Institute for Fiscal Studies

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Working paper

Who enters the public sector? A cohort analysis of sectoral choice

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Who Enters the Public Sector?
A Cohort Analysis of Sectoral Choice

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Abstract

This study documents that, between 2008 and 2019, the public sector in the United Kingdom became a less common workplace for individuals entering the labour market with low levels of education. At the same time, it became a more common destination for the most educated, whether defined by highest qualification, university rank, or final degree grade. The changes occurred over two distinct phases: a decline in the public sector share for the cohorts entering the labour market between 2009 and 2014, followed by a recovery between 2015 and 2019. Both phases had an educational gradient: the decline was steepest for those entering work without university qualifications and for graduates from the lowest–ranked universities. The recovery was confined to graduates from the best–ranked universities, for those graduating with a first-class degree or a postgraduate qualification. A breakdown by graduate discipline and destination area in the public sector suggests that the trends reflect changes in funding for different parts of the public sector and rising educational requirements.

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1 Introduction

There are reasons to believe that the public sector's appeal has declined. The most obvious lies in the evolution of pay differentials: a graduate in the United Kingdom who saw the public sector offering, on average, 18% more than the private sector in 2008 might no longer opt for it in 2023, with a premium of 10%.[1] But non–pecuniary incentives may also have changed. The trend towards outsourcing is said to be 'infantilising' the public sector (Mazzucato and Collington, 2024) and declining trust in public institutions may have diminished its prestige.

The lack of evidence reflects constraints in data infrastructure. Databases on pay and employment in the public and private sectors typically aggregate multiple cohorts of labour market entrants, with changes in their averages shaped not only by inflows but also by outflows, retention patterns and life–cycle trajectories. Accurately describing changes in the public sector's appeal requires data on both (i) pre-employment characteristics (e.g., education) of those it seeks to attract and (ii) employment records with sectoral identifiers. Although the United Kingdom has administrative education and firm–level employment records available for research, these datasets were not linkable until recently.

For the entire population of English–educated labour market entrants since 2008, educational records – from primary and secondary education (held by the Department for Education, DfE) to tertiary education (collected by the Higher Education Statistics Agency, HESA) – have recently been linked to income data from His Majesty's Revenue and Customs (HMRC) and a near–complete registry of employing organisations in the UK, maintained by the Office for National Statistics (ONS).[2] This linkage allows us to study the educational backgrounds of public sector entrants across more than a decade of labour market entry cohorts at an unprecedented level of granularity: by highest qualification, rank within and across universities, subject and grade.

The analysis shows that, between 2008 and 2019, the public sector became a less common initial employment destination for individuals with lower levels of education. At the same time, it became an increasingly common destination for those at the top of the education distribution, whether defined by highest qualification, university rank or final degree grade. This shift occurred over two distinct periods: a phase of decline in the public sector share at entry between 2009 and 2014 and a recovery between 2015 and 2019. The decline was steepest for GCSE holders (examination at age 16), A–Level holders (examination at age 18), and for university graduates from lower–ranked universities. The recovery was confined to university graduates and driven by those graduating from high–ranked universities, with a first-class degree or a postgraduate qualification.

What accounts for the divergent developments at the two ends of the education distribution? Candidate explanations are unlikely to affect all areas of the public sector equally, nor all graduate subjects equally, which makes it useful to break down the trends by graduate subject and destination area in the public sector. The decline in entry between 2009 and 2014 cannot be explained by reduced entry from graduates in education or medicine and stems largely from

[1] Own calculation using the Labour Force Survey.

[2] The second iteration of the Longitudinal Educational Outcomes (LEO) database, released in November 2023, permits linkages between the National Pupil Database (NPD), which provides educational attainment data for all pupils in state schools in the UK; HESA's tertiary education data, annual income data from HMRC, and firm–level data from the Inter-Departmental Business Register (IDBR).

reduced entry into local authority and government. This suggests that cuts to public sector expenditure in the beginning of the 2010s—which largely spared education and health budgets—can partly account for the observed trends.

Examining the extent to which the documented trends are linked to the evolution of sectoral pay differentials reveals substantial heterogeneity across graduate disciplines. For graduates in subjects offering competitive private–sector options (e.g., science, technology, engineering, and mathematics (STEM)), the explanatory power of the entry–level public sector pay premium is stronger than for those in subjects where the public sector is the dominant employer (e.g., medicine or education). Graduates from the top five universities,[3] stand out: their public sector entry share increased from 12% to 13% between 2008 and 2019, despite a substantial increase in the average entry–level pay differences in favour of the private sector.

2 Data

This study uses the second iteration of the Longitudinal Education Outcomes database (LEO2)[4] which links administrative datasets from several government departments into an individual–year panel of educational trajectories and labour market outcomes.

- **The National Pupil Database (NPD):** Held by the Department for Education, this dataset provides attainment data at ages 16 and 18 for all pupils in state–funded schools in England, including detailed GCSE and A–Level results.[5][6] The NPD is itself linked to the School Census, which provides demographic information such as sex, age, ethnicity, and socioeconomic background.

- **Tertiary education outcomes:** Drawn from the Higher Education Statistics Agency (HESA), covering all students enrolled at publicly funded UK higher education institutions. These records include the institution attended, subject area, degree level (undergraduate, postgraduate, PhD), and final degree grade (e.g., first-class, upper second).[7][8]

- **Annual income data:** Derived from His Majesty's Revenue and Customs (HMRC) via the Pay As You Earn (PAYE) system, which captures nearly all employees earning above the National Insurance threshold.[9][10]

[3] As ranked by the average GCSE scores of prior students.

