Can Information Strengthen Local Governance of Schools? Evidence from Pakistan

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June 19, 2019

Overview

Background

- Punjab, Pakistan (36 districts; 52,000 primary, middle, and high public schools; Segregated by sex/gender)
- School Councils were established under school-based management/decentralization reforms; Formal policy in 2007
  - 7-17 (elected?) members in each school comprising of a head-teacher, parents, and notable and literate members of the community
- Responsibilities:
  - Conduct school council meetings
  - Utilize a Non-salary budget (NSB) for school improvement
  - Hire temporary or contract teachers, infrastructural development
  - Improve enrollment, teacher and student attendance

Policy Problem

- Schools, on average, spent only 33 percent of funds available to them in 2014
- Only 31 percent of the schools spent more than 75 percent of their budget in 2014
- Why?
  - May not have information on the availability and process of spending the funds
  - Fear of audit

The School Council Mobilization Program (SCMP)

Step 1

Government hired a call center; Developed scripts

Step 2

Council members called every month for 10 months (Mar-Dec 2015)

Step 3

Focus on expenditure from the budget

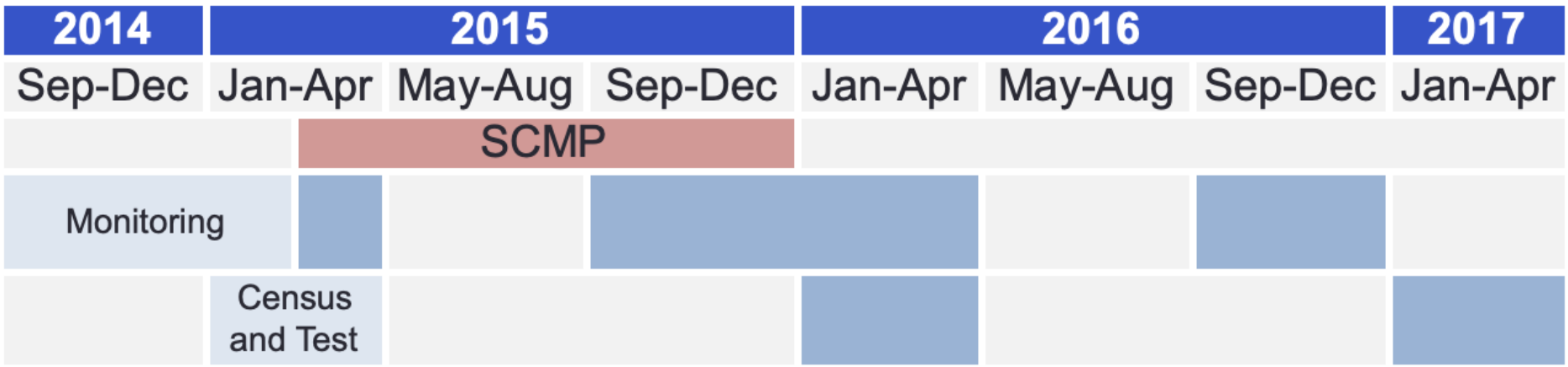
SCMP Contd.

- Program Features
  - Targeted information dissemination on school council meetings, availability and processes of spending funds, hiring of temporary teachers, improvement of school facilities
  - Credibility to the calls
  - Continuous and personalized engagement with the same calling agent; Cultural context: same-sex agents as the school council member, local language, conference calls
  - Low-cost: USD 50 per school for 10 months of engagement (as opposed to USD 240 for a one-time in-person training)

Theory of Change

- SCMP → Direct Effect
  - Information on "what" and "how" (Banerjee et al., 2008)
  - More school council meetings and improved expenditure
  - Additional school resources in the education production function → improved school and student outcomes (Duflo, Dupas and Kremer, 2015)
- SCMP → Indirect Effect
  - More autonomous, informed and active school councils; Greater bottom-up accountability → teacher behavior (rank/political influence)
  - Additional school resources → teacher incentives (reduced effort; Mbiti et al., 2019)
  - Negatively impacted school and student outcomes

