Information as an Incentive Experimental Evidence from Delhi Elections

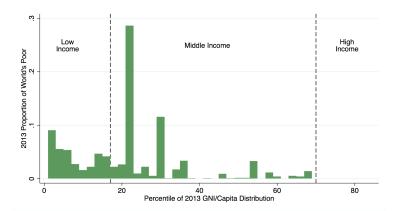
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A majority of the world's poor now live in middle income countries; many in democracies



How can the democratic state work better for the poor?

- ► This paper: multi-year media field experiment focussed on urban elected bodies in Delhi
 - ► The urban poor are concentrated in slums; slum-dwellers make up 46% of urban population in non-high income countries (WDI database 2012-2014)
- Questions

How can the democratic state work better for the poor?

- ► This paper: multi-year media field experiment focussed on urban elected bodies in Delhi
 - ► The urban poor are concentrated in slums; slum-dwellers make up 46% of urban population in non-high income countries (WDI database 2012-2014)
- Questions
- 1. Does informing councillors that media will report on their performance in two years time cause them to change behavior?
 - Incentives or information? accompanying audit experiment examines impact of just informing councillor about public good problems in ward
- 2. Do these disclosures influence party decisions to give incumbents' party tickets?
 - ▶ How do gender quotas affect this party ticket allocation?

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Yes

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 Yes
- Disentangling incentive and information effects: Do incumbents react differentially to anticipated media disclosures v/s private information disclosures?
 Only media disclosures cause politicians to be responsive to citizen preference
- 3. Do media disclosures influence party ticket allocation and electoral outcomes? Yes

Structure of Talk

- 1. Introduction
- 2. Political agency models and related literature
- 3. Delhi local government and Experiment Design
- 4. Impact on Politician Policy Choices
 - Anticipated Newspaper disclosures
 - Private Information disclosures
- 5. Impact on 2012 Electoral Outcomes
 - Party ticket decisions
 - Electoral Outcomes

Policy information in political agency models

- Causes of information asymmetries: Unobserved politician ability (adverse selection) and actions that are unobservable to citizens (moral hazard)
- Retrospective voting to hold politicians accountable: Bayesian voters will re-elect incumbents with performance above a threshold=f(beliefs on politician quality, state of the world).
- ▶ Update beliefs based on signals on performance ⇒ gives politicians an incentive for restraint
- Incentive effect: politicians' using policy choices to signal type
 - Good politicians may exaggerate type
 - Bad politicians may seek to pool

Situating this paper

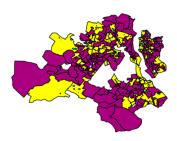
- Large scale media experiment to quantify incentive impacts identified by quasi-experimental media studies
 - Is there a discernible link between voter preferences, information disclosures and policy outcomes?
 - Can informing politicians about policy problems achieve similar impacts?
- How do media disclosures interact with gender quotas to influence party ticket allocation and, thereby, electoral outcomes?

Structure of Talk

- 1. Introduction
- Related Literature
- 3. Delhi government and experiment design
 - Institutional context
 - Data and descriptive statistics
 - Experimental design
- 4. Impact on Politician Policy Choices
- 5. Impact on 2012 Electoral Outcomes

Delhi: Electoral and administrative structure

- World's second most populous metropolis with 18M inhabitants, roughly half are slum-dwellers.
- Political decentralization with first urban local body election in 1997
 - 272 wards (avg. population 50,000) governed by Municipal Council of Delhi (MCD)
 - Every five years, each ward elects a councilor (term of interest: 2007–12)





Electoral and Administrative Structure of Delhi

- ▶ 1994 Decentralization act introduced ward reservation in favor of two groups: women (33%) and lower castes (16%).
- ▶ In December 2011, government announced gender quota expansion to 50%.
 - Wards to be arranged by serial number and every odd seat reserved for women
- Local elections along party lines: in 2007 highest representation of BJP (65%) and Congress (25%)
 - Party tickets directly chosen by party elite (no primaries)