[4] Department for Education; HM Revenue and Customs; Department for Work and Pensions; Higher Education Statistics Agency, released 01 November 2023, ONS SRS Metadata Catalogue, dataset, Longitudinal Education Outcomes SRS Iteration 2 Standard Extract – England, https://doi.org/10.57906/pzfv–d195

[5] Over our timeframe, GCSEs were graded on a scale of A*–G, with C considered a passing grade. Students typically select between 6 and 11 subjects, including mandatory English, mathematics, and science.

[6] In 2015, the compulsory school–leaving age in England was raised from 16 to 18, requiring students to remain in some form of education or training. We observe no discontinuities in our trends around this policy change.

[7] Students who enrol in tertiary education but do not complete their qualification are assigned their next highest completed qualification (e.g., A–Level holders).

[8] To ensure comparability, we exclude individuals with non–standard educational trajectories: those taking less than three years or more than five years to complete an undergraduate degree after A–Levels, less than a year or more than three years for a postgraduate degree after an undergraduate, or more than seven years for a PhD after a postgraduate. These restrictions remove highly selected individuals with atypical labour market experiences prior to graduation.

[9] We exclude self–employment income, which is available only from 2013 onwards.

[10] As noted by Bell, Bloom, and Blundell (2022), PAYE data omit low–hours individuals earning below the threshold, equivalent to a minimum–wage employee working fewer than 15 hours per week.

- **Firm and sector data:** Finally, LEO2 links these records to the Inter–Departmental Business Register (IDBR), a registry of UK employers registered for VAT or PAYE. Public sector status is inferred directly from the tax classification of the employer. The IDBR also provides seven–digit Standard Industrial Classification (SIC) codes and legal status identifiers, allowing us to distinguish public sector sub–industries (e.g., local authorities, central government).[11]

Two data–preparation issues warrant particular attention. First, there is a high concentration of low–income observations—a known but not yet fully understood feature of these administrative income records. We address this by censoring the bottom 5% of the income distribution within each tax year.[12]

Second, there is a risk of cohort compositional bias. Since this is a cohort study – where cohorts are defined by the first year in which individuals are observed with positive annual income – care is warranted when constructing cohorts for valid comparisons over time. We mitigate this risk in two ways:

- **Consistent cohort definitions:** We begin with the cohort entering the labour market in 2008, when the first undergraduate degree holders with standard study durations appear in the data. To ensure comparability, we exclude individuals with unusually short or long educational trajectories—such as completing an undergraduate degree in two years or skipping school years.[13] Without this restriction, undergraduate cohorts observed before 2008 would consist almost entirely of highly selected individuals. Starting in 2008 and excluding these outliers ensures that cohorts are comparable and standard.

- **Iterative analysis by highest qualification:** We account for cohort differences in the representation of different highest qualification groups by examining public sector entry trends within, rather than across, highest–qualification categories.

3 Background

The first two decades of the 2000s witnessed significant shifts in the sectoral structure of the UK economy. Figure 1 provides a brief description.

Before comparing trends across the public and private sectors, it should be noted there are marked compositional differences (see Table 1 in the Appendix). The public sector employs a higher proportion of women, older individuals, and degree-holders than the private sector (Nibloe, 2024).[14] Life–cycle income and non–wage benefits—such as pension contributions—also substantially differ between the sectors (Postel-Vinay, 2015; Postel-Vinay and Turon, 2007; Boileau et al., 2023). Public sector pay is also more compressed, with a negative premium at the top of the wage

[11] We exclude organisations that are neither strictly public nor private, such as charities or NGOs.

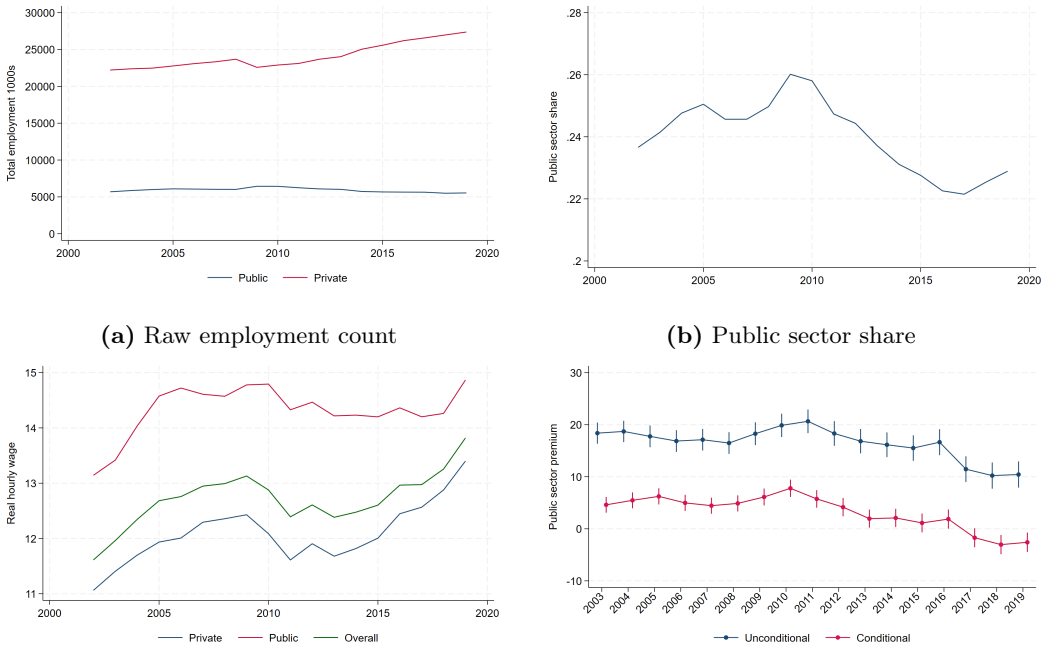
[12] This restriction primarily affects GCSE–level entrants rather than university graduates, who are the main focus of this study. A large share of these observations likely capture short–term or marginal work.

