changes in Electoral Boundary

- Electoral (MP/MLA) constituencies redrawn every 3 decades
  - Based on population size changes shown by Census
  - Last one since 2001 Census, completed 2007
- Every state has a state Redistricting Commission (RC):
  - Appointed by National Election Commission
  - Has 3 (non-political) members: retired Chief Justice, NEC member, state election commissioner
  - Advisory committee consisting of 5 MPs and 5 MLAs
- Evidence of political neutrality of redistricting in AP and Rajasthan (Iyer and Reddy 2013)

Table 2: Predicting Redistricting

	(1) All Redistricted	(2) High Comptt. Redistricted * Aligned
Left GP* Left PS	-0.06	
	(0.29)	
Left PS	-0.04	
	(0.18)	
Left Dominated GP 2008	0.02	0.26
	(0.25)	(0.19)
Delimitation Commission Member	0.17	0.44
	(0.12)	(0.31)
Seat Reserved for SC/ST	-0.03	-0.12
	(0.17)	(0.14)
Observations	89	26
Adjusted R^2	-0.039	0.083
Mean Dependent Variable	0.29	0.31

* p<0.10, ** p<0.05, *** p<0.01 Robust standard errors in parentheses, clustered at district level.

[1] All Redistricted is a dummy variable with value 1 if the assembly constituency containing the village changed.

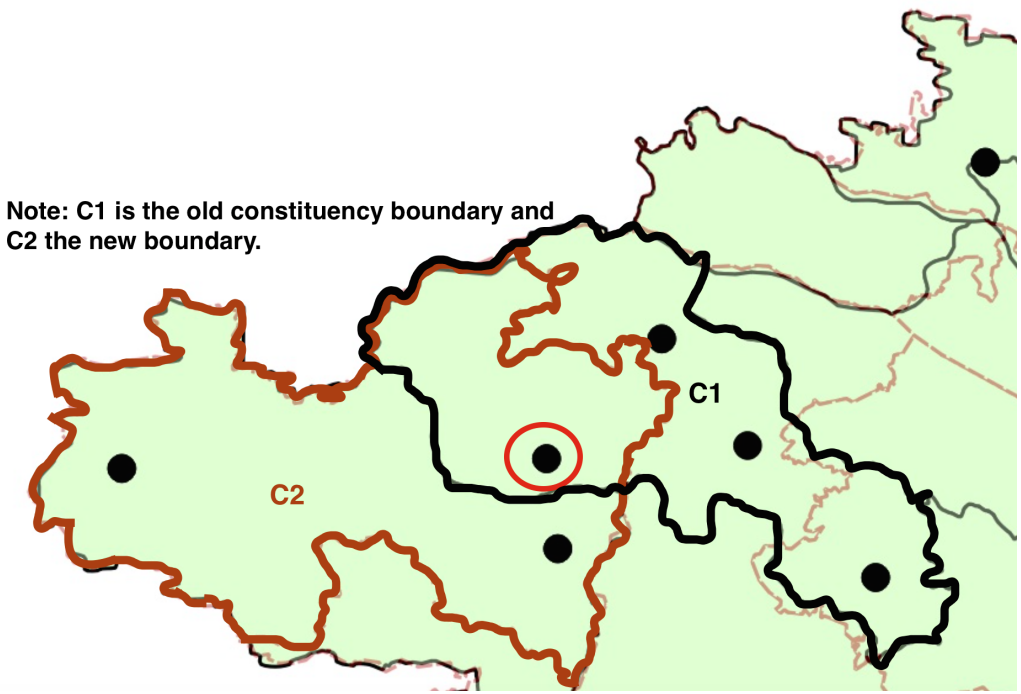
[2] High competition Redistricted refers to those cases where GP was redistricted to an assembly constituency where incumbent party has a lower likelihood of winning based on victory margins.

[3] Aligned is a dummy that takes value 1 if the same party is in power at the GP as well as at Panchayat Samiti.

[4] Sample in Column (2) consists only of redistricted villages.

