

Steps Towards an Effective Bureaucracy



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The Problem



- Effectiveness of public policy and public spending is often compromised.
- Common complaints:
 - Waste due to poor implementation
 - Leakages due to corruption

How to Improve Bureaucratic Effectiveness?



- Two main mechanisms:
 1. Stronger accountability mechanisms
 - Top-down approaches
 - Improving monitoring/providing stronger incentives
 - Bottom-up approaches
 - Empowering citizens with more information and accountability mechanisms
 2. Improving selection into the bureaucracy

How to Improve Bureaucratic Effectiveness?



- **Accountability mechanisms**
 - Briefly review this research
 - Limitations of exclusively relying on accountability mechanisms
- **Improving selection**
 - Discuss some recent work
 - ✦ Increased compensation as a mean of improving selection?
 - IAS case study: can selection rules be improved by assessing relationship between bureaucrats' characteristics and their effectiveness/integrity?

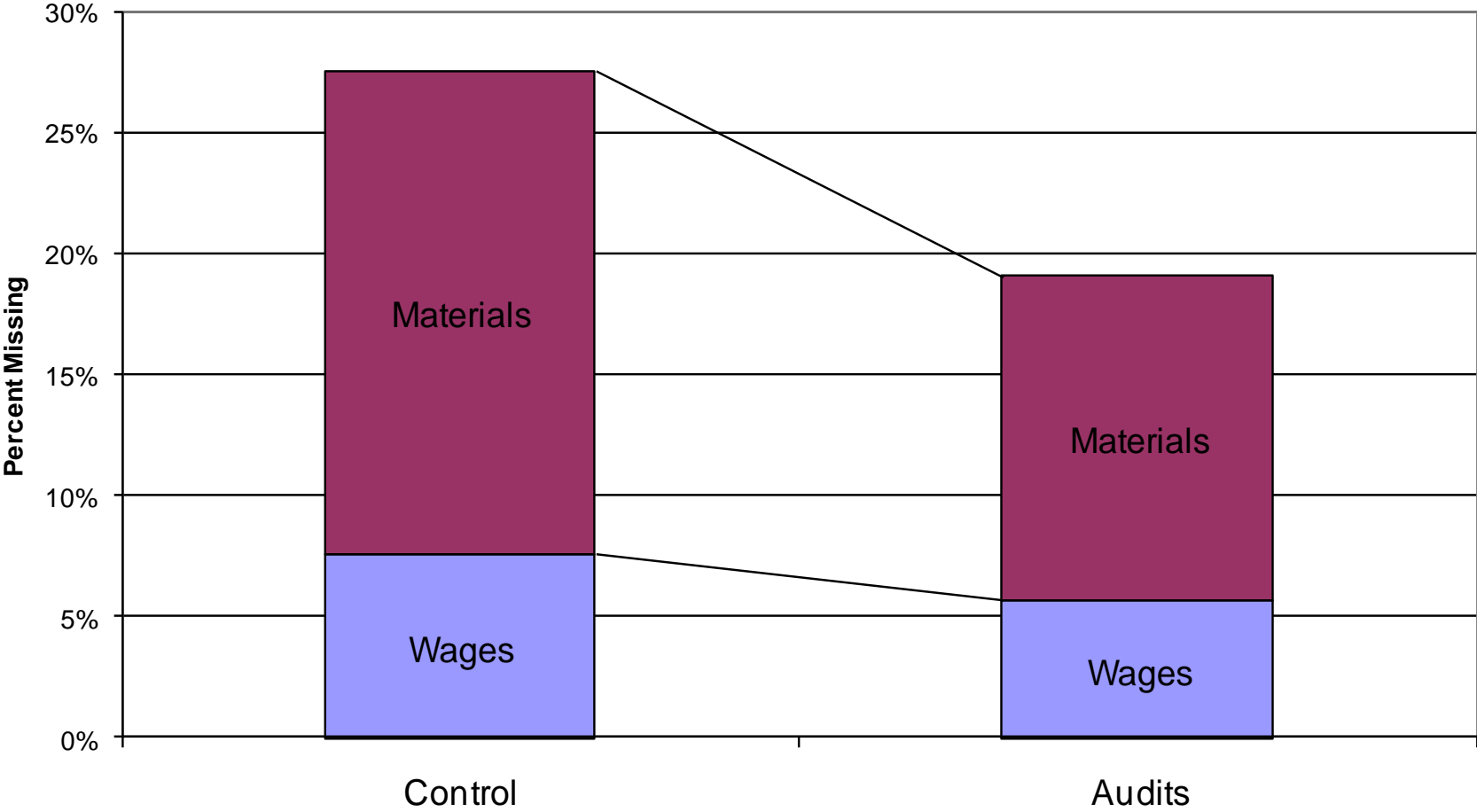
Top-Down Approaches: A Success Story in Indonesia



