Incentives and Teacher Effort

School survey data from Lao PDR show that nonmonetary incentives can be effective in motivating teachers to increase their effort.

Teachers and their classroom performance affect the ability of any education system to produce learning results, and incentives feature prominently in this process. For example, even when teachers are well trained, they may not be motivated to do their best because good performance is not aptly rewarded, with salaries being determined primarily by seniority, or because performance is neither monitored nor measured.

To improve performance, some countries have linked at least part of teacher pay to performance criteria such as student test performance. Opponents of this approach argue, however, that the work of teachers is multidimensional, with only some of its aspects measured by student test scores, and that linking pay to student performance would lead to teachers teaching mainly to the test. Moreover, research suggests that nonmonetary and implicit incentives, such as work conditions and peer pressure, may be sufficient or even more powerful in raising teacher effort.

The Lao People’s Democratic Republic offers a particularly interesting case for analysis. This country has witnessed steady economic growth rates averaging 7 percent in recent years, but it remains one of the poorest countries in East Asia, with limited quantitative evidence on its education system. A recent paper by Dang and King investigates the link between teacher incentives and effort in Lao PDR using a nationally representative primary school survey fielded by one of the authors.

Basic summary statistics reveal interesting patterns in the data. For example, teacher morale is higher and absenteeism lower than in other countries at higher income levels. Thirteen percent of teachers offer tutoring lessons to their students, more than half of them for no fee. Teachers generally spend an average of 13 hours a week preparing for class and grading homework. Nevertheless, teachers report frequent delays in salary payments. They report a delay of 1.8 months on average, with a maximum of up to 7 months.

The school survey collected richer information related to monetary and nonmonetary incentives. The authors use reported delays in the payment of individual teacher salaries to capture monetary incentives, and the extent of teacher autonomy, parent-teacher association (PTA) activities, and a school principal’s authority to measure nonmonetary incentives. Interestingly, these incentives represent the current practice in Lao PDR’s education system and are relatively amenable to policy influence in this country as well as in other developing countries, but most have not been analyzed in previous studies.

The authors also investigate novel measures of teacher effort that include the number of after-school hours a teacher works, whether or not a teacher offers after-school tutoring, whether or not after-school tutoring is for pay, and how many students a teacher tutors after school. The first two main outcomes—after-school work hours and after-school tutoring activities—are jointly estimated with a new simultaneous ordinary least squares–probit model with school random effects, an approach that can provide more efficient estimates than a single-equation estimation approach. Other econometric models, such as multinomial logit and negative binomial models, are also used.

The authors find that both monetary and nonmonetary incentives correlate with increased teacher effort in after-school work hours and after-school tutoring activities. In particular, one month of salary delay is associated with a 0.12 percent increase in the probability that teachers offer tutoring, while the freedom to develop teaching materials correlates with teachers working three additional hours a week. Incentives such as teachers having autonomy over the teaching method or the principal having the power to dismiss teachers lead teachers to substitute effort away from the less visible activity of preparing for classes and toward the more visible activity of after-school tutoring.

One limitation of this study is that the school survey did not collect data on student performance such as test scores, so the impact of incentives and teacher effort on student achievement cannot be investigated. But related studies point to the general positive influence of increased teacher effort (as measured by lower absenteeism, for example) on student learning, which suggests that a higher probability of teachers providing tutoring or longer after-school work hours are likely to result in nonnegligible and beneficial effects on students.

Promising avenues for future research include more investigation into the strategic behavior of teachers under different incentive mechanisms. Moreover, because of measurement issues related to self-reported effort, direct observation methods akin to those used in time allocation studies—methods that are admittedly costly to implement—would help strengthen the quality of future studies.