[13] For example, undergraduates are restricted to those who complete tertiary education between 3–5 years after finishing their A–Levels. Likewise, postgraduate graduates must graduate at most three years after their undergraduate degree, and PhDs must graduate between 3–7 years after their previously highest level of education.

[14] This reflects the occupational composition of the public sector, particularly in health and education, where tertiary qualifications are typically required.

distribution (Cribb and O'Brien, 2024). Yet, it can be argued that the *trends* in average pay differentials remain informative, as they appear robust to workforce composition controls (Cribb and O'Brien, 2024).

Figure 1 panels (c) and (d) show that real average pay rose in both sectors up to the financial crisis but then diverged: private sector wages fell sharply but recovered relatively quickly, while public sector wages stagnated in real terms from 2010 onward. As a result, the average public sector pay premium increased until 2012 (when private sector wage growth resumed) and then steadily declined.



(a) Raw employment count

(b) Public sector share

(c) Pay across sectors

(d) Public sector pay premium

Figure 1: Trends in public sector employment and pay, 2008–2019.

These panels show trends from 2008 to 2019: (a) total public and private sector employment (Y–axis), (b) the public sector share of total employment (Y–axis), (c) real public and private sector hourly pay in 2019 prices (Y–axis), and (d) the public sector pay premium (Y–axis), defined as the percentage difference in average pay between the public and private sector. In each panel, the X–axis shows years. Panel (a) is constructed from official government statistics, and (b)–(d) are constructed using the Labour Force Survey. Private sector employment includes self–employment. The unconditional public sector premium is calculated by regressing log hourly wages on a binary indicator for public sector employment. The conditional premium is calculated in the same way, except we also control for age (squared), sex, education, and 3–digit occupation fixed effects.

These pay trends are partly reflected in the employment patterns (panels (a) and (b)). The public sector's share of total employment remained relatively stable at around 25% until 2007, rose during the financial crisis as private sector layoffs spiked, and declined steadily thereafter. Panel (a) shows that the increase in public sector share during the crisis was driven by a contraction in private sector employment rather than a growth in public sector headcount. The subsequent decline

in public sector share after 2009 reflects stagnant public sector employment alongside continuing private sector expansion.

The decline in public sector employment relative to the private sector after 2009—and the erosion of the public sector pay premium—largely reflects fiscal consolidation measures implemented between 2010 and 2017. During this "austerity" period, total managed expenditure fell from 46.5% to 40.4% of GDP.[15] The cuts were unevenly distributed across departments.[16] Wage growth was capped at 1% annually for individuals earning above £21,000, the public sector median. These policies significantly reduced income progression, particularly at the top of the distribution. The average public sector pay premium fell from 7% in 2010 to 0% by 2018, with degree-educated and female individuals outside southern England especially affected (Nibloe, 2024). The pay caps were lifted in 2018 and the public sector's share of total employment rose for the first time since 2009.

4 Results

The subsequent graphs offer one interpretive angle on the trends in Section 3: they show pay and employment at *labour market entry*, isolating cohort–specific inflow trends that are obscured in aggregate series such as Figure 1. They differ from Figure 1 and from most cross–cohort analyses in the literature in three ways:

1. The X–axis shows entry cohorts, defined as the first year of labour market income after graduation.

2. The Y–axis reports the public sector share and pay *in the first year of labour market income after completion of the highest qualification.* At entry, the public sector share is lower than later in the life cycle—and therefore lower than the cross–cohort aggregates in Figure 1—because the probability of public sector employment increases with labour market experience (see Appendix A2).

3. Due to data limitations, the first year considered is 2008. This means that the analysis does not cover the relatively stable period preceding the financial crisis.[17]

4.1 Main results

We evaluate three different proxies of education: highest qualification, university rank and degree grade. All three point to the same pattern, namely that, between 2008 and 2019, the public sector became a less common first work destination for those with lowest levels of education, but a more common one at the very top of the education distribution.

[15] Total managed expenditure includes both departmental and non–departmental spending, such as welfare, pensions, and debt interest.

[16] Local governments saw a 47.5% real–terms reduction, while health spending rose by 5.4%. The civil service headcount fell by 20%.

[17] We compare the share of university graduates entering the public sector with that of GCSE and A–Level holders, whose entry can be traced further back. Public sector entry probabilities for these groups remained stable between 2005 and 2008, suggesting that the first year of our analysis (2008) is representative of the pre–financial–crisis landscape.

4.1.1 Trends by highest qualification

Figure 2 shows that the public sector share at entry more sharply declined for those with GCSEs and A–Levels than for those entering with undergraduate degrees.[18] By 2019, the share halved for GCSE holders, it declined by 25% for A–Level holders and by only 5% for entrants with an undergraduate degree.

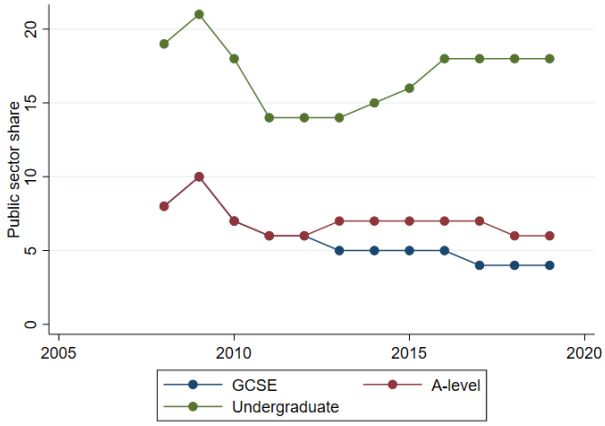


Figure 2: Public sector share at labour market entry by highest qualification, 2008–2019.

