**Background**

Teachers retire considerably earlier than other professionals because of their pension incentives. Lengthening a teacher’s career is a possible solution to staffing pressures. One approach would be to increase the minimum age for receiving full retirement benefits, but legal and political factors may prevent this type of reform for incumbent teachers. A new study by Dongwoo Kim and colleagues, published in vol. 16, issue 1 of *EFP*, examines how retention bonuses targeted toward STEM teachers can neutralize retirement “push” incentives and improve school staffing.

**The Study**

The authors simulated the workforce effects of alternative late career compensation schemes and changes to pension plan rules. The authors examined two types of retention policies: a) retention bonuses of various sizes ($10,000 - $30,000) paid to teachers who hit certain experience milestones, and b) targeted Deferred Retirement Option Plans (DROP) that permit teachers to retire, collect either 70 percent or 100 percent of annuity, but continue working at full pay for a specified period of time (one year, in these simulations). Both policies relax the “push” incentive of the pension plan with the aim of extending the careers of targeted teachers. The sample included 2,131 STEM teachers from Missouri between ages 48 to 65 who were followed for three years, within which 31.3% of teachers retired.

**Findings**

Compared with retention bonuses, DROP plans yielded additional teacher years at lower costs. Depending on the size of the payment, retention bonuses can deliver between 100-350 additional STEM teaching years in Missouri at a cost of roughly $38,000 per incremental year. In comparison, DROP plans can deliver roughly 250 additional STEM teaching years at a cost of about $30,000 per additional year. The lower cost from a DROP plan comes from the fact that recipients agree to stop teaching at the end of the DROP period, which forces them to reveal hidden information about work versus retirement preferences. This reduces the number of teachers who would have worked longer even in the absence of the DROP plan, so it is more cost-effective. For various types of incentive schemes, the figure below summarizes the costs per additional teaching year (net of salary) and expected total teaching years gained.

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