The Job of Councillors

Councillors influence public good provision – local roads, sanitation (public toilets and drains) and garbage disposal using multiple policy levers

- 1. Legislature-based policy work: come under MCD.
- Constituency development fund: on average 700,000 USD per year to be spent in ward
- Membership of committees that hear citizen complaints/ monitor bureaucrats
- 4. Oversight on contract assignment for toilets etc

Measuring policy demand at baseline: constituent preferences and public good quality

- ► Slum household survey Over 5,000 slum dwellers in 102 'high slum' wards surveyed
 - Measures of policy preferences and beliefs about councillor responsibilities and performance
- Residential Welfare Association(RWA) survey Heads of neighborhood associations in 94 of these wards
- ► Toilet and Garbage audit in over 300 slums

Introduction A primer on political agency models Context Disclosures and Policy Outcomes Party and Electoral Outc

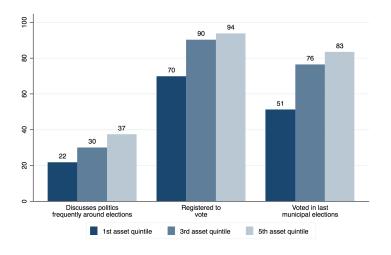
Baseline Sample

Over 5000 slumdwellers in 107 'high urban poor' wards:roughly 50 households per ward



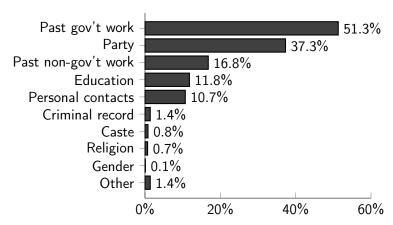
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Slum dwellers show relatively high levels of political participation

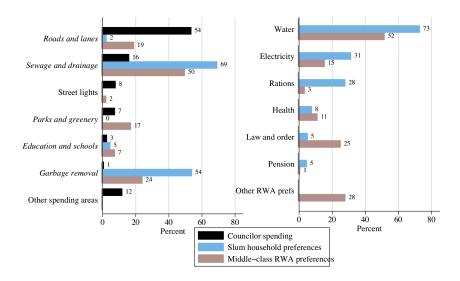


Voters Value Candidate Experience and Party Affiliation

"What do you think about when evaluating individual candidates?"



Summarizing the discongruity in preferences



Local sanitation: Measures from audits

- ► We also audited every public toilet complex and garbage points in 312 slums across 107 wards
 - 819 toilets; 196 formal garbage points and over 5,000 informal points
 - Surveyed three times
- Audit collected information on physical infrastructure, pricing and usage for toilets (monitored for 15 min intervals)

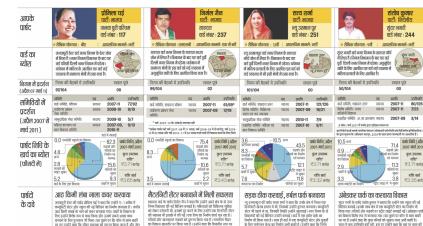
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Timeline of newspaper disclosures

- In 2010 treatment councillors received letters from a Right-to-Information NGO Satark Nagrik Sangathan informing them that, in collaboration with Delhi's second-largest Hindi daily newspaper Dainik Hindustan, SNS will
 - ▶ Publish performance report cards just prior to 2012 elections
 - ► The format would be identical to midterm report cards which the newspaper was currently publishing
- Difference in text
 - T1 group: letter stated that they had not been selected for midterm report cards
 - ► T2 group: letter stated that they were also the subject of midterm report cards
 - Control group: letter stated that they would not be reported on atleast until 2014

Example of Newspaper Report Cards



आई दिक्कतों के कारण ही बोड़ा पैसा बक नहीं हो सका।

में आई तकनीकी खराबी के कारण कुछ पैसा खर्च नहीं हो सका।

80/126

7/23

पार्श्वट लिशि (अप्रैल

2007-सार्च 2011)