- Road construction projects in Indonesia
- Outcome: ‘Missing expenditures’ in village roads
 - Conducted engineering and price survey to estimate what village road actually cost to build; compared to official expense reports
- **Intervention: Increase ex ante probability of audits by government auditors from 4% to 100%**

Effect of Government Audits

Effect of Audits on Percent Missing



Limitations of Top-Down Approaches



- While a priori appealing, the very individuals tasked with monitoring and enforcing punishments may themselves be corruptible.
- So, very much an empirical question whether top-down approaches will work or not.
- Unlikely to be an across-the-board solution to improve bureaucratic effectiveness and reduce corruption.

Limitations of Top-Down Approaches



- Top-down approaches may take the form of stronger incentives (financial rewards, new assignment and promotion) based on realized measures for various indicators of performance
- Issues in practice:
 - As above, you need to incentivize the very individuals that are in charge of implementing these incentive programs.
 - A lot of what bureaucrats are expected to do cannot be summarized in a simple observable outcome measure:
 - ✦ Multi-tasking problem
 - ✦ Example: tax collection, policing
 - Crowding out of intrinsic motivation

Bottom-Up Approaches



- Recent focus on strengthening government providers' accountability to “citizen-clients”
 - Beneficiaries lack information
 - Inadequate participation by beneficiaries
- Bottom-up approaches have been found to be successful in some contexts/under some implementations...:
 - People less likely to re-elect a politician if informed he/she was corrupt (Brazil)
 - Health care clinics (Uganda)

Limitations of Bottom-Up Approaches



- Devil is very much in the details when implementing bottom-up approaches.
 - Importance of:
 - ✦ Enabling citizens with the necessary information
 - ✦ Helping them develop some process to voice their complaints and concerns/mechanisms to exert accountability
- Other concerns:
 - May work particularly poorly when citizens are less educated.
 - Free-riding
 - Elite capture

Improving Selection into the Bureaucracy



- Instead of developing stronger accountability mechanisms, focus on selecting higher-ability, higher-integrity bureaucrats.
- How to improve that selection?
 - Higher compensation as a way to attract better bureaucrats
 - Better understanding how various individual characteristics map into higher effectiveness/lower corruption may help put higher or lower weights on those characteristics in the selection process.

Better Selection through Higher Compensation?



- Maybe not. Making a public sector more financially attractive may in fact disproportionately attract the wrong type of individuals.
 - Several cross-country studies find that higher public wages are associated with lower corruption, though these studies are essentially cross-sectional in nature.
 - Studies in Italy and Brazil find that higher salaries attract better political candidates (more education; more experience); also improve performance of politician while in office (Brazil).
- Best evidence on this question so far:
 - Dal Bo, Finan, Rossi (2011)

Dal Bo, Finan and Rossi (2011)



- Hiring of coordinators for a social program of Mexico's Federal government called the Regional Development Program (RDP).
- Recruitment involved an exogenous assignment of wage offers across recruitment sites (5,000 pesos vs. 3,750 pesos)
 - And exogenous assignment of job offers. (Ultimately, will relate individual characteristics to effectiveness.)
- In this context at least, higher compensation translates into better (or at least as good) candidates across all a priori relevant dimensions.

