A New Approach to Public Sector Hiring in India for Improved Service Delivery

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Background / Motivation
Some Key Facts
A New Approach to Hiring
Implementation & Next Steps

Very weak service delivery in India

- Widely acknowledged that weak public service delivery is the Achilles Heel of the Indian state (World Bank 2003; Pritchett 2009)
  - Police (law and order); water & sanitation; education; health

- Public-sector service-delivery reform somewhat neglected relative to reforms affecting the private sector
  - Perhaps because elites have dealt with the failure by exiting from the system
  - But the average citizen bears the brunt of low-quality service delivery every single day (and elites can't always escape either)

- Stuck in a low-level equilibrium:
  - Sector advocates mainly push for larger budget allocations (education – 6%; health – 3%, etc.), unmindful of fiscal constraints or opportunity costs
  - Finance has to deal with budget constraints – all get less than asked for
  - "Low budget" becomes alibi for poor performance
  - Simply have to focus on improving quality of spending (despite the weak departmental incentives to do so)

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Human Resources are the Weakest Link

- Almost all service delivery weaknesses can be traced to HR issues
  - Not enough front-line providers (chronic under-staffing)
  - Poor/ineffective training and skilling of providers
  - Poor governance and management of service delivery functions
  - Many weaknesses in service delivery can be explained by the structure of public sector labor markets (these also spillover into the broader economy)

- Paper first documents a set of key facts on service delivery and links them to features of public-sector labor markets

- I then propose a new approach to public-sector hiring that can mitigate several of the problems identified above
  - Illustrate with a detailed example from teaching (and police)
  - Potential for integrating with the new National Skills Framework
  - Fourteenth finance commission award to states is a good opportunity for a few states/sectors to innovate (paper provides a roadmap for this)

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Shortage of front-line staff

- True in almost every core area of service delivery (even worse after accounting for spatial mismatch)

- Police
  - Current ratio of 1:761, compared to norms of 1:568 (MHA) or 1:450 (UN)
  - International benchmarks: Canada = 1:191; US = 1:224; Spain = 1:313

- Teachers
  - Estimated shortage of 5.8 lakh primary teachers, 3.5 lakh upper primary teachers (will get worse after RtE; expected cost of Rs. 25,000 crores/year)

- Health-workers
  - No. of qualified public providers (per unit population) is 25% of WHO norm

- Anganwadi workers
  - Unrealistically over-worked AWW's in understaffed AWC's (PEO 2011)

Public sector pay is high and NOT correlated with Productivity

- On the face of it, simple smell test – which is that we typically see over a 100 applicants for every public sector job opening

- Does not by itself imply that pay is too high
  - What matters is whether the pay is right for those who DO get recruited (and whether they'd have joined at lower pay)
  - In other words, need to assess marginal product of public workers under different sets of employment terms

- Highly non-trivial problem!
  - Need to estimate individual productivity in the public sector (really hard), and also have meaningful variation in contractual terms

- Can solve this issue in one important sector - teaching
  - Longitudinal data on student learning, mapped to teachers, allows estimation of teacher "value added" (good measure of productivity – see Chetty et al. 2014a/b)
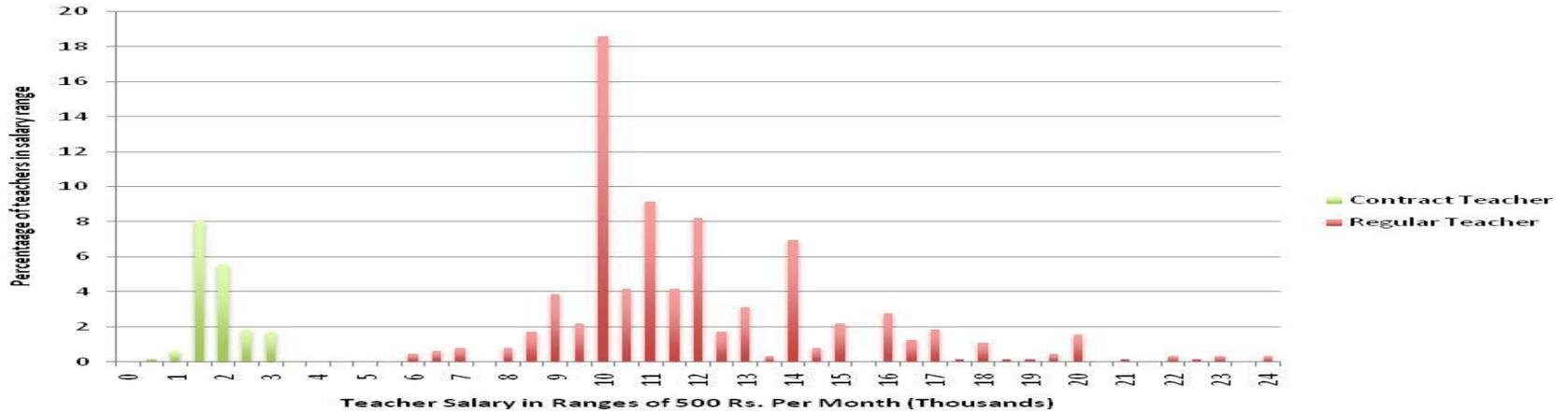 - In particular, can compare across "regular" and "contract" teachers