कुल उपलब्ध

राधिः*

₹3.71 क्रोड

राधि कर्न

₹3.35 करेड

बात कम होती रही और शोर उदादा हम कारण वह बैठक में कम गए।

रोड पर रिवत एक खाली जमीन पर पार्क बनवादा जाना है।

Timeline of private audit cards

- We conducted three rounds of toilet and garbage (3 slums per ward) audits in the 107 wards in our baseline survey.
- Report cards on the first two rounds were mailed to randomly selected treated elected officials
 - Baseline Round March to May 2011 (Report Card Mailed August 2011)
 - Midline Round Nov 2011 to Jan 2012 (Report Card Mailed February 2012.)
 - ► Endline Round May 2012 to June 2012

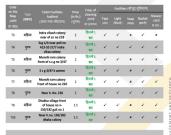




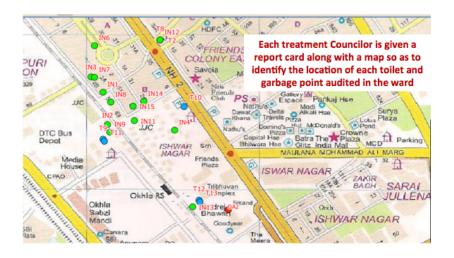
J-PAL South Asia at IFMR AADI Building 2, Balbir Saxens Marg Hauz Khas, New Delhi- 110016

DETAILED REPORT ON OPEN TOILETS

(खुने शौघालयों कि विस्तृत जानकारी)



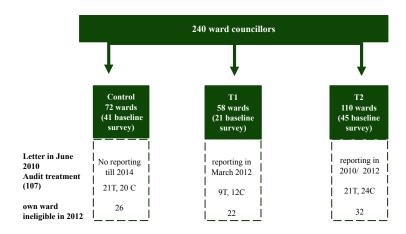
Audit Report Cards: Maps



Reservation, Party Selection and Reportcards: Timeline

- In 2012 reservation for female politicians was increased from 33–50%. ⇒ a high fraction of male councilors ineligible for re-election from their ward
- ▶ Which wards will be reserved was announced in late January 2012 for election in March
- Newspaper report cards started being published daily on 27
 Feb 2012
- On one day, a newspaper would featured 4 councilors (randomly assigned)
- Political party leadership announced candidates: Week of March 20 2012
- Elections were in mid April

Summary of sample



Structure of Talk

- 1. Introduction
- 2. Related Literature
- 3. Delhi government and experiment design
- 4. Impact on Politician Policy Choices
 - Anticipated Newspaper disclosures
 - Private Information audits
- 5. Impact on 2012 Electoral Outcomes

Anticipated Public Disclosures: Pre-election effects on politician performance

- Different population groups may have distinct preferences: we have baseline citizen preference data from surveys of slum-dwellers and RWAs in predominantly low income wards.
- We define a high slum ward dummy: A ward is 'high slum' if above median fraction of ward area is slums (median is 45%).
 - Check similar results hold for subsample of survey wards
 - ▶ 82% of our surveyed wards are high slum wards v/s 22% of non-surveyed wards
- Outcomes of interest: Overall spending, spending weighted by preference and attendance

Slum Preference-based spending index

- Categorize councillor spending: (1) Roads, (2) Drains, (3)
 Parks, (4) Schools, (5) Garbage & Malba, and (6) Other
- Weight each spending-on-category by a measure of slum household preference-for-category
- Specifically: Fraction of slum households in the city reporting that...
 - 1. ... the issue is the most problematic one in the area,
 - 2. ... the issue is a problem for them, and
 - 3. ... the issue is a problem for the community.
- ▶ Take logs and convert to three *z*-scores and average them.
- Additionally, councilor meeting attendance in each period:
 - 1. Mean annual attendance in legislature.
 - 2. Mean annual attendance at the councilor's committees.