Table 11: Effects on Financial Incentives on the Applicant Pool

	Obs	Control	Treatment Effect	Wi
	(1)	(2)	(3)	
Number of applicants	106	18.300	4.815 [4.437]	
<u>Panel A: Employment history</u>				
Wage in previous job	1572	3479.667	819.154 [174.703]***	
Currently employed	2225	0.104	0.053 [0.019]***	
<u>Panel B: Market skills</u>				
IQ (Raven test)	2229	8.488	0.506 [0.223]**	
Raven score >=9	2229	0.572	0.091 [0.039]**	
Raven score <9	2229	0.428	-0.091 [0.039]**	
Chose dominated risk option	2213	0.431	-0.064 [0.025]**	
Years of schooling	2198	14.552	0.091 [0.308]	
Speaks English	2225	0.115	0.007 [0.022]	
Knows how to use a computer	2226	0.921	0.018 [0.033]	
Knows how to use spreadsheet program	2226	0.859	0.009 [0.042]	
<u>Panel C: Demographics</u>				
Male	2219	0.569	0.039 [0.031]	
Age	2206	26.577	0.680 [0.660]	
Height	2167	1.612	0.015 [0.008]*	


Panel E: Big 5 personality traits

Extroversion	2189	3.674	0.013 [0.036]
Agreeableness	2167	4.107	0.004 [0.022]
Conscientiousness	2191	4.235	0.063 [0.030]**
Neuroticism	2168	2.254	-0.099 [0.033]***
Openness	2168	3.910	0.042 [0.028]
Big 5 index	2099	0.000	0.087 [0.049]*

Panel F: Public sector motivation traits

Attractiveness	2217	2.803	0.070 [0.041]*
Commitment	2170	3.316	0.045 [0.035]
Social Justice	2180	3.646	0.075 [0.026]***
Civic Duty	2158	3.924	0.027 [0.033]
Compassion	2168	3.001	0.066 [0.031]**
Self sacrifice	2168	3.687	0.039 [0.034]
Public sector motivation index	2074	0.000	0.092 [0.046]**

Selection and Bureaucratic Effectiveness: A Case Study of the IAS



- Questions:
 - What bureaucrat characteristics (if any) relate to effectiveness on the job?
 - What bureaucrat characteristics (if any) relate to corrupt behavior?
 - How are characteristics of officers changing over time?
 - ✦ Trend up in private sector opportunities/wages
 - ✦ Pay commissions mark drastic changes in compensation for IAS officers
- Goals: 1) suggest ways to alter selection process to achieve better bureaucratic outcomes; 2) indicate whether pay level within IAS is a threat to quality
- Purely descriptive, no experiment.

Selection into the IAS



- Selection based on performance on Civil Service Exam (UPSC)
- Extremely competitive exam
 - 100,000+ take the exam each year for about 100 IAS slots
- Furthermore:
 - Affirmative Action
 - ✦ Quotas for SC, ST; OBC since 1995 (Mandal Commission)
 - Age limit
 - ✦ Higher for reserved groups
- Top scorers on the entry exam by caste group become IAS officers
- “Quasi-random” allocation of officers to various cadres
 - About 1/3 allocated to state of domicile

After Selection



- **Training:**
 - Academic training at Mussoorie (“course work”)
 - District training (“practical training”)
- **Career starts:**
 - District administration (district collectors)
 - State ministries
- **Best officers get empaneled:**
 - Move from State to Centre government

Data (1)



- Descriptive rolls data (1970-2005):
 - Socio-economic background:
 - ✦ Father's occupation
 - ✦ Gender
 - ✦ Rural
 - ✦ Age at entry
 - ✦ Fields of study (as well as grades, institutions)
 - ✦ Caste (Gen/OBC/SC/ST)
- Inter-se-seniority lists:
 - For now, 1989 to 2009:
 - ✦ UPSC marks
 - ✦ Course work marks
 - ✦ District training marks
- Note: clearly a less than perfect list of individual characteristics. Cf. Dal Bo et al list

Data (2) – Outcome Measures



- Career path for all IAS officers currently in service:
 - Empanelment, proxied for by position in Centre government
- Corruption charges based on media search
 - Archives of Indian Express, Times of India, Whispers in the Corridor
 - ✦ 2000 to present
 - Search for articles that mention IAS officers by name AND:
 - Corrupt|cash|scam|interrogate|bribe|vigilance
- Also: course work marks and district training marks
 - Post-selection
 - Fit for job/Effort in learning about the job
- Note: clearly a less than perfect list of outcomes. Some thoughts re. improving on these outcomes:
 - ✦ “360-evaluation” by relevant stakeholders
 - ✦ Changes in district outcomes (poverty, PCE) based on NSS data for those in district administration