Regular Vs. Contract Teachers

- The use of contract teachers is probably the most prominent policy innovation in primary education in the past 20 years in India and other developing countries

- Contract teachers are typically hired from local communities; less educated; no formal training; renewable contracts; and paid MUCH lower salaries (~20-25%)

- The use of contract teachers is highly controversial
  - Proponents point to cost effectiveness, superior incentives, ties to community
  - Opponents claim that contract teachers are unlikely to improve learning outcomes (concerns include lack of training, low motivation, and possible local elite capture)

- No evidence to support this view (that contract teachers are less effective)
  - Muralidharan & Sundararaman 2013
  - Atherton & Kingdon 2011; Goyal & Pandey 2011
  - If anything, point estimates suggest that they may be *more* effective

- Possible mechanisms include better incentives from renewable contracts, connection to local area, lower marginal cost of attendance
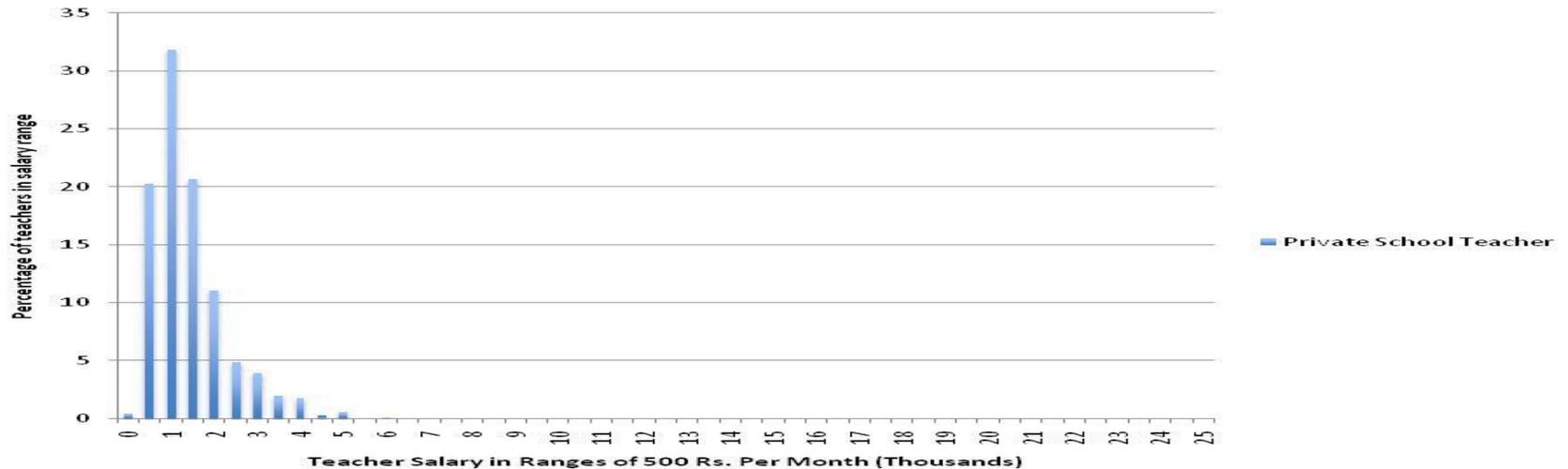
Salary Distribution by School and Teacher Type

Percentage

More evidence on broken link between pay and performance

- Performance-linked pay can be highly effective
  - A 3% performance-linked bonus to teachers (with a range of 0-15%) in AP led to large and sustained increases in learning outcomes (0.22 SD over 2 years; 0. 44 SD over 5 years – larger than most other interventions) (Muralidharan & Sundararaman 2011; Muralidharan 2012

- As opposed to across the board increases
  - An experimental evaluation of DOUBLING teacher pay across the board in Indonesia found ZERO impact on learning (de Ree et al. 2015)