Defining Treatment Group

- Let C_1 and C_2 be the two different constituencies; C_2 expands; at the intersection black is the old and red is the new boundary
- Village v_i belongs to assembly treatment group "Left Weaker" if difference in Left and TMC vote share was lower in C_2 compared to C_1



Defining Alignment

Define alignment (focusing on the Left Front)

- Two-tier alignment: both constituency (PS) and GP are Left dominated
- Three-tier alignment: district (ZP), constituency (PS) and GP are all Left dominated

Theoretical Predictions: Politics-based Budgeting

- We model budgetary allocations across a top-down hierarchy: Constituency (District/Block) to GPs/villages v to households
- Each level has an incumbent government controlled by either L or T party
- Each GP receives allocation from the upper level govt. and allocates to households within its jurisdiction to maximize GP-vote share of the incumbent party
- Party that dominates constituency level selects allocations to maximize re-election probability at the constituency level (taking behavior of lower level GPs as given)

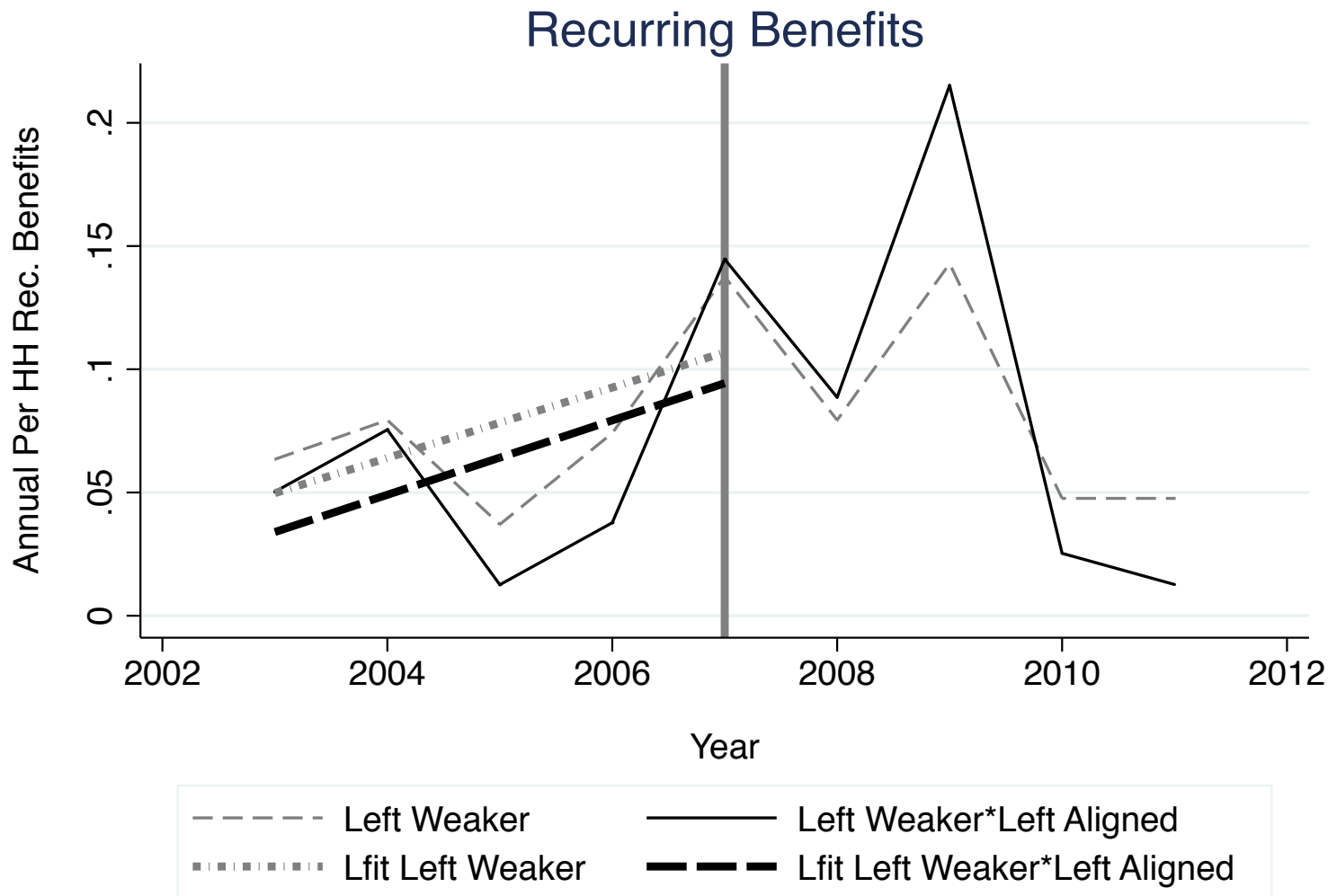
Testable Predictions for Upper-Level Allocation's Response to Redistricting

