

How to Make Merit Pay Work

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Conservatives have a wide range of solid suggestions for education reform (to which liberals are increasingly warming), including school choice, merit pay, and tenure reform, which are undeniably appealing on principle, and usually have some good empirical support, too. But it's especially encouraging when there's gold-standard evidence of how a particular reform can succeed, and a new study provides just that for merit pay, for which the existing empirical support had been somewhat weak.

Roland Fryer of Harvard, Steven Levitt and John List of Chicago, and Sally Sadoff of UC San Diego have released [a paper](#) in which a randomized-control trial finds very strong support for incentivizing teachers based on their students' test scores, in a particular way, by exploiting the behavioral economic effect of "loss aversion": Rather than just offering extra merit pay, they would claw back some of the extra compensation if performances were unimpressive.

In nine low-income K–8 schools in Chicago Heights, Ill., the academics offered the following design for an incentive program, for which 150 of 160 teachers signed up to be divided into two groups for merit compensation, "gain" and "loss."

Essentially, the "gain" groups were promised a year-end reward between zero and \$8,000 depending on how much their students improved on various standardized tests, with \$4,000 being the reward for an average performance and the expected value. Meanwhile, the "loss" groups were given \$4,000 at the beginning of the year, and at the end of the year, if their students performed above average, they would receive more in compensation; below average, they would have to return whatever share of the \$4,000 their performance didn't earn.

"Gain" groups showed weak but insignificant benefits for student achievement, while the "loss" groups showed very significant gains: Scores under teachers with the treatment improved by between .2 and .398 standard deviations, or up to 9 percentiles; this is "large — roughly the same order of magnitude as increasing average teacher quality by more than one standard deviation," or, to put it another way, a more feasible way to deliver the performance expected from a much more talented teacher cohort.

#more# "Team" incentives used the same "gain" and "loss" dynamics, except with teachers grouped together so that their bonuses relied on the performances of students under a group of teachers. It's notable that there were no significant differences between the "team" and "individual" groups, casting doubt on the argument many teachers' unions groups put forward that merit-programs undercut morale or workforce cohesion.

Thus, the authors conclude that “framing a teacher incentive program in terms of losses rather than gains leads to improved student outcomes,” and “our findings have implications not only within education.” It’s worth thinking, then, about education reforms that will exploit this dynamic, either because, as the authors of the study speculate, its use as a compensation tactic is generally effective, or because for some reason it’s particularly useful in the context of education. And it seems like there could be something to the latter: Given the nature of public-school education and teachers’ unions, with all due respect to hard-working teachers, is it terribly surprising that they are risk-averse rather than terribly ambitious, and respond to incentives more when they risk loss, not expect reward? (That said, the literature on loss aversion also suggests that this dynamic holds true for people in general.)

So what policies could exploit this dynamic without being flat-out rejected by loss-averse unions? One could be tying teachers’ standard step raises to levels of student achievement: Most teachers currently expect such experience-based raises every year, but below-average teachers could be given below-average raises, and above-average teachers could be given above-average raises (this relies on the assumption that teachers now expect, say, a 2 percent step raise and would perceive receiving less as a loss, not just a forgone gain). It’s possible above-average raises might lead to compensation spiraling out of control, but the effects seen in this study suggest that the benefits could well be worth it.

One other way to exploit this, more obvious but more difficult, would be reforming teachers’ already legendary job security to tie it to measures of student achievement. A more moderate form of this would be the elongation or postponement of the tenure process, which Bobby Jindal’s education reforms in Louisiana began to attempt. Of course, a quicker way to take advantage of the power of loss aversion would be to improve school choice — students will get to benefit from private- or parochial-school teachers who have to answer to, often, year-to-year contracts, the kind of accountability public-school teachers, alas, may never see.