- Interesting new evidence from healthcare in MP (Das et al. 2015)
  - Strong link between quality of care provided in the private sector (effort, and treatment quality) and prices charged
  - No correlation between wages and quality in the public sector

Status Quo on Training & Credentialing is not working

- Absolutely NO evidence to suggest that teachers with a formal teacher training credential (either B.Ed. or D.Ed) do better at improving student learning outcomes relative to teachers without such a credential
  - Kingdon & Teal (2010)
  - Muralidharan & Sundararaman (2011, 2013)
  - Four different studies on supplemental instruction find large improvements in learning outcomes using community teachers/volunteers with little or no training (Banerjee et al 2007, 2009, 2012; Lakshminarayana et al (2012))

- Thus training credentials as currently delivered by the system are neither "necessary" nor "sufficient" markers of teacher quality

- What is going on? Three main candidate explanations:
  - Quality of current training/certification is really poor (including fake degrees)
  - Content is too theoretical and not focused enough on practical skills
  - Even if content is good, there is no motivation to either absorb or deploy training
 - TET solves (1), but not (2) and (3)

Mismatch on "non-CV" traits

- Results so far suggest that status quo of recruitment, training, and pay are neither selecting, nor creating effective service providers

- But, there is also evidence of persistent variation in provider quality over time

- What would be driving this? "Non-CV" traits:
  - Grit, perseverance, emotional stability, extroversion, conscientiousness, empathy

- Nascent, but growing and exciting field of research – too nascent to reach firm conclusions, but two broad patterns do emerge

- First, "non CV" traits really do matter

- Second, these ARE observable to employers, colleagues, and customers, though they are difficult to spot at the time of recruitment

Broader Labor Market Distortions

- Educated youth waste several productive years in their twenties trying repeatedly to get into a "government job"

- Low take-up of training programs, high attrition

- Some could be fit issues; but there is anecdotal evidence that many would prefer to keep trying for a government job rather than get skilled and enter the competitive private labor market
  - Jeffrey (2010) – "Timepass"

- Perfectly rational for individual because the returns to winning the "government job lottery" are so large (many times market clearing wage, job security for life, opportunity to make more money on the side); but highly inefficient for the economy as a whole

- Corruption scandals in recruitment are a symptom of this (can undermine entire logic of high public sector pay)

Distribution of Males aged 15-65 with a 10th standard pass (NSS)
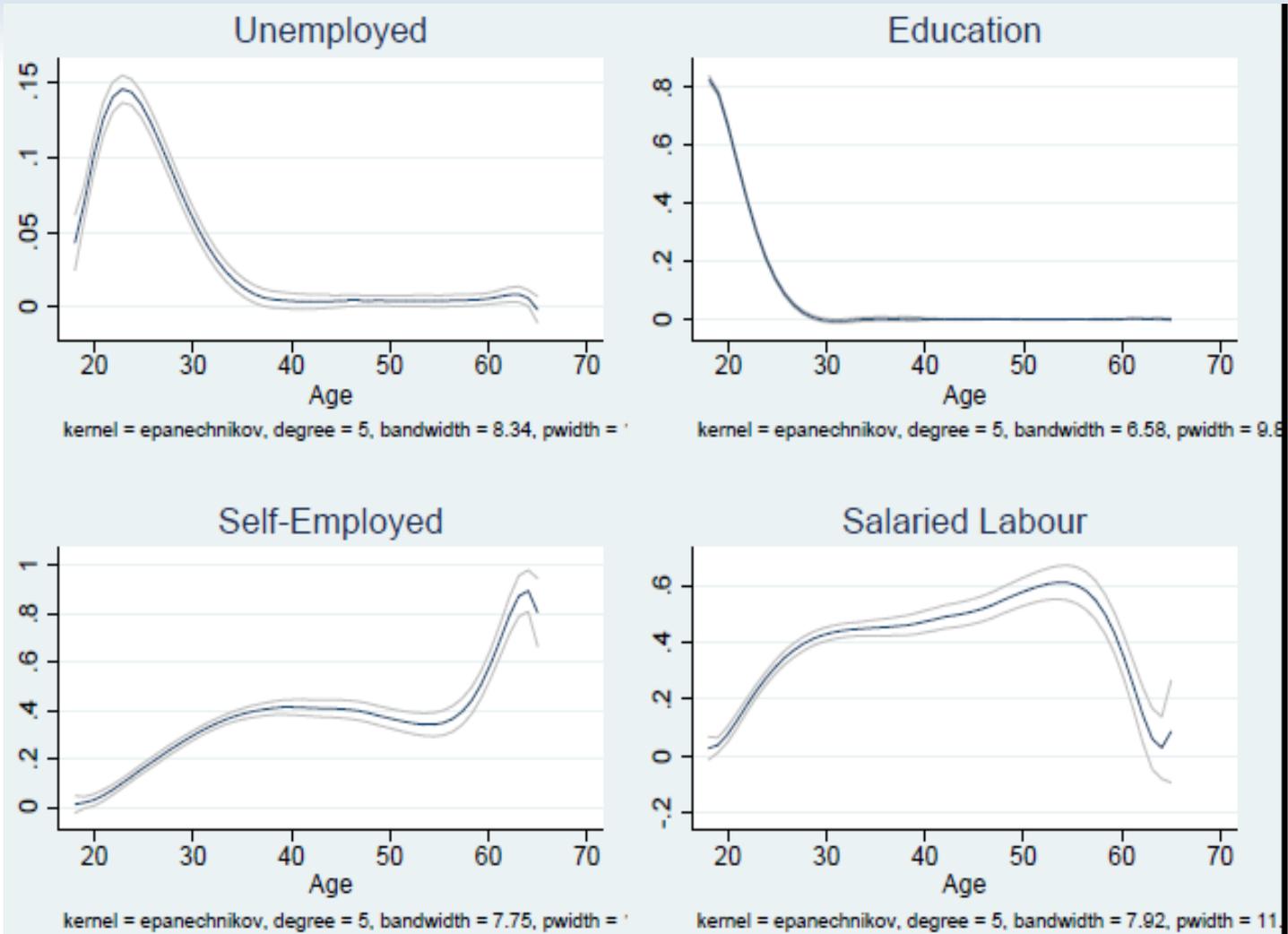
Agenda