This line plot shows the public sector share at labour market entry (Y–axis) from 2008 to 2019 (X–axis) for three groups: individuals entering the labour market directly after GCSEs, after A–Levels, and after completing an undergraduate degree. Each point captures the percentage of entrants selecting public sector employment in that year for each group. Values are rounded.

The divergence in trends by highest qualification group is mainly attributed to a stronger recovery in public sector entry among undergraduates between 2015 and 2019, which GCSE and A–Level holders do not observe. Trends were more similar across qualification groups between 2008 and 2014, with a financial–crisis–driven increase around 2009 followed by a sharp decline.

4.1.2 Trends by university rank

Are the trends *within* highest–qualification categories consistent? Figure 3 zooms in on undergraduate degree holders as the largest qualification group in the public sector, showing a university-rank gradient: entry into the public sector fell among graduates of lower–ranked universities but slightly increased among those from top–ranked ones.[19]

Figure 4 shows that this divergence was primarily driven by developments in the first half of the analysis period. Between 2008 and 2014, the public sector share at entry fell by ten percentage points for graduates of bottom–percentile universities, while entry rates from top–percentile universities remained stable. In contrast, the recovery between 2015 and 2019 was more evenly distributed.

[18] Further analysis within tertiary education levels follows below.
[19] Universities are ranked according to the average GCSE (age–16) scores of their prior entrants.

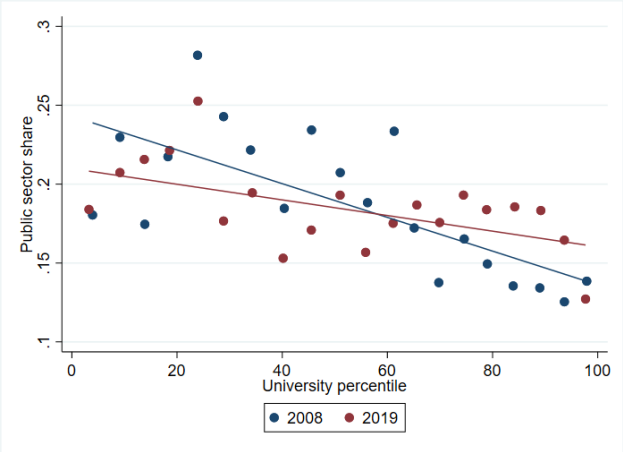
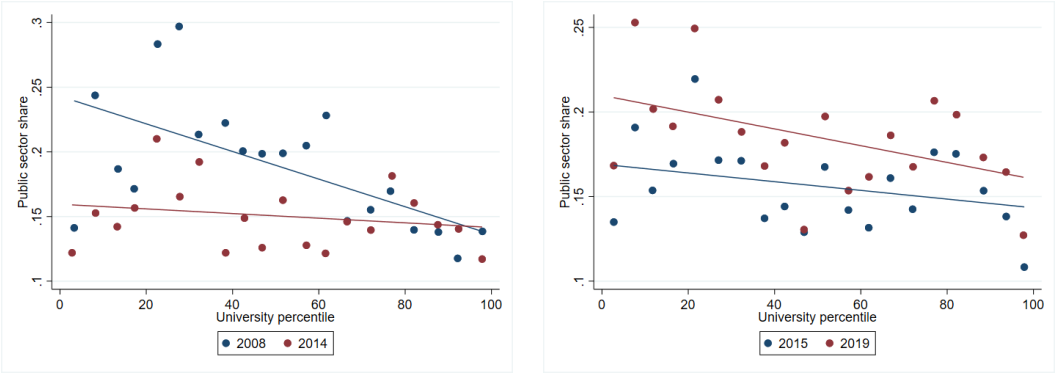


Figure 3: Public sector share at labour market entry by university rank, 2008–2019.

This binned scatterplot shows the mean public sector share at labour market entry (Y–axis) for 2008 and 2019 by university percentile (X–axis). Universities are ranked by the average GCSE scores (age 16) of prior graduates, with the 100th percentile representing the top 1% of universities. Each dot represents a mean over equal–sized bins of universities, weighted by student numbers. Values are rounded.



(a) 2008–2014

(b) 2015–2019

Figure 4: Public sector share at labour market entry by university rank: 2008–2014 (left) and 2015–2019 (right).

This binned scatterplot shows the mean public sector share at labour market entry (Y–axis) by university percentile (X–axis) for two years in each panel. Universities are ranked by average GCSE scores of prior graduates. Each dot represents a mean over equal–sized bins of universities, weighted by student numbers. Values are rounded.

4.1.3 Trends by final degree grade

Are the trends robust to alternative measures of educational attainment, e.g. one only weakly related to university rank—the final degree grade?