The Face of the IAS (1989 to 2005)



	Variable	Obs	Mean
	Gen	2181	0.5896378
	SC/ST	2181	0.2356717
	OBC	2181	0.1746905
	Female	2180	0.1830275
	Age at entry	2118	26.01322
	Rural	2151	0.2515109
	Low SES	2181	0.1503897
Studied:			
	Econ/Bus	2181	0.1889042
	Agri/Zoo/Bio/Bota	2181	0.170564
	Math/phys	2181	0.3044475
	Eng/Chem	2181	0.6547455
	Lit/English/Phil/Psy	2181	0.3177442
	Pol/Hist/Law	2181	0.2269601
	Medecine	2180	0.0692661

The Face of IAS (1989-2005)



Father Occupation	N	Pct
Agriculture	245	11.24
Business	278	12.75
Clerk/Laborer/Shop	83	3.81
Engineer/Science	157	7.2
Government	725	33.26
Legal	56	2.57
Medical	95	4.36
Military	41	1.88
Misc.	1	0.05
Miscellaneous	93	4.27
Politics	4	0.18
Service	83	3.81
Teaching	319	14.63

How Do Reservations Change the Face of the IAS? (1989-2005)



Category	Female	Age at Entry	Rural	Low SES
Gen	0.21	25.34	0.15	0.10
OBC	0.09	26.91	0.52	0.27
SC	0.16	27.36	0.28	0.16
ST	0.20	27.01	0.36	0.30