Anticipated Public Disclosures: Pre-election effects on Politician Performance

$$Spend_{w1} = \beta_1 Treat_w + \gamma (Spend_{w0}) + X_w + \epsilon_w,$$

$$Spend_{w1} = \beta_1 Treat_w + \beta_2 Treat_w \times HiSlum_w + \beta_3 HiSlum_w + \gamma (Spend_{w0}) + X_w + \epsilon_w,$$

 $Spend_{w1}$ and $Spend_{w0}$ are log spending in 2010–12 and 2007-2009 by councilor, with spending on each issue weighted by voter preference measure X_w is a vector of randomization strata dummies (incumbent party \times urban zone)

Similar regression for attendance

Spending changes reflect high-slum ward preferences

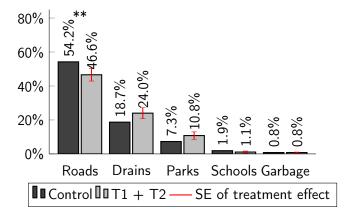
Table: Effect of any newspaper report card treatment on MCD councilor spending according to slum preferences

	Log total spending (2010–12)		Mean z-score of three log preference-weighted spending amounts (2010–12)		Log of spending on issues, each weighted by fraction of RWAs in city reporting that it is one of the top three issues (2010–12)		Mean z-score of two attendance measures (2010–12)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Report card \times High slum		-0.049 (0.074)		0.617** (0.288)		1.215** (0.483)		0.372* (0.196)
Report card	0.005 (0.040)	0.050 (0.057)	-0.010 (0.133)	-0.309 (0.201)	-0.018 (0.224)	-0.606* (0.337)	0.030 (0.100)	-0.227 (0.138)
High slum		-0.002 (0.065)		-0.230 (0.250)		-0.518 (0.420)		-0.238 (0.166)
Pre-treat outcome control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strata (zone–party) FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control mean Control s.d. Observations	4.552 0.243 240	4.555 0.248 227	-1.854 1.053 240	-1.879 1.059 227	1.209 1.807 240	1.165 1.815 227	-0.394 1.162 240	-0.373 1.171 227

Heteroskedasticity-robust standard errors in parentheses. * p < .10, ** p < .05, *** p < .01.

More Money for Drains; Less for Roads (Surveyed wards)

Effect of any newspaper report card treatment in baseline wards on MCD councilor spending on selected spending categories



Private Disclosures: Pre-election effects on councillor performance

- The wards covered by the baseline survey entered this intervention
 - Quality of toilets and audits in midline and endline surveys
 - ► Toilet provision is contracted out main role of councillors is via choice of contractor and then directly lobbying them

Private disclosures: Councillors respond by closing toilets

Table: Effect of audit report cards on public toilet provision

	(1)	(2)	(3)	(4)	(5)	(6)
	Total toilets	Open toilets	Closed toilets	Toilet price	Adult users (#)	Facilities
Panel A: Male toilets						
$Mid/Endline \times Any \; audit$	0.083 (0.082)	-0.032 (0.068)	0.114** (0.057)	-0.066 (0.170)	-1.122 (0.892)	-0.099 (0.236)
Ward FE	Yes	Yes	Yes	Yes	Yes	Yes
Baseline control mean Observations	1.378 932	0.902 932	0.476 932	1.031 422	5.280 932	2.395 424
Panel B: Female toilets						
$Mid/Endline \times Any \; audit$	0.037 (0.092)	-0.077 (0.082)	0.114* (0.058)	-0.089 (0.122)	-1.093* (0.657)	-0.089 (0.144)
Ward FE	Yes	Yes	Yes	Yes	Yes	Yes
Baseline control mean Observations	1.244 932	0.768 932	0.476 932	0.703 419	3.183 932	2.447 421

Standard errors clustered by ward in parentheses. * p < .10, ** p < .05, *** p < .01.