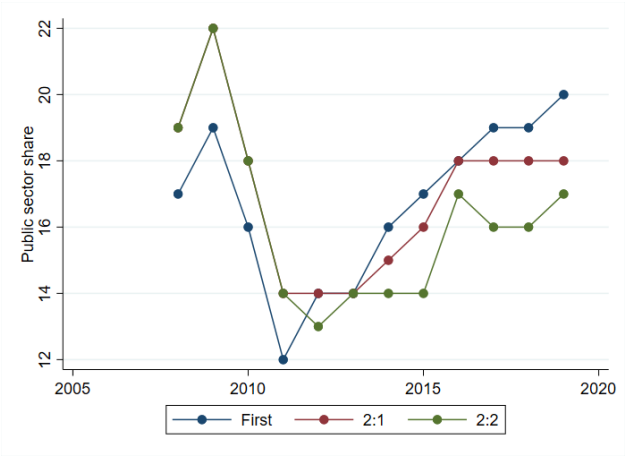


Figure 5: Public sector share at labour market entry by final degree grade, 2008–2019.

This line plot shows the public sector share at labour market entry (Y–axis) from 2008 to 2019 (X–axis) by final degree grade. Degrees are grouped into five categories: First, 2:1, 2:2, Third, and Fail. The latter two categories are omitted as they represent a very small share of students. Values are rounded.

Figure 5 suggests that yes. In 2008, graduates with upper and lower second–class degrees had higher public sector entry shares than those with first-class degrees but, by 2019, the ranking reversed. Entry shares increased among first-class graduates while declining for those with lower degree grades. By the end of the period, 22% of graduates with first-class degrees entered the public sector, compared to 19.5% of graduates with upper seconds (2:1) and 17.5% of graduates with lower seconds (2:2). (While grade inflation occurred over the period, it only biases interpretation if it affected different categories of final degree grades differently.)

4.1.4 Trends by graduate education

The analysis thus far has focused on graduates with undergraduate degrees, who account for the largest share of graduate entrants.[20] For a more complete picture, we extend the analysis to two further graduate categories: postgraduate–degree holders (e.g. MSc, MA, MPhil) and PhD graduates. Figure 6 shows the public sector share at entry across cohorts of labour market entrants. As discussed in Section 2, the more years of education, the later the year of labour market entry implying that postgraduates and PhDs cannot be traced as far back as undergraduates. Public sector entry shares are increasing in educational attainment: PhDs exhibit the highest probability of public sector entry (30% in 2018), followed by postgraduates (27%), and then undergraduates (18%)—a ranking that holds across cohorts of labour market entrants.

More revealing than the ranking is the dynamic: the growth rate of the public sector share upon entry is found to increase with the level of tertiary qualification. The share of PhD graduates entering the public sector increased by 30% between 2014 and 2018, compared with 17% for postgraduates and 5% for undergraduates.

[20]To avoid cohort compositional bias, as explained in Section 2.

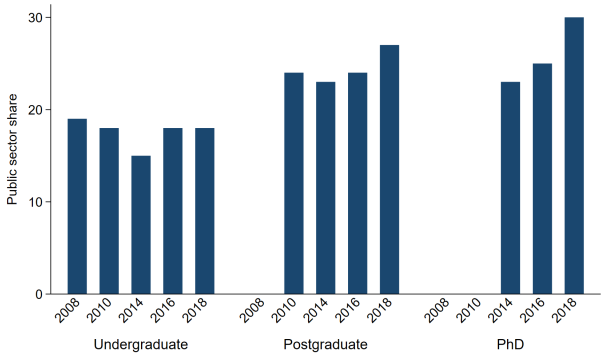


Figure 6: Public sector share at labour market entry by subject and tertiary education category

This bar chart shows the public sector share at labour market entry (Y–axis) for selected years (2008, 2010, 2014, 2016, and 2018), disaggregated by tertiary education category: undergraduate, postgraduate (e.g. MSc, MPhil, MA), and PhD. Values are rounded.

4.2 Interpretation

What could be driving the divergence of trends across the two ends of the education distribution? Candidate explanations are likely to have unequal effects across public sector areas, graduate disciplines, or the distribution's tails.

The following analyses aid interpretation with a decomposition of the trends (i) by subject of study, (ii) by destination within the public sector, (iii) by examining the extent to which the trends are associated with the evolution of the public sector pay premium and (iv) with a separate analysis of the graduates from the top five universities.

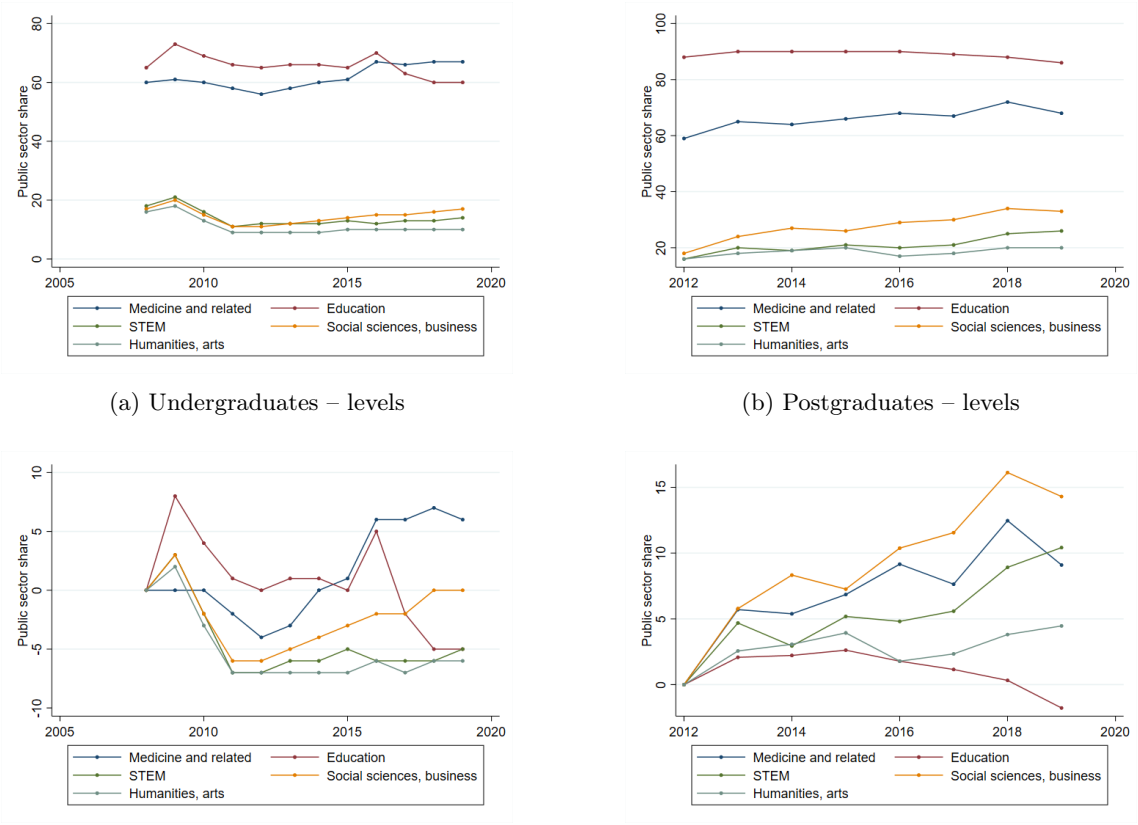
4.2.1 Heterogeneity by graduate discipline

