Incentives & Teacher Effort: Evidence from Lagos, Nigeria

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MOTIVATION

- About 85% of the world’s children live in the developing world, and these children receive extremely low-quality education in order to thrive later on in life.
- Lagos State is the most economically important state of Nigeria. Aside its economic importance, Lagos is also the most populated city in West Africa.
- The state has 339 Public Junior Secondary Schools and 319 Senior Secondary Schools (LJSS 2016).
- The rates are low (about 40%), the percentage of average students at various levels is high (at least 30%) at any given level (UBEC 2010).
- The ILG (2003) lamented that the situation of teachers in the school system in the Sub-Saharan region is so bad that it had reached “an insurmountable low point”.

This Paper

In this paper I answer the question: how do incentives affect the productivity or effort of public school teachers in Lagos, Nigeria?

- We randomly selected 10 public schools into treatment and control schools – 6 treatment, 4 control.
- The incentives were awarded to the teachers in each school with the highest average improvement in teacher effort.
- There were incentive arms: monetary incentives (a prize of about NGN500 or $15 cash), near monetary incentives (a supermarket gift card equal in value to the cash prize) and non-monetary incentives (an award ceremony at a school wide assembly).
- The outcome of teacher effort was measured using a teaching effectiveness survey – previous studies have used test scores as the outcome of choice – administered at baseline and end line to measure the following characteristics:
  1. Presentation of Content
  2. Clarity of Expectations on Directions
  3. Helpfulness/Availability
  4. Usefulness/Clarity of Feedback on Performance
  5. Encouragement of Participation/Discussion
  6. Motivation
  7. Overall Teaching Effectiveness
  8. Final Evaluation Score

SPECIFICATION

Identifying assumptions: Effort outcomes are exogenous conditional on the random assignment of treatment

- Differences in Differences (DID) methodology
- In addition to the basic linear regression assumptions, major underlying assumption of this method is the parallel trends assumption.

The basic empirical model we will be estimating is:

\[ \text{TeacherEffort}_{it} = \beta_0 + \beta_1 \text{Treatment}_{at} + \text{time} + \text{time} \times \text{Treatment}_{at} + \text{ytone} + \mu_{it} \]

*** Standard errors are clustered at the school level

\[ \text{When TeacherEffort}_{it} is the effort of teacher } i \text{ at time } t \text{ as measured by our key indicators, Treatment}_{at} \text{ is an indicator variable which shows the treatment status of teacher } i \text{ at time } t \text{ (1 if you are in the treatment group and 0 otherwise). Time}\text{ is an indicator variable which is 1 at the end line and 0 at baseline and } \mu_{it} \text{ is the differential impact on teacher effort of the assigned incentive relative to the control group.} \]

RESULTS

![Figure 1: Baseline (Left) & Endline (Right) Mean of Final Score in Treatment (1) and Control (0) Groups.](image-url)