1. If a GP is 'treated' (i.e, redistricted to a constituency where Left is weaker and the GP is controlled by the Left), its allocation will increase (relative to GPs not treated)
2. The direction of change should be the same for all benefit programs; with larger increases for those programs that are more effective in generating votes

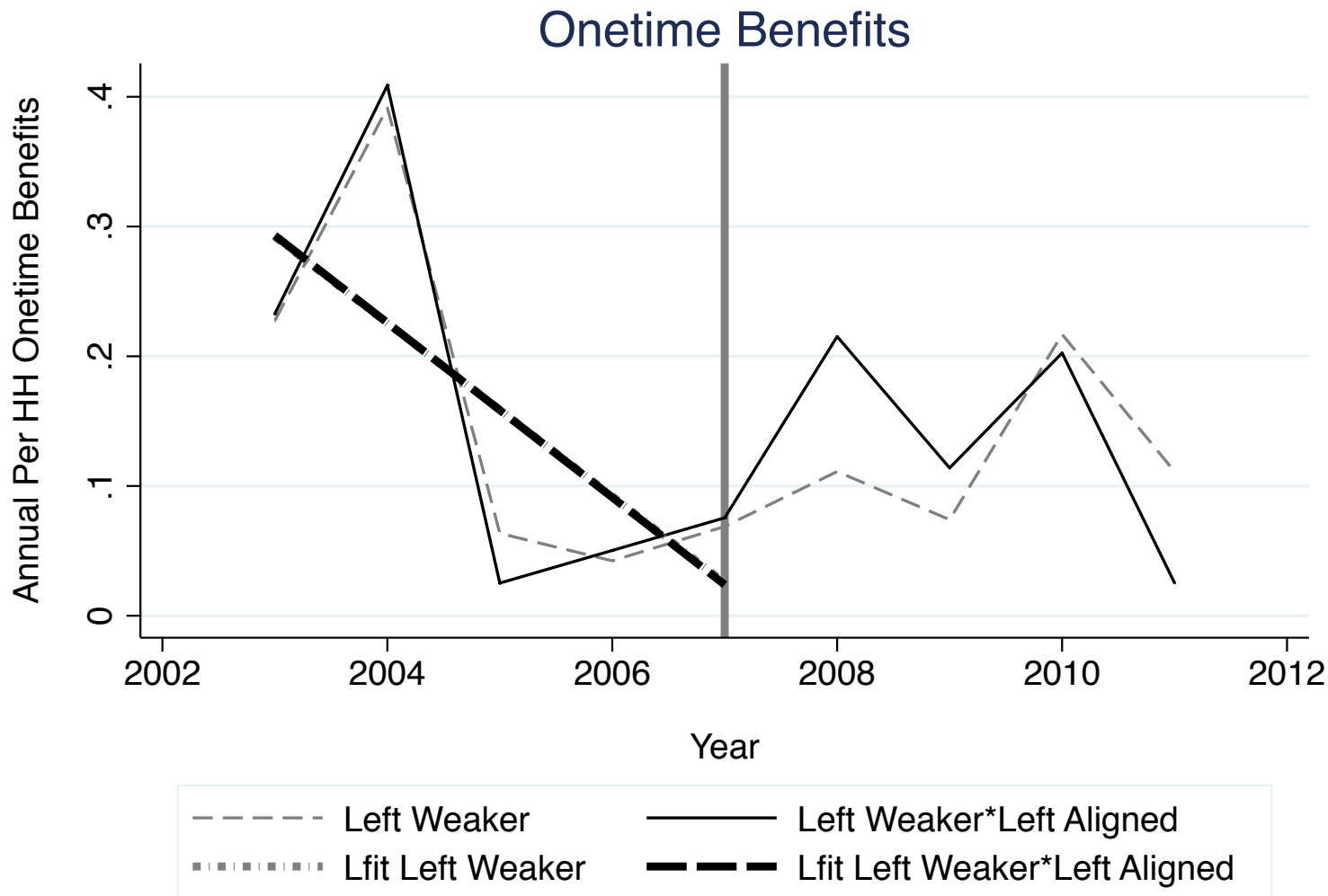
First Stage Analysis: Effects of Redistricting on GP Level Benefit Allocation