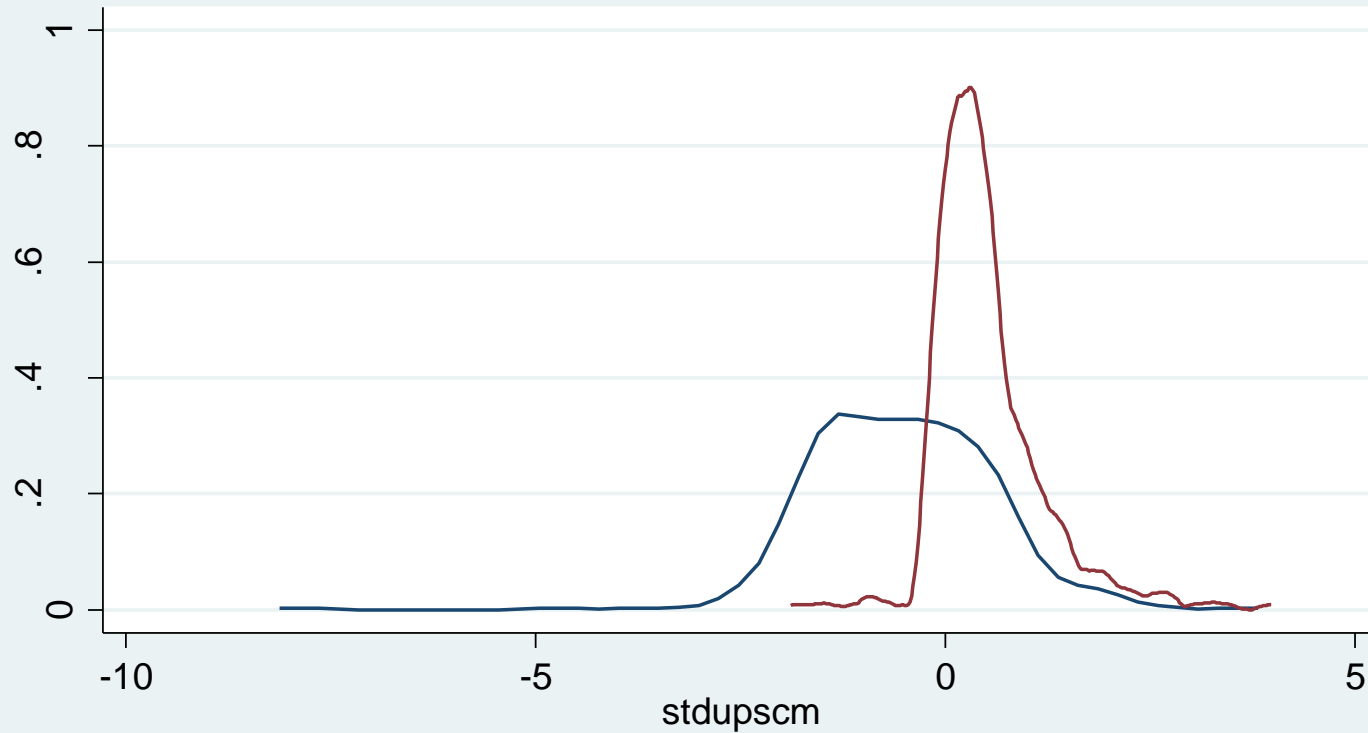
Analysis



- Are Individual Background Characteristics Predictive of Effectiveness?
- Are Individual Background Characteristics Predictive of Corruption?
- How has the face of the IAS changed over time (as opportunities for “good jobs” in the private sector increases)?

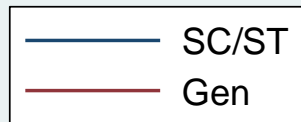
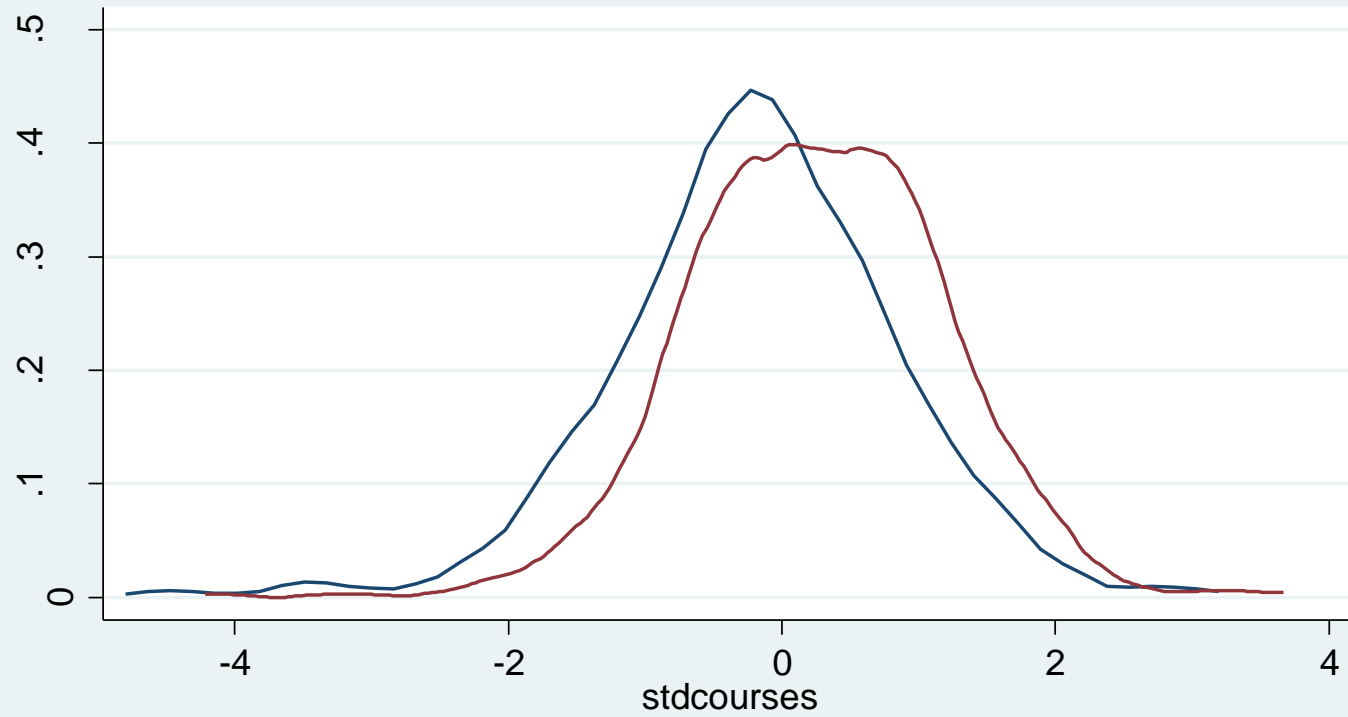
	Standardized Marks on:			Position in Centre
	UPSC	Coursework	District Training	
Econ/Bus	-0.024 [0.041]	0.226 [0.056]**	0.138 [0.058]*	0.036 [0.024]
Agri/Zoo/Bio/Bota	0.021 [0.046]	0.216 [0.062]**	0.223 [0.064]**	0.025 [0.027]
Math/phys	0.136 [0.050]**	0.139 [0.067]*	0.062 [0.070]	0.008 [0.029]
Eng/Chem	0.041 [0.036]	-0.043 [0.049]	-0.096 [0.051]	-0.034 [0.021]