The breakdown of trends by university degree subject (Figure 7) reveals that the steep educational gradient in the decline of public sector entry between 2008 and 2014 was not driven by graduates in education or medicine, but by graduates from all other fields, with substantial variation across subjects.

As shown in panels (a) and (c), graduates in education and medicine (and related fields) consistently exhibited high public sector entry shares, which remained relatively stable throughout the entry cohorts until 2014 (and beyond for education graduates).[21] Over the sample period, the most pronounced reductions in public sector entry shares were observed among humanities, arts and STEM undergraduates. By contrast, social sciences and business undergraduates experienced a sharp decline between 2009 and 2011, followed by a marked increase in public sector entry after 2012.

Turning to postgraduates in panels (b) and (d), we observe an increase in the public sector share across all subjects between 2012 and 2019. Unlike among undergraduates, there was a substantial rise in the proportion of STEM postgraduates entering the public sector.

[21] 'Medicine and related undergraduates' includes, for example, core medicine graduates and those who studied pharmacy and nutrition. The latter two are more likely to enter the private sector than core medicine graduates.



(a) Undergraduates – levels

(b) Postgraduates – levels

(c) Undergraduates – normalised

(d) Postgraduates – normalised

Figure 7: Public sector share at labour market entry by subject

These line plots show the public sector share at labour market entry (Y–axis) by selected subjects of study (X–axis), separately for graduates entering the labour market with an undergraduate degree (left panels), from 2008 to 2019, and for entrants with a postgraduate degree (right panels), from 2012 to 2019.[22] Panels (a) and (b) present shares in levels; panels (c) and (d) show shares normalised to 2008 for undergraduates and to 2012 for postgraduates. Subjects are grouped into five categories: Education; Humanities and Arts; Medicine and Related; STEM; and Social Science and Business. Values are rounded.

4.2.2 Heterogeneity by destination area in the public sector

The breakdown by public sector destination area (Figure 8) shows that the decline in public sector entry between 2008 and 2014 was driven by reduced entry into local authority and government (including core civil service), rather than into health. The recovery of the public sector share at entry since 2014 appears to have been driven mainly by health, and to a small extent by the government (see Figure 7), while local authority entry has continued to decline.

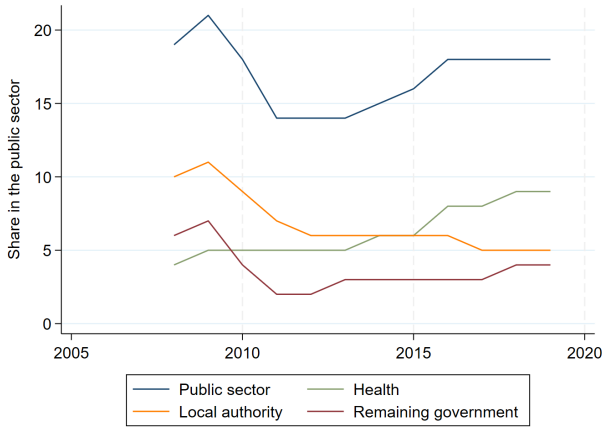


Figure 8: Public sector share at labour market entry by destination area, 2008–2019.

This line plot shows the share of labour market entrants (Y–axis) from 2008 to 2019 (X–axis) in four categories: the overall public sector, all government, the health sector, and local authorities, for graduates entering the labour market after an undergraduate degree. Values are rounded.