Timeline and Data



Identification Strategy

- School Selection Criteria
  - 21 districts; 27,000 primary and middle schools
  - Schools above 50^{th} percentile of enrollment in each district, school-level and school-gender bin
  - However, treatment was inconsistent with eligibility rule
- Difference-in-Differences
  - Parallel Trends
- Estimation Equation

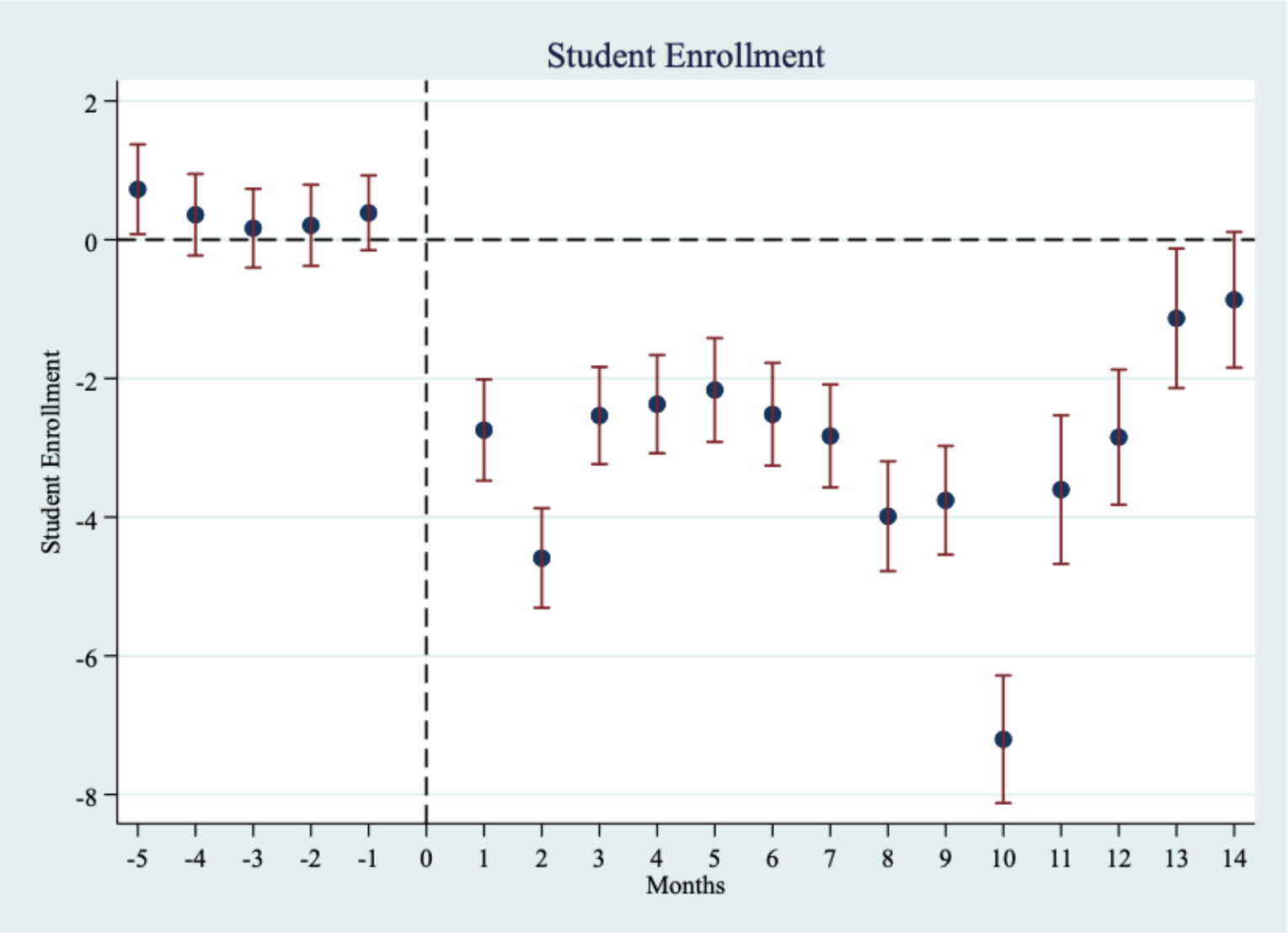
$$Y_{st} = \alpha_s + \lambda_t + \beta D_{st} + \epsilon_{st} \tag{1}$$

