UK General Election 2019: Modelling assumptions used for costing the three main political parties proposals on teachers' pay

The estimates presented in our blog depend on a number of assumptions that are outlined below.

1. Scenarios

The scenarios we have modelled may not reflect the intentions of the main political parties as to how they might implement these policies. However, they provide useful benchmarks for constructing a range of estimates.

The costs of our scenarios are measured relative to a baseline scenario, which assumes that teacher salaries remain flat between now and 2022/23. This ensures our estimates are comparable with government policy announcements, which are provided in cash terms.

2. Inputting missing data

Our analysis uses data on all qualified teachers whose salaries have been reported in the 2018 School Workforce Census (SWC). We exclude all unqualified teachers from our analysis as they have a separate pay range and it is not clear how the pledges made by all the main parties would apply to this range.

Our analysis excludes a small number of cases where either the school did not supply a school workforce census return or where salary information was either missing / had an extreme value (as defined by the methodological guide to the DfE school workforce publication). We have not weighted our analysis for these missing cases as we do not have sufficient information about their characteristics and teaching experience. As a result, our estimates of the policy costs are likely to be a slight underestimate of the true costs.

3. Salary data

Our analysis used base salaries that have been reported in the SWC. This excludes any additional payments that teachers receive; for example, payments received for additional teaching and leadership responsibilities or Special Education Needs teaching. This is because there is a lack of detail on how the many party pledges that our blog considers would apply to these additional payments.

4. Data cleaning

Our analysis is based on all qualified teachers whose salaries have been reported in the SWC. In our data cleaning stage, we excluded duplicate teacher records, removed extreme values and cleaned other contextual variables.

5. Teacher population composition

Our analysis assumes that the composition of the teacher workforce will remain the same between now and 2022/23.

6. Pay policy by school type

Most teachers are on one of three pay ranges: main, upper and leadership[i]. As a rule, most classroom teachers are on the main pay range, teachers with additional responsibilities are on the upper pay range and school leaders are on the leadership pay range. Since 2013, the government has set the minimum and maximum salary for each pay range.

Local authority (LA) maintained schools then have the freedom to pay their teachers at any point between the minimum and maximum within each pay range. Government salary announcements affect the minimum and maximum thresholds of each range.

Academies (including free schools, University Technical Colleges and studio schools) have complete freedom on how they set teacher salaries. However, previous research has documented that many academies use DfE guidance in setting teacher salaries (Burgess et al, 2019). Even when they do not actively set their salaries according to DfE guidance, many academies will still set salaries to compete with LA maintained schools in order to attract teachers within their local labour markets. Our modelling therefore assumes that academies will react to policy changes in the same way as LA maintained schools.

7. Projecting salary increases for 2019/20

For 2019/20, we assume a pay rise of 2.75% based on current government policy. There is no clear evidence for how far policy increases affect teacher salaries. This is due to the difficulty in disentangling pay increases that result from policy changes with pay increases related to performance or promotions. Due to this lack of evidence, we make the simplifying assumption that all teachers experienced the 2.75% salary increase.

8. Proposed percentage salary increases

While government policy sets the minima and maxima of each pay range for LA maintained schools, individual schools have the flexibility to set increases for teachers within the pay ranges. For the purposes of this modelling, we have assumed that LA maintained schools will pass on the full pledged salary increase.

9. Area cost adjustment

The £30,000 minimum threshold is adjusted using the current DfE area cost adjustment (ACA), which takes into account higher teacher wages in London.

Table 2: Area level adjustment

Area	Weights	Adjusted minimum
Inner London	1.1897	£35,691
Outer London	1.0996	£32,988
Fringe	1.0298	£30,894
Rest of England	1	£30,000

Source: Department for Education teacher pay area-cost adjustment.

10. Pension and National Insurance costs

Our school-level estimates of the costs of increasing teacher salaries include National Insurance and pension costs. These are as follows:

- Schools will pay employer National Insurance Contributions (NIC) at 13.8% of all salary costs above £8,632 per year.
- Schools contribute to the Teacher Pension Scheme (TPS) at 16.48% of all salary costs. In doing so, we assume that the additional grant funding which schools currently receive to fund employer pension contributions to the TPS between 16.48% and 23.68% of salaries will continue.

11. Inflation

We project inflation using Office Budget responsibility forecasts for the GDP Deflator.

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[i] There are also separate pay ranges for lead practitioners and unqualified teachers.