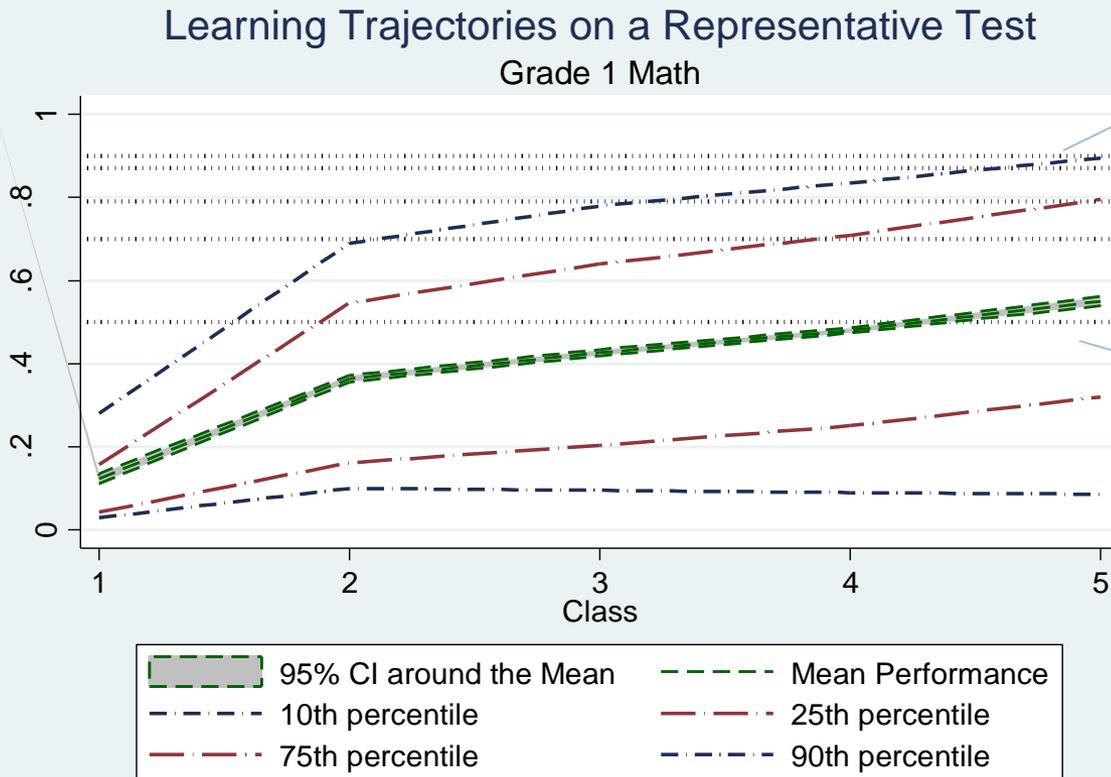| Background / motivation |
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Key elements of new approach to public-sector hiring