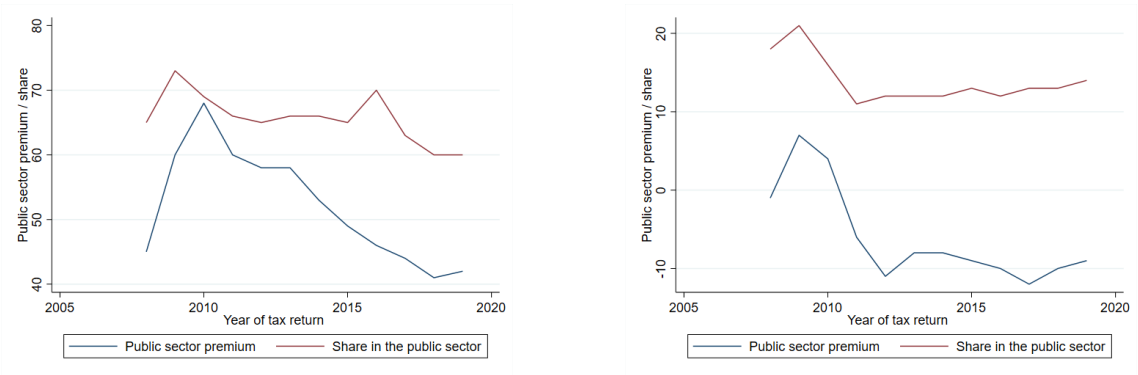
Taken together, the heterogeneity analysis by graduate subject and public sector destination suggests that expenditure cuts played an important role in the decline in public sector entry among those with the lowest levels of education: the areas most exposed to cuts exhibited the largest changes in entry, whereas those largely shielded showed little change. As Table 2 in the Appendix documents, public sector spending reductions largely spared education and health budgets and disproportionately affected local authority.

4.2.3 Link to public sector premium at entry

To what extent are the observed trends linked to the evolution of pay differentials between the public and private sectors?

Figure 9 reveals heterogeneity in this relationship. For graduates from fields with strong private–sector options, the trends exhibit a relatively strong correlation with the evolution of entry-level pay differences, whereas in fields where the public sector is the dominant employer—such as medicine and education—the correlation is weaker. On the whole, the explanatory power of the public sector pay premium does not appear to weaken or strengthen over time, as one might expect if non–pecuniary factors were becoming increasingly important for occupational choice (see Figure A4 in the Appendix).

It should be noted that this evidence is merely suggestive of the importance to attribute to financial incentives, and the measure considered – the entry-level public sector pay premium – debatable. First because, for most individuals, sectoral choice depends more on long–term career prospects than on first-year pay. Second, because the measure is imprecise: since entry occurs throughout the calendar year, the observed first-year annual income conflates differences in compensation rates with differences in employment duration and hours worked (see Section 2).



(a) Education

(b) STEM

Figure 9: Public sector share and pay premium at labour market entry: Education and STEM graduates, 2008–2019.

These line plots show the public sector share at labour market entry (left Y–axis) and the public sector pay premium (right Y–axis) from 2008 to 2019 (X–axis) for (a) Education graduates and (b) STEM graduates. The public sector pay premium is defined as the percentage difference in average pay in the public and private sector in the labour market entry year. Values for both series are rounded.

4.2.4 Graduates from the top five universities

Graduates from the top five universities[23] stand out in that their public sector entry share slightly increased despite a substantial decline in their entry-level public sector pay premium (Figure 10). While immediately after the financial crisis their average first-year income was higher in the public than in the private sector, the entry-year premium fell to around –20% by 2013 and has remained at that level until 2019. Nevertheless, the share entering the public sector rose by 18% between 2014 and 2019. As Figure 11 shows, this increase is primarily driven by higher entry rates into government.

[23]We select the top five universities based on the average GCSE scores of prior graduates.

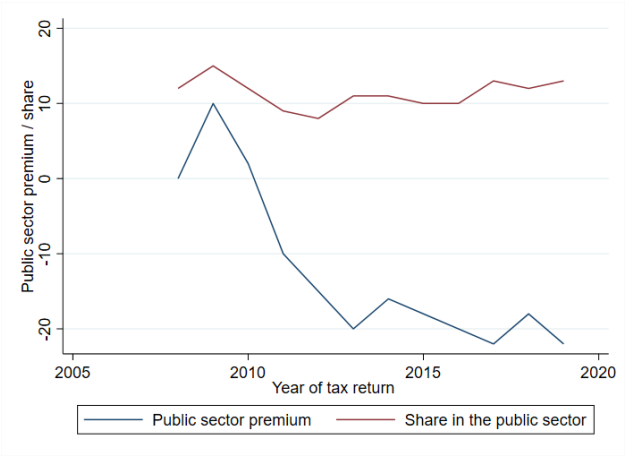


Figure 10: Public sector share at labour market entry for entrants with an undergraduate degree from the top five universities, 2008–2019.

This line plot shows the evolution of the public sector share at entry and the entry-level public sector pay premium (Y–axis) from 2008 to 2019 (X–axis) for graduates from the top five universities.[24] Values are rounded.

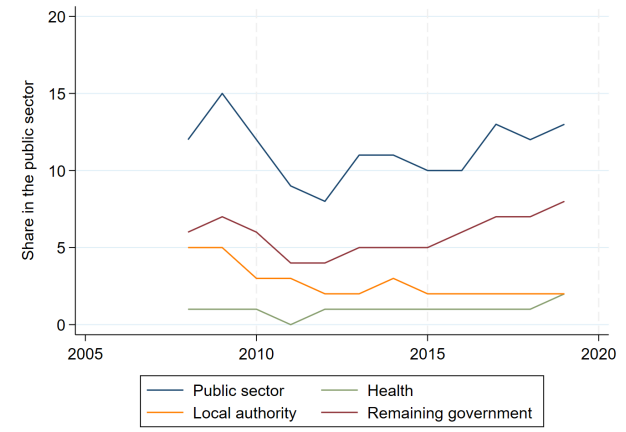


Figure 11: Public sector share at labour market entry by public sector area for entrants with an undergraduate degree from the top five universities, 2008–2019.

This line plot shows the share of labour market entrants from the top five universities (Y–axis) from 2008 to 2019 (X–axis) in four categories: the public sector, government (incl. core civil service), the health sector, and local authorities, for labour market entrants with an undergraduate degree from the top five universities. Values are rounded.