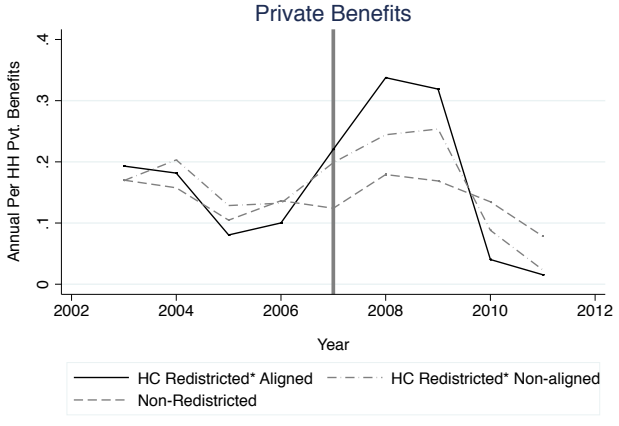
- We regress:
  - changes in specific benefits (recurring, other) distributed per household by GPs before-and-after redistricting (i.e., 2007)
  - on treatment (post-2007 dummy, cum Left aligned, cum redistricted to Left weaker constituency)
  - controlling for year effects, redistricted to Left weaker, Left-aligned and double interactions

Graphical Illustration of Pre-Trends and Treatment Impact: Recurring Benefits



Graphical Illustration of Pre-Trends and Treatment Impact: Other Benefits




Private Benefits
Annual Per HH Pvt. Benefits
0
.1
.2
.3
.4
2002
2004
2006
2008
2010
2012
Year
HC Redistricted* Aligned
HC Redistricted* Non-aligned
Non-Redistricted

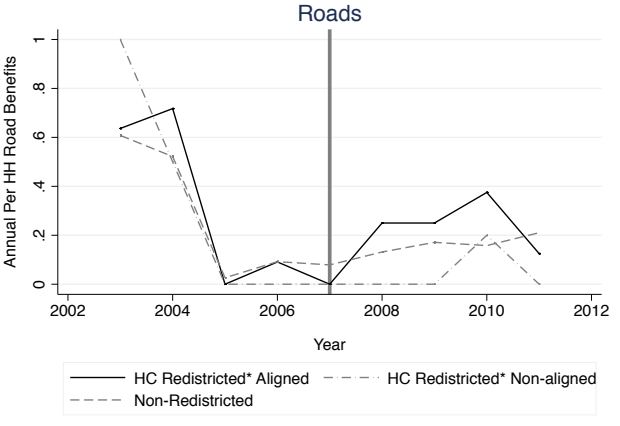

Roads
Annual Per HH Road Benefits
0
.2
.4
.6
.8
1
2002
2004
2006
2008
2010
2012
Year
HC Redistricted* Aligned
HC Redistricted* Non-aligned
Non-Redistricted