Lit/English/Phil/Psy	-0.083 [0.045]	-0.071 [0.060]	-0.057 [0.062]	0.001 [0.026]
Pol/Hist/Law	-0.116 [0.044]**	-0.173 [0.059]**	-0.11 [0.061]	0.02 [0.026]
Medecine	0.068 [0.063]	-0.045 [0.085]	-0.149 [0.087]	-0.036 [0.037]
SC/ST	-0.602 [0.052]**	-0.115 [0.071]	-0.069 [0.073]	0.018 [0.031]
Gen	0.959 [0.048]**	0.511 [0.066]**	0.342 [0.068]**	0.062 [0.028]*
Low SES	-0.077 [0.048]	-0.006 [0.066]	0.07 [0.067]	-0.037 [0.029]
Age at entry	-0.042 [0.008]**	-0.04 [0.011]**	0.001 [0.011]	-0.01 [0.005]*
Rural	-0.056 [0.042]	-0.016 [0.057]	-0.031 [0.059]	-0.011 [0.025]
Female	0.022 [0.044]	0.11 [0.060]	-0.028 [0.062]	0.051 [0.025]*
Batch F.E.	Y	Y	Y	Y
Constant	0.787 [0.222]**	0.824 [0.308]**	-0.194 [0.312]	0.39 [0.135]**
R-squared	0.53	0.14	0.05	0.22