Garbage: No Impacts

Table: Effect of audit report cards on garbage facilities

	(1)	(2) Informal piles	(3)	(4)	(5) Dhalaos	(6)	(7) Dhalaos
	Total informal piles	not recently collected (%)	Informal piles overflowing (%)	Total dhalaos	with proper structure (%)	Dhalaos overflowing (%)	regularly collected (%)
$Mid/Endline \times Any \; audit$	2.802 (2.723)	-0.004 (0.048)	-0.046 (0.042)	-0.041 (0.074)	-0.158 (0.152)	0.001 (0.125)	0.048 (0.130)
Ward FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Baseline control mean Observations	22.355 867	0.742 867	0.273 867	0.390 932	0.338 328	0.750 328	0.375 328

Standard errors clustered by ward in parentheses. * p < .10, ** p < .05, *** p < .01.

Summary of anticipated disclosure impacts

- ➤ For slum-preference weighted spending index, report cards improve spending in high slum wards in direction of slum preferences by 0.65 SD (relative to low-slum density wards with no disclosures)
- No discernible difference in incentive effects by subsequent eligibility status of politicians
- Private information has no discernible positive impacts on quality of infrastructure. Evidence that councillors (contractors) shut down dirty toilets and expanded roads...

Structure of Talk

- 1. Introduction
- Related Literature
- 3. Delhi local government and Experiment Design
 - Institutional Context
 - Descriptive Statistics on Citizen Preferences, Councilor Behavior and Quality of Local Sanitation
 - Experimental Design
- 4. Impact on Politician Policy Choices
- 5. Impact on 2012 Electoral Outcomes
 - Party ticket decisions
 - Electoral Outcomes

The political fortunes of councillors

- Voters state that candidate performance and party identity matter
- Party leadership may also value additional characteristics: loyalty, ability to fund raise, etc.
- In Delhi as in much of the developing world party leadership selects candidates and, so, orchestrates trade-off between quality and party-relevant characteristics
- Two shocks to party selection in 2012:
 - Expansion of gender quotas 30% of incumbents ineligible to contest in their own ward
 - Report cards 70% of incumbents assigned to have newspaper report cards on them

Empirical specification

We estimate regressions where we assign treatment at incumbent councillor level c who is in ward w for 2007-12 (similar if we do at ward level)

$$\begin{aligned} \textit{Outcome}_{\textit{cw}} &= \beta_1(\textit{Tr}_{\textit{cw}}) + \beta_2(\textit{El}_{\textit{cw}}) + \beta_3(\textit{Tr}_{\textit{cw}} \times \textit{El}_{\textit{cw}}) + \textit{X}_w + \epsilon_{\textit{cw}} \\ \textit{Outcome}_{\textit{cw}} &= \beta_1(\textit{Tr}_{\textit{cw}}) + \beta_2(\textit{El}_{\textit{cw}}) + \beta_3(\textit{Sp}_{\textit{cw}}) + \beta_4(\textit{Tr}_{\textit{cw}} \times \textit{El}_{\textit{cw}}) \\ &+ \beta_5(\textit{Tr}_{\textit{cw}} \times \textit{Sp}_{\textit{cw}}) + \beta_6(\textit{El}_{\textit{cw}} \times \textit{Sp}_{\textit{cw}}) \\ &+ \beta_7(\textit{Tr}_{\textit{cw}} \times \textit{El}_{\textit{cw}} \times \textit{Sp}_{\textit{cw}}) + \textit{X}_w + \epsilon_{\textit{cw}}, \end{aligned}$$

 El_{cw} is whether candidate is ineligible in ward w and Sp_{cw} is performance measure. Note that this is (potentially) affected by treatment status

Report cards help candidates gain party tickets

Table: Effect of newspaper report card publication and attendance on councilor-level electoral outcomes

		Councilor rui	
	(1)	(2)	(3)
Treatment			
Report card	0.120* (0.067)	0.071 (0.086)	0.206 (0.302)
Report card \times Ineligible		0.091 (0.114)	-0.424 (0.420)
Report card \times Attendance			-0.198 (0.433)
Report card \times Spending			-0.067 (0.096)
Report card \times Ineligible \times Attendance			0.792 (0.603)
Report card \times Ineligible \times Spending			0.229* (0.118)
All interactions as controls	Yes	Yes	Yes
Strata (zone–party) FE	Yes	Yes	Yes
Ineligible control mean Eligible control mean Observations	0.000 0.478 240	0.000 0.478 240	0.000 0.478 240

Heteroskedasticity-robust standard errors in parentheses. * p < .10, *** p < .05, *** p < .01.

