



Short communication

Overview of the symposium on performance pay for teachers

Eric A. Hanushek^{a,*}, Ludger Woessmann^b^a Hoover Institution, Stanford University, CESifo, University of Texas at Dallas, and NBER, Stanford, CA 94305-6010, United States^b University of Munich, Ifo Institute for Economic Research, CESifo, and IZA, Germany

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1. Introduction

For a variety of reasons, considerable policy discussion currently revolves around the idea of linking teacher pay and promotion more directly to performance (e.g., Organisation for Economic Co-operation and Development, 2009). This attention partly reflects a now almost universal recognition that variations in teacher effectiveness are a key determinant of differences in school quality. But it also goes deeper than that and reflects a growing interaction of research and policy development.

From the policy side, the public in the U.S. and in other countries is becoming increasingly aware of the level of student performance. As the demand for skilled people increases, policy makers and the public have focused on making improvements in their schools. From the research side, data on student outcomes can be linked more readily to teachers and to programs. The strong results about the importance of teachers (Hanushek and Rivkin, 2010) have provided new impetus for investigating deeper aspects of

the labor market for teachers. And, newly available data bases on student performance have allowed researchers to investigate more clearly how performance relates to teacher pay, job mobility, retention, and the like. These two sides of the same issue are complementary and create the backdrop for this symposium.

To economists, the idea of linking a person's pay and promotion to job performance seems very natural (e.g., Lazear, 2003). Thus, the rarity of explicit linkages in most school situations is both a puzzle and research challenge. The research challenge presented is that a relatively limited range of performance pay schemes are currently implemented in schools. Moreover, those that have been introduced are relatively new, implying that any long-run responses including general equilibrium outcomes are difficult to observe. For this reason, a strand running through several of the papers in this symposium is how to gather indirect evidence about performance pay that could then support development of different policy options.

2. Highlights of articles

While several descriptive studies on the effects of performance pay for teachers are available for the United

* Corresponding author. Tel.: +1 650 736 0942.

E-mail address: hanushek@stanford.edu (E.A. Hanushek).

States (see Neal, 2011; Podgursky and Springer, 2007 for reviews), the most direct evidence to date comes from a set of experimental studies in Israel, Kenya, and India (Lavy, 2002, 2009; Glewwe, Nauman, & Kremer, 2010; Muralidharan & Sundararaman, 2009). Building on their experimental study in the Indian state of Andhra Pradesh, Muralidharan and Sundararaman (this issue) analyze how teachers like the concept of performance pay and how this is affected by whether they are subjected to performance pay or not. The interview-based study finds very high levels of support for performance pay schemes among teachers. These are raised even further by being exposed to the specific performance-pay scheme implemented in Andhra Pradesh, a result which – given the random assignment in the experiment – has a causal interpretation. It is thus not necessarily the case that teacher opposition is a leading cause for the rarity of performance pay schemes in practice. The study also finds a positive association between teachers' support for performance pay and their estimated value-added to student achievement, suggesting that over time, performance pay schemes may be able to attract better teachers into the profession.

Such possible long-term general-equilibrium effects are also a main motivation for the cross-country study by Ludger Woessmann (this issue). Short-term experimental studies are restricted to the incentive effect of motivating current teachers. By contrast, international evidence comparing student achievement in countries that do and do not employ performance pay schemes is also able to capture the sorting effect of attracting and retaining a different pool of teachers. Of course, this comes at the cost of reduced confidence in the causality of the estimates relative to experimental analyses. Still, the student-level evidence based on the rich database of the PISA international achievement test shows a positive association of average student achievement with a country-level measure of teacher performance pay. More refined analyses that use continental fixed effects and control for other forms of salary adjustments that are not based on teachers' performance rule out the most obvious concerns about causality.

While direct pay for performance has not been common in public school systems (Ballou, 2001), little is known about the extent to which promotions and retentions of teachers are related to their performance in the classroom. Using extensive administrative data from Florida, Matthew Chingos and Martin West (this issue) thus turn to an investigation of whether alternative personnel policies may be related to teacher effectiveness. Specifically, if there is a rigid wage in teaching (based on experience and educational degrees), there might be implicit compensation from other policies such that more effective teachers are rewarded outside of the teacher salary system. They find evidence to support this. Teachers who are more effective in raising student achievement are more likely to move into administration such as becoming a principal where they presumably have higher salary opportunities. Less effective teachers on the other hand tend to move to lower-stakes teaching – that is, teaching where accountability tests are not used.

A related question that arises is the role of supervisors in evaluating teachers. A concern that has been frequently expressed is that subjective evaluations will not reflect the effectiveness of teachers but instead could introduce elements of favoritism or discrimination. Brian Jacob and Elias Walsh (this issue) use the actual teacher evaluations given by principals in Chicago and investigate whether they are systematically related to teacher characteristics and especially to those characteristics that have been found to be correlated with teacher effectiveness. The analysis suggests that the evaluations are systematically related to productivity-enhancing attributes such as early career experience, teacher absences, and quality of college attended by the teacher. This study reinforces prior work that had relied upon survey information for evaluations.

One of the prime motivations for considering performance pay is a presumption that current teacher personnel systems do not reward teachers who are particularly effective in the classroom. Matthew Chingos and Paul Peterson (this issue) use rich data from Florida to demonstrate that this proposition is true and important. Through an analysis of teacher value-added to student achievement, they can essentially rule out the relationship of determinants of hiring and pay on achievement. Specifically, in contrast to pay schedules, the effectiveness of teachers by experience shows a short period of rising, but this is followed by broad declines in effectiveness in later stages of the career. From that, they go on to investigate whether some teacher training institutions do better than others. Their limited success at this suggests little systematic differences among the alternative suppliers of new teachers.

Discussions of performance pay necessarily revolve around salaries and extra payments for effective teachers. Little analysis is available, however, to place the costs of alternative programs into economic perspective. Instead, discussions tend to focus on changes in achievement scores or possibly continuation in school but these are difficult to relate in a benefit-cost way to expenditures. The study by Eric Hanushek (this issue) relates measures of teacher effectiveness directly to the economic value generated by different quality teachers. Two alternative approaches are employed: an evaluation of the impact on future earnings of a class for teachers of varying rankings; and an assessment of how the bottom end of the teaching effectiveness distribution affects aggregate student achievement and ultimately overall GDP. By both approaches the estimated impact of improving teacher quality appears extraordinarily large.

Extending the existing and recently emerging literature, the set of contributions collected in this symposium sheds new light on several important aspects of teacher performance pay. The papers in this collection were originally prepared for the Conference on "Merit Pay: Will it Work? Is it Politically Viable?" at Harvard's Kennedy School in June 2010, which was sponsored by Harvard's Program on Education Policy and Governance. We are grateful to Paul E. Peterson and Michael Henderson for organizing this stimulating event. It is hoped that the conclusions and open issues revealed by the contributions of this symposium will inform and invigorate a rapidly expanding stream of future research on this important topic.

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