Standardized UPSC Marks



kernel = epanechnikov, bandwidth = 0.2466

Standardized Course Work Marks



kernel = epanechnikov, bandwidth = 0.2123

Analysis



- Are Individual Background Characteristics Predictive of Effectiveness?
- Are Individual Background Characteristics Predictive of Corruption?
- How has the face of the IAS changed over time (as private sector for “good jobs” increases)?

Media Reports of Corruption

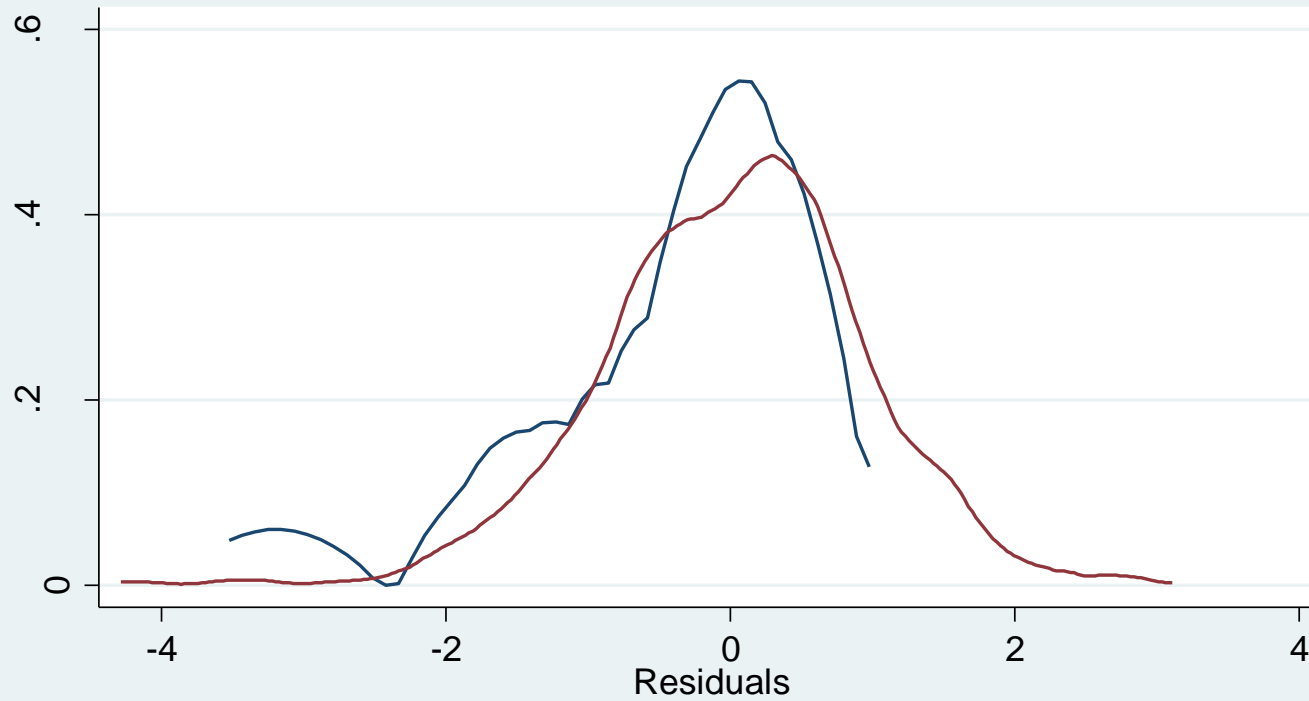


- Recall media archives cover period 2000 to present.
- Across all officers in career data: 1.4%
- 1979-2005: .8%

Allegation of Corruption in the media (Y=1)

SC/ST	-0.008 [0.008]	-0.006 [0.007]	0 [0.008]
Gen	-0.006 [0.008]	-0.006 [0.006]	-0.018 [0.008]*
Low SES	-0.008 [0.006]	-0.007 [0.006]	-0.006 [0.007]
Age at entry	0 [0.001]	0 [0.001]	0 [0.001]
Rural	0.004 [0.005]	0.007 [0.006]	0.008 [0.006]
Female	-0.01 [0.005]	-0.007 [0.005]	-0.006 [0.006]
Standardized Marks UPSC			0.014 [0.003]**
Standardized Marks Coursework			-0.003 [.002]
Constant	-0.001 [0.030]	0.005 [0.029]	0.025 [0.032]
Batch F.E.S	Y	Y	Y
Batch	1970-2005	1989-2005	1989-2005
R-squared	0.02	0.01	0.02

Error in Predicted Course Work Marks



— Reports of Corruption
— No Reports of Corruption

kernel = epanechnikov, bandwidth = 0.3289

Analysis



- Are Individual Background Characteristics Predictive of Effectiveness?
- Are Individual Background Characteristics Predictive of Corruption?
- How has the face of the IAS changed over time (as private sector for “good jobs” increases)?

Batch	Female	Age at	Rural	Low SES	Econ/Bus	Domicile	
		Entry				Bimaru	Exit IAS
1989	0.16	25.14	0.17	0.19	0.12	0.52	0.05
1990	0.11	25.39	0.25	0.13	0.18	0.45	0.03
1991	0.17	25.63	0.20	0.18	0.22	0.46	0.04
1992	0.17	25.23	0.20	0.16	0.18	0.42	0.05
1993	0.14	25.42	0.19	0.11	0.09	0.59	0.04
1994	0.25	25.48	0.17	0.11	0.17	0.40	0.05
1995	0.15	26.03	0.29	0.12	0.16	0.41	0.00
1996	0.18	25.54	0.33	0.12	0.16	0.53	0.02
1997	0.22	26.34	0.37	0.18	0.11	0.47	0.03
1998	0.11	26.02	0.27	0.16	0.13	0.54	0.01
1999	0.18	25.80	0.20	0.04	0.06	0.55	0.04
2000	0.16	25.58	0.32	0.17	0.25	0.49	0.01
2001	0.26	27.18	0.19	0.15	0.32	0.28	0.01
2002	0.25	26.81	0.22	0.08	0.29	0.41	0.02
2003	0.30	26.99	0.27	0.18	0.33	0.28	0.01
2004	0.21	27.20	0.36	0.18	0.24	0.30	0.01
2005	0.17	27.75	0.35	0.20	0.19	0.33	0.04