Table 5: Effect of Competition and Alignment on Benefits Distributed

	Recurring Benefits		Onetime Benefits		Road Program	
	All	Left PS	All	Left PS	All	Left PS
	(1)	(2)	(3)	(4)	(5)	(6)
Post* HC Redistricted* Aligned	2.40***	2.18**	0.95	0.55	0.54	-0.20
	(0.60)	(0.79)	(0.84)	(1.03)	(0.46)	(0.44)
Post* HC Redistricted	-1.53***	-1.54**	-0.83	-0.59	-0.58	0.01
	(0.44)	(0.64)	(0.64)	(0.71)	(0.39)	(0.30)
Observations	801	477	801	477	801	477
Adjusted R^2	0.086	0.124	0.103	0.077	0.315	0.289
Mean Annual Per HH Benefits	0.51	0.61	0.25	0.33	0.42	0.51
SD Annual Per HH Benefits	1.86	1.83	1.76	1.82	1.40	1.46
Test: Post* HC Redistricted* Aligned + Post* HC Redistricted = 0						
F Statistic	6.82	5.08	0.05	0.00	0.04	0.47
P-value	0.01	0.03	0.82	0.95	0.84	0.50

* p<0.10, ** p<0.05, *** p<0.01. Robust standard errors in parentheses, clustered at Panchayat Samiti level.

[1] Observations at the village-year level, 2003-2011. Post takes value 1 for years 2007 and onwards.

[2] The dependent variable is standardized measure of annual per HH benefits for each village.

Table 8: Placebo Test

	Recurring Benefits		Onetime Benefits		Road Program	
	All	Left PS	All	Left PS	All	Left PS
	(1)	(2)	(3)	(4)	(5)	(6)
Post 2003* HC Redistricted* Aligned	-0.17	-0.46	-0.71	-0.51	0.71	0.81
	(0.79)	(0.70)	(0.95)	(0.97)	(1.00)	(1.04)
Post 2003* HC Redistricted	0.23	0.60	0.39	0.40	0.17	0.29
	(0.77)	(0.66)	(0.79)	(0.80)	(0.83)	(0.88)
Observations	445	380	445	380	445	380
Adjusted R^2	0.094	0.136	0.103	0.099	0.329	0.350
Mean Annual Per HH Benefits	0.28	0.26	0.44	0.47	0.57	0.57
SD Annual Per HH Benefits	1.63	1.40	1.59	1.62	1.97	1.99
Test: Post* HC Redistricted* Aligned + Post* HC Redistricted = 0						
F Statistic	0.09	0.36	0.38	0.04	2.53	3.58
P-value	0.76	0.55	0.54	0.84	0.12	0.07

* p<0.10, ** p<0.05, *** p<0.01. Robust standard errors in parentheses, clustered at Panchayat Samiti level.

Table 9: Effect of Benefits on Votes for GP Incumbent in 2011 Straw Polls

Dependent variable: whether household voted for GP incumbent in 2011 straw polls.				
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
Recurring Benefits	0.008	0.119**		
	(0.012)	(0.048)		
Onetime Benefits	0.022**	0.070		
	(0.009)	(0.051)		
Public Benefits	-0.009	-0.034**		
	(0.016)	(0.014)		
Private Benefits			0.025**	0.158***
			(0.011)	(0.041)
Non-PMGSY Roads			-0.008	-0.074
			(0.016)	(0.055)
PMGSY Roads			-0.018	-0.022**
			(0.018)	(0.010)
Observations	2383	2383	2383	2383
Adjusted R^2	0.181	0.124	0.182	0.121
First Stage F-test (p-value)		6.52, 5.76		7.39, 7.60
		(0.00, 0.00)		(0.00, 0.00)
Rank test (p-value)		46.10 (0.00)		35.44 (0.00)
Weak-instrument-robust tests:				
Lagrange multiplier test (p-value)		$15.45^{\dagger}$ (0.00)		$15.97^{\dagger\dagger}$ (0.00)
J overidentification test[§] (p-value)		11.42 (0.49)		11.09 (0.52)