

The effects of pay decentralisation on teachers' pay and teacher retention

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Motivation

Good teachers matter, both in the short-run for pupil attainment, and in the longer-run for non-test outcomes (e.g. Chetty, Friedman and Rockoff 2014ab; Rothstein 2010,2015). Delivering good education therefore means attracting and retaining good teachers, and incentivising them to perform well. How to recruit, retain and incentivise good teachers is a concern in many countries. In England, concern has centred on the system of centralised pay determination since it is unable to respond to workers' outside options in local labour markets (Britton and Propper 2016). The School Teachers' Pay Review Body (STRB) which advises government on teacher pay awards in England noted in 2012 that "the current pay system is rigid, complex and difficult to navigate and does not support schools to recruit high-quality teachers or leaders" (DfE 2012).

This paper evaluates the impact of a major reform to that pay system which opened up the flexibility for schools to pay teachers whatever they liked in order to attract, retain and incentivise them, subject to an upper and lower bound. We explore the effects of this shift away from the previous national seniority-based system towards one in which schools are free to negotiate pay with individual teachers as they see fit.

In principle, there is the potential for the reform to have significant effects not just on teachers themselves, but also their pupils, although it is the former on which we focus in this paper. Under the reform, schools are expected to have regard to individual teacher annual performance reviews. While the previous spine-point pay schedule published by the STRB has been discontinued, teacher unions continue to provide 'shadow' national wage schedules intended to aid schools wishing to pursue the previous method of paying teachers. We use these to estimate the extent to which individual schools took advantage of the pay flexibility now available to them, explore the characteristics of the schools who chose to do so, and use a difference-in-differences strategy to estimate the effects of a school taking advantage of this flexibility on teachers' pay.

The literature on rather small-scale incentive bonuses for teachers is large (e.g. Loyalka et al., forthcoming) but only a handful consider wage decentralisation on the whole teacher labour market. Biasi (2018) evaluates the impact of Wisconsin's Act 10 which permitted school districts to dispense with collective bargaining and replace it with individual wage bargaining. She finds districts that chose to switch experienced a greater pre-post improvement in value-added compared with districts that stuck with the regulated pay regime. Willen (2018) investigates the wage effects of the cessation of centralised pay determination for teachers in Sweden with a system of individual wage bargaining devolving responsibility for pay setting to employers at local level. He finds that the move to decentralised pay setting resulted in an across-the-board increase in teacher wages compared to the wages of college-educated non-teachers. This increase comes at the expense of other

school expenditures, a resource switch which may partly explain the fact that the wage hike does not translate into an improvement in pupil attainment.

Data and Methods

We use national administrative data, including teacher- and school-level records from England's national administrative School Workforce Census (SWF), which we have linked (at the school-level) to the Consistent Financial Reporting returns (for financial performance data) and to the School Performance Tables (for average pupil attainment data).

A unique feature of our setting is that even after the reform, a consortium of large teacher unions has continued to publish reference pay points. This allows us to construct counterfactual pay for every teacher, had the pay reform not taken place. We use these counterfactual salaries to identify schools that adopted some form of flexibility and those who continued to use the seniority-based system. Hence, we classify schools into adopters and non-adopters. We also distinguish between groups of adopters according to the form of flexibility they adopted.

Having identified schools that adopted flexible pay, we analyse the effects of adopting this pay flexibility. We focus on the following outcomes: individual teacher pay; individual teacher hours; and the probability of individual teacher retention. We plan to expand this list to see if teachers became more likely to move across certain types of schools, if certain types of schools' ability to fill vacancies changed, or if the teacher workforce composition changed. We employ a difference-in-difference (DiD) framework, using the adopter status as a treatment indicator; we discuss the challenges we face in using adopter status in this way.

Contribution

About 9% of schools sped up pay progression relative to what would have been expected in the seniority based scheme, while about twice as many slowed it down, which is perhaps unsurprising against a backdrop of declining per-pupil budgets during this period.

Teachers in schools that sped up pay progression saw wages increase by 4% on average, while those who slowed it down saw wage falls of 3%; however, we find no effects of adoption on teacher retention. These estimates imply low labour supply elasticities to schools, leaving them with substantial monopsony power. About 15% of schools did not adopt the reforms at all, while the remainder are "mean zero" adopters.

We intend extend the analysis by linking our findings to a linked employer-employee panel data set (Annual Survey of Hours and Earnings) containing a 1% snapshot sample of all English workers in employment, and which allows us to identify schools (as workplaces) and teachers. These data serve two primary purposes; (i) they allow us to check much longer pre-trends of adopter and non-adopter schools, going back to 2002, in validating the design we use, and (ii) they allow us to explore the role of local labour markets in our analysis, in relation to both the observed pattern of adoption of pay flexibility and in moderating the impacts of the pay reforms on labour market outcomes for teachers.

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