- Create untenured apprenticeship positions lasting 3-5 years in major front-line service delivery departments (police, teachers, anganwadi workers, etc), at a significantly lower entry-level pay (follow a recruitment process similar to that used for contract teachers)

- Give preference to local candidates for these positions

- Create modular training courses that can be interspersed with the apprenticeship and lead to progressive certificates of skilling consistent with the new National Skills Qualification Framework

- Retain the current pay scales and process for regular full-time hiring, but provide extra credit for years of successful service as an apprentice (ideally based on performance)

- Provide a one-time exit payment to apprentices (based on years of meritorious service) who do not get hired into regular positions

Learning Trajectories over 5-years for 1 Cohort

Learning Trajectories on a Representative Test
Grade 1 Math

Curriculum Defined Grade 5 Standard*

Curriculum Defined Grade 1 Standard*

Legend:
- 95% CI around the Mean
- Mean Performance
- 10th percentile
- 25th percentile
- 75th percentile
- 90th percentile

* Standard defined as the probability of a correct answer given the lowest ability level required to receive an average score of 50% in the universe of grade specific questions

The Teaching Assistant Proposal

- A National Program of Primary School Teaching Assistants to Guarantee Minimum Absolute Learning Standards for All Children by the End of the 12th Plan

- The core idea of the current proposal is the following:
  - Major fiscal commitment to reduce PTR from 40:1 to 30:1 under RtE ($5B/year)
  - The same resources can be used to bring PTR down to under 15:1 as follows:
  - The regular teacher norm can be maintained at 40:1 (subject to a minimum of 2 regular teachers per school as per SSA norms)
  - But each regular teacher shall be provided with 2 teaching assistants hired from the same village as the school (with a similar profile as the current contract teachers)
  - **Key point is to treat the TA role as the first step on a performance-based career ladder**

- The proposal allows for a dramatic reduction in PTR and a sharp increase in the feasibility of customized instruction (based on grouping by level of learning) in a fiscally-sustainable way, while also creating substantial employment and skill-building opportunities for educated rural youth.

Key Details of Proposal

- Hiring & Appointment Criteria

- Training & Certification

- Pay and Integration into Regular Teacher Career Track

- Exit Compensation

Teaching Assistants Vs. Contract Teachers

- Two similarities, but many important differences. Similarities:
    - Based on the research findings of equal effectiveness of CT's and RT's (for primary school)
    - Based on the documented availability of educated under-employed rural youth (especially women – who may not be able to work outside the village for socio-cultural reasons)

- But contract teacher model "failed" for three important reasons
    - Professional
    - Legal
    - Political

- The proposal addresses the key weaknesses/concerns of the contract teacher model
    - De-professionalizing education, equal pay for equal work, pressure for 'regularization'
    - First point is addressed by modular training and raising standards for selection as an RT
    - Second is addressed by clearly defining the roles differently (staff vs. apprentice)
    - Third is addressed by the career ladder with well defined standards (problem was caused by attempting to 'replace' RT with CT – which is not the aim here)

Teaching Assistant Program – Summary of Benefits

- Provides schools/teachers with instructional resources to achieve the 12th Plan goals on universal functional literacy and numeracy (in a fiscally feasible way)

- Draws on global best practices on training (integrated with practice)

- Increase teacher quality over time
  - Huge variation in teacher quality, but uncorrelated with observables
  - Need to observe on the job to assess quality (match quality as well)
  - Reduce barriers to entry, raise them for retention

- Provision of white-collar employment to rural youth without leaving the village
  - May be especially important for young women

- Boost female empowerment
  - Provides a job, income, respect, and financial independence
  - Increases the "returns to education" for young women and provides powerful role models
  - Likely to delay age of marriage and fertility (both are stated policy objectives)
  - Historical parallels with mass education in the US/UK

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Implementation Roadmap

- The overall structure of the proposal is clear, but many important details need to be worked out in consultation with teacher training institutes, local administrators, and potential third-party partners for monitoring/implementation support

- Specific issues include:
  - Working out the details of the modular teacher training program
  - Modifying classroom pedagogy to optimize the use of the extra instructional resources
  - Leadership training to regular teachers (including measuring, monitoring, and supporting learning improvements for all children) for this approach to deliver to its full potential

- Would therefore be prudent to first try out the approach in a few districts/blocks

- Ideal way forward would be to make the proposal to states and to first work in locations with strong political interest and district-level leadership

- Tamilnadu SPYB as a promising entry point