Report cards help ineligible candidates gain party tickets

Table: Effect of newspaper report card publication and attendance on councilor-level electoral outcomes

	Councilor runs in other ward					Councilor runs in other ward controlled by party		
	(4)	(5)	(6)	(7) from high- slum ward	(8) from low- slum ward	(9)	(10)	(11)
Treatment								
Report card	0.039* (0.022)	-0.012 (0.019)	0.037 (0.080)	0.345 (0.216)	-0.045 (0.122)	0.044** (0.018)	0.007 (0.014)	0.020 (0.060)
Report card \times Ineligible		0.156*** (0.056)	0.172 (0.245)	-0.415 (0.303)	0.261 (0.394)		0.116** (0.050)	0.112 (0.218)
Report card \times Attendance			-0.078 (0.117)	-0.424 (0.283)	0.051 (0.200)			-0.026 (0.080)
Report card \times Spending			-0.048 (0.034)	-0.149 (0.095)	-0.012 (0.031)			-0.005 (0.014)
Report card \times Ineligible \times Attendance			-0.017 (0.355)	0.771 (0.467)	-0.225 (0.554)			0.012 (0.322)
Report card \times Ineligible \times Spending			0.125** (0.058)	0.291** (0.136)	0.084 (0.068)			0.074 (0.051)
All interactions as controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strata (zone-party) FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ineligible control mean Eligible control mean Observations	0.000 0.022 240	0.000 0.022 240	0.000 0.022 240	0.000 0.038 116	0.000 0.000 112	0.000 0.000 240	0.000 0.000 240	0.000 0.000 240

Heteroskedasticity-robust standard errors in parentheses. * p < .10, *** p < .05, **** p < .01.

Electoral benefits

Table: Effect of newspaper report card publication and attendance on councilor-level electoral outcomes

	Councilor's vote share (0 if didn't run)			Councilor wins in any ward			
	(1)	(2)	(3)	(4)	(5)	(6)	
Treatment							
Report card	0.047* (0.027)	0.032 (0.035)	0.048 (0.121)	0.029 (0.057)	-0.014 (0.080)	-0.033 (0.336)	
Report card \times Ineligible		0.024 (0.047)	-0.176 (0.170)		0.093 (0.098)	-0.266 (0.414)	
Report card \times Attendance			-0.022 (0.165)			0.021 (0.479)	
Report card \times Spending			-0.046 (0.038)			-0.131 (0.104)	
Report card \times Ineligible \times Attendance			0.314 (0.233)			0.583 (0.595)	
Report card \times Ineligible \times Spending			0.096** (0.047)			0.230** (0.117)	
All interactions as controls	Yes	Yes	Yes	Yes	Yes	Yes	
Strata (zone–party) FE	Yes	Yes	Yes	Yes	Yes	Yes	
Ineligible control mean Eligible control mean Observations	0.000 0.171 240	0.000 0.171 240	0.000 0.171 240	0.000 0.304 240	0.000 0.304 240	0.000 0.304 240	

Heteroskedasticity-robust standard errors in parentheses. * p < .10, ** p < .05, *** p < .01.

In summary..

- Media can play an important role in creating a more informed political environment – if done right, it can incentivize politicians to align policies with voter preferences - extent of alignment will vary with preference heterogeneity in voter population
 - In contrast, just informing councillors about the quality of governance has limited impact
- In situations of increased intra-party competition (here, caused by gender quotas) report cards enable better performing candidates to gain party tickets
 - However, information per se is not enough to dislodge eligible incumbents
 - Open question: How do we create incentives for media to undertake such disclosures on a consistent basis?