Who Exits? 1989-2005

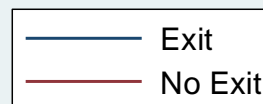
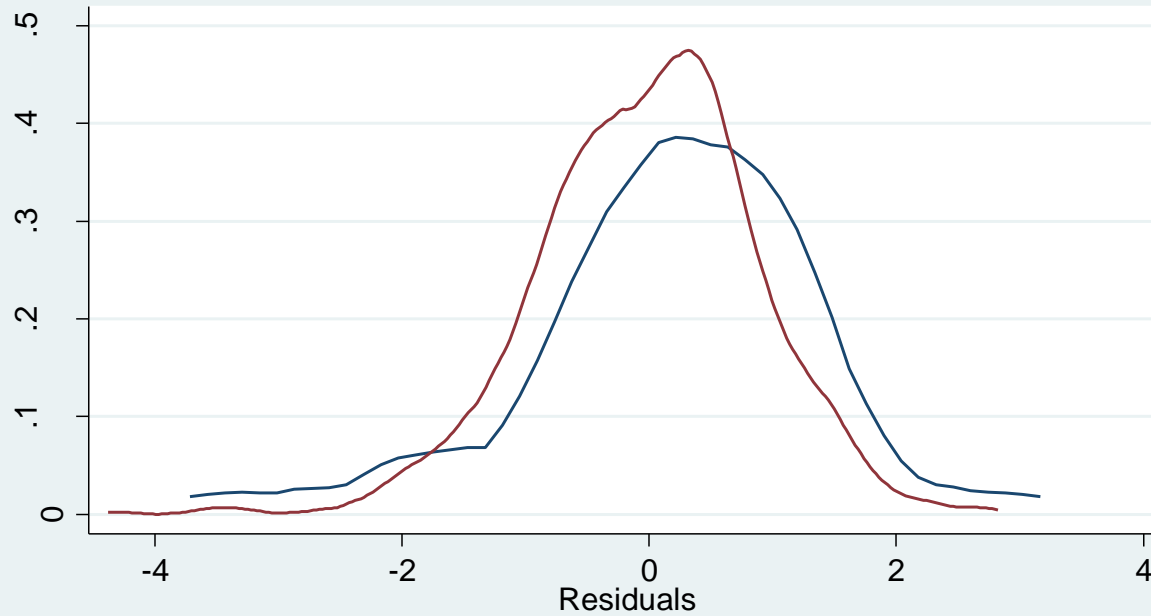


					Standardized Marks on:		Error on Predicted
	Female	Rural	Low SES	Econ/Bus	UPSC	Coursework	Course Work
No Exit	0.19	0.25	0.15	0.19	-0.03	0.00	-0.02
Exit	0.11	0.19	0.13	0.21	0.32	0.35	0.17

Who Exits?



Error in Predicted Course Work Marks, 1989-2005



kernel = epanechnikov, bandwidth = 0.3941

A Few Take-Aways of IAS Case Study



- Selection in entry exam may not properly account for people having field knowledge that matches the requirement of the job (econ, bus, agriculture?)
- One of the largest apparent cost of AA in this context may be that it is “women-regressive”
 - Women more effective, less likely to be corrupt
- A potentially valuable indicator of future effectiveness/integrity may be value added in training post selection
 - A proxy for intrinsic motivation, or fit?
- No apparent changes in the composition of admits over time as private sector opportunities are rising/pay gap with private sector rises
 - Maybe not so surprising; these forces may affect the composition of the (large) pool of applicants but not the set of top applicants
- Those exiting the service may be disproportionately drawn from the set the service would very much like to keep...