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Teacher Incentives¹

By PAUL GLEWWE, NAUMAN ILIAS, AND MICHAEL KREMER²

We analyze a randomized trial of a program that rewarded Kenyan primary school teachers based on student test scores, with penalties for students not taking the exams. Scores increased on the formula used to reward teachers, and program school students scored higher on the exams linked to teacher incentives. Yet most of the gains were focused on the teacher reward formula. The dropout rate was unchanged. Instead, exam participation increased among enrolled students. Test scores increased on exams linked to the incentives, but not on other, unrelated exams. Teacher attendance and homework assignment were unaffected, but test preparation sessions increased. (JEL 121, I28, J13, O15)

Incentives for public school teachers are weak in many countries. Teacher absence is one symptom. A study of five developing countries found a 19 percent teacher absence rate (Nazmul Chaudhury et al. 2006). Many policies have been proposed to address weak incentives, including rewards for teacher attendance, adjusting teacher salaries based on students' exam scores, voucher programs, and increased community oversight. This paper examines a Kenyan program that rewarded teachers based on students' exam scores, with penalties for students missing the exam.

The program changed teacher behavior, particularly in the second year of the program, after teachers had had time to learn how it worked. Scores on the formula used to reward teachers were substantially higher in program schools.

Yet while there is evidence of narrow gains, that is gains on outcomes that were the focus of the incentives, there is less evidence for gains in other, broader measures of the stock of student human capital. In some cases, point estimates of effects are very close to zero, while in other cases they are positive, but fairly small and statistically insignificant. Students in program schools were more likely to take exams conditional on enrollment, but the dropout rate did not fall. A decomposition analysis suggests that two-thirds of the increase on the formula used to reward teachers is due to higher exam participation. Test scores increased on the exams linked to the incentives, but point estimates of increased scores on exams that were not linked to the incentives

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