Parallel Trends

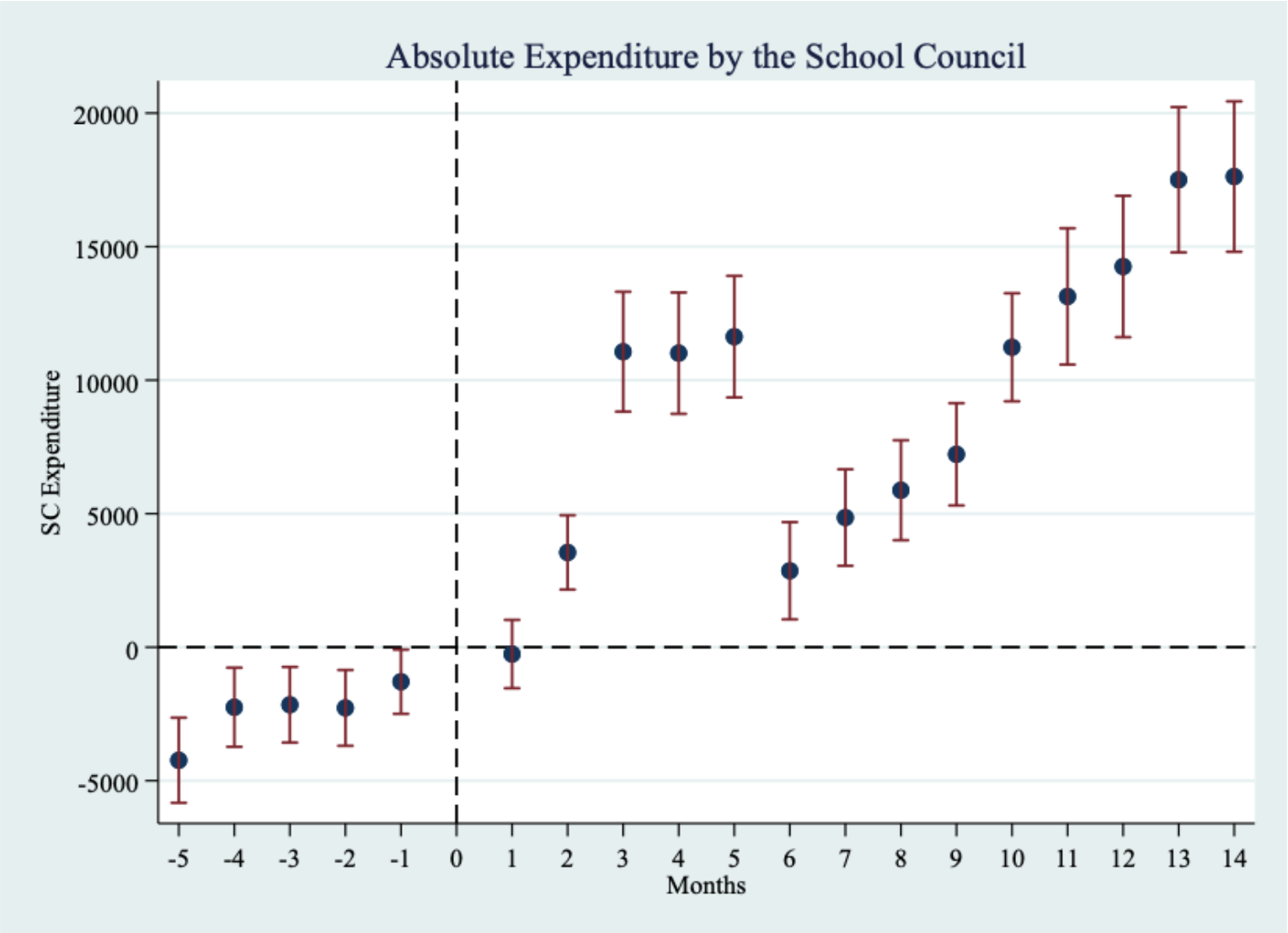
Table: Common Trends Assumption

	(I)	(II)
Expenditure (1=Yes, 0 No)	-0.050***	-0.052***
	(0.005)	(0.005)
Total Expenditure	856.993*	412.654
	(427.129)	(484.043)
Contract Teachers	-0.000	0.002
	(0.004)	(0.004)
Teacher Attendance	0.106	0.163
	(0.224)	(0.255)
Student Enrollment	-0.004	-0.227
	(0.161)	(0.185)
Students Present	-0.080	-0.369
	(0.223)	(0.259)
N	26,213	17,080

Trends in School Enrollment



Trends in School Council Expenditure



Results

Table: Impact of SCMP on School Council Participation

	(I)	(II)
SC Meetings	0.213***	0.124**
	(0.047)	(0.047)
Expenditure (1=Yes, 0 No)	0.057***	0.065***
	(0.005)	(0.006)
Total Expenditure	11732.893***	13878.416***
	(651.373)	(783.519)
N	26,213	17,080

Results

Table: Impact of SCMP on School Outcomes

	(I)	(II)
Contract Teachers	-0.014**	-0.014*
	(0.005)	(0.006)
Facilities Factor	-0.011***	-0.011***
	(0.002)	(0.002)
Teacher Attendance	-0.596***	-0.462*
	(0.163)	(0.190)
Student Enrollment	-2.252***	-2.566***
	(0.305)	(0.365)
Students Present	-0.696*	-0.682
	(0.303)	(0.364)
N	26,213	17,080

Results

Table: Impact of SCMP on Student Outcomes

	(I)	(II)
Math	-0.105***	-0.103***
	(0.014)	(0.014)
Urdu	-0.081***	-0.080***
	(0.011)	(0.011)
English	-0.088***	-0.086***
	(0.014)	(0.014)
Composite Test Measure	-0.118***	-0.116***
	(0.014)	(0.014)
Percent of Test Takers	0.569***	0.551***
	(0.107)	(0.107)
N	25, 936	22, 498

Summary

- SCMP schools conducted 2.5 percent more council meetings, were 11 percent more likely to spend the NSB, and on average, spent 40 percent more money than non-SCMP schools
  - Non-trivial amount (USD 100) for the context: contract teachers can be hired, facilities installed
- Facilities factor reduced by 1 percent and likelihood of contract teachers by 6 percent in treated schools
- Student enrollment and teacher attendance went down by 1.3 and 0.7 percent from baseline, respectively
- Student test scores reduced by 1/10 of a standard deviation in SCMP schools
  - Reduction in test scores is not meaningfully attenuated by reduction in enrollment or increase in test takers (explain only 9 percent of the reduction)

Discussion

- Where did the money go?
  - Spent on outcomes not captured in the data or spent on outcomes not impacted in the measured time frame
- What explains the negative impact on school and student outcomes?
  - Indirect effect: teacher response to increased council presence and increased resources in school
    - Primary versus middle schools
    - Dynamic effects: SCMP actively engaged versus post intervention

Discussion Contd.

- Problems with large scale interventions (Muralidharan and Neihaus, 2017)
- Accountability through external exams (Hanushek, 2019)
- Closed ecosystems (Prichett, 2013)

Thank you! Questions?

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