



Teacher Performance Pay: Experimental Evidence from India

Author(s)	Karthik Muralidharan, Venkatesh Sundararaman
Contact	vsundararaman@worldbank.org
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Abstract	We present results from a randomized evaluation of a teacher performance pay program implemented across a large representative sample of government-run rural primary schools in the Indian state of Andhra Pradesh. At the end of 2 years of the program, students in incentive schools performed significantly better than those in control schools by 0.27 and 0.17 standard deviations in math and language tests, respectively. We find no evidence of any adverse consequences of the program. The program was highly cost effective, and incentive schools performed significantly better than other randomly chosen schools that received additional schooling inputs of a similar value.
Gender Connection	Gender Informed Analysis
Gender Outcomes	School performance
IE Design	Clustered Randomized Control Trial (Clustered at school level)
Intervention	The intervention provides bonuses based on student performance up to about 3% of a teacher's annual salary. The incentives were calculated on the basis of the average improvement in test scores. There were two different treatment groups. In group incentive schools, all teachers received the same bonus based on school-level averages. In individual incentive schools, teachers received incentives based on the scores of their students.
Intervention Period	August 2005 - for the school year
Sample population	The study sampled five districts across each of the 3 regions in Andhra Pradesh. In each of the five districts, one division was randomly selected, and then 10 mandals were selected from that division. In each of the 50 mandals, 10 schools were randomly sampled. There are 500 schools total, but 200 of the schools were tested in a sister experiment.
Comparison conditions	There are 3 treatment arms: individual teacher incentives, group teacher incentives and a control group with no teacher incentives.
Unit of analysis	Student and School Level
Evaluation Period	June 2005 - 2007
Results	After 2 years, students in incentive schools performed significantly better than control schools. The mean treatment effect is .22 standard deviations. There are significant improvements across the performance distribution. Additionally there were no observations of adverse consequences, given that students also do



	better in non-incentivized subjects. The main mechanism of impact is increased teacher effort conditional on the teacher being present. The student's gender does not have a significant effect on the impact of the intervention.
Primary study limitations	Once teachers get more familiar with the incentive formula they may be more likely to game the system.
Funding Source	Andhra Pradesh, DFID, Azim Premji Foundation, the Spanish Impact Evaluation Fund
Reference(s)	Muralidharan, K., & Sundararaman, V. (2011). Teacher Performance Pay: Experimental Evidence from India. <i>Journal of Political Economy</i> , 119(1), 39-77.
Link to Studies	http://www.prgs.edu/content/dam/rand/www/external/labor/seminars/adp/pdfs/2011/muralidharan2.pdf
Microdata	