5 Conclusion

In 2008, young university graduates were already more likely than those with GCSEs or A–Levels to begin their careers in the public sector. By 2019, this educational gradient strengthened: entry into the public sector became more common among the most qualified, while it declined sharply among those with fewer qualifications.

The timing and nature of these trends point to a central role for public sector spending cuts. The overall decline in public sector entry was driven by reduced inflows from the lower end of the educational distribution into local authority and government, both of which were particularly exposed to expenditure cuts. Areas that were less affected by spending cuts, such as health and education, continued to attract entrants.

Changes in the entry-level public sector pay premium correlate with the documented trends, with notable heterogeneity across disciplines: the correlation is weak for graduates in fields where the public sector is the dominant employer (e.g. medicine and education).

Graduates from the top five universities stand out; their public sector entry rates remained stable despite a 20% decline in their entry-level public sector pay premium.

References

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Additional Material

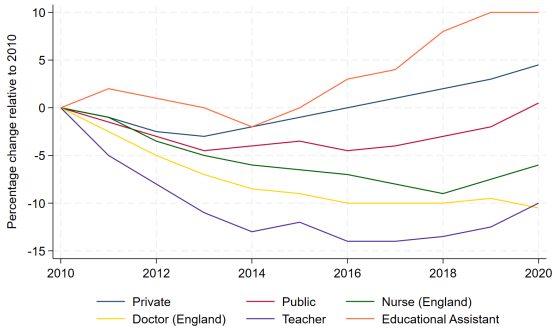

Figure A1: Wages in public and private sectors by occupation.

This figure shows the average pay evolution between 2010 and 2020 across a range of occupations. The public and private series refer to mean weekly earnings from the Average Weekly Earnings dataset (AWE). The series on doctors and nurses are mean annual earnings per person in NHS trusts and other core organisations in England. The data on teachers and educational assistants refers to average weekly earnings collected from the Annual Survey of Hours and Earnings (ASHE). The figure is replicated from Cribb and O'Brien, 2024.

Sector	Mean Wage	Wage P10	Wage P90	Emp. Share (%)	Educ > A-Level (%)	Age	Female Share (%)	White Collar (%)	North (%)
Private	2.46	1.81	3.26	68.56	47.08	38.39	43.17	43.84	37.29
Public	2.63	2.03	3.24	31.43	67.28	42.13	64.18	63.79	42.52
Overall	2.51	1.86	3.26	100.00	52.89	39.47	49.21	49.57	38.79

Table 1: Summary Statistics by Sector

This table summarises key characteristics of public sector employees, showing that the workforce is more female, older, and more educated compared to the private sector. All wages are in 2020 £. "White collar" occupations are defined as occupations under 4000 according to the SOC 2000 classification. This table is reproduced from Nibloe (2025) using the Quarterly Labour Force Survey pooled from 1992–2020.

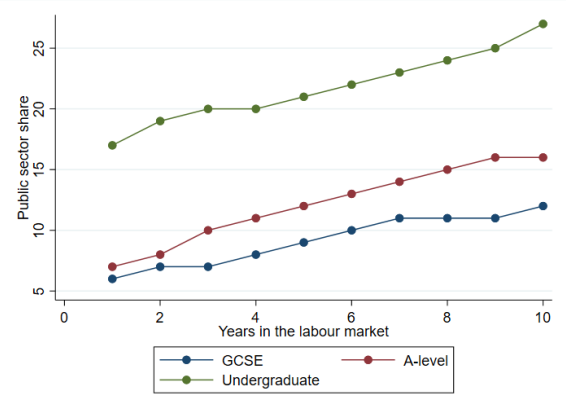

Figure A2: Public sector share over the lifecycle, by highest qualification.

This line plot shows the public sector share at labour market entry (Y-axis) over years of experience, grouped by highest qualification.

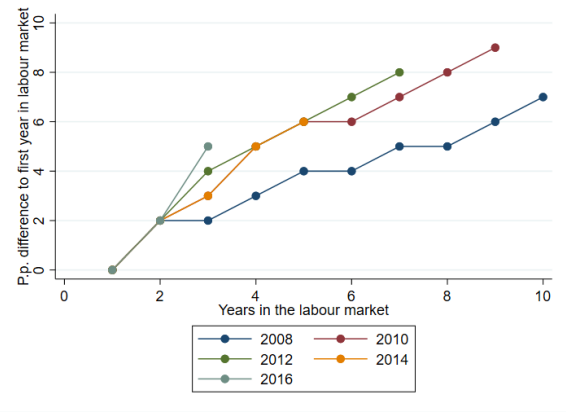

Figure A3: Public sector share over the years of experience, by labour market entry cohort

This line plot shows the public sector share over years of experience (Y-axis) across different labour market entry cohorts

	National Statistics					
Total DEL by departmental group	**2010–11**	**2011–12**	**2012–13**	**2013–14**	**2014–15**	**2015–16 (plans)**
Education	61,520	58,008	56,126	55,264	56,997	57,630
NHS (Health)	107,483	108,144	108,888	111,307	113,300	115,420
Personal Social Services (Health)[3]	1,574	–	–	–	–	–
Transport[4]	13,352	13,003	12,566	12,414	11,915	8,425
CLG Communities[5]	10,980	6,030	4,064	5,940	6,356	7,738
CLG Local Government[5]	26,047	26,688	23,997	16,711	13,657	10,534
Business, Innovation and Skills	20,458	18,255	17,265	17,461	15,767	16,713
Home Office	13,948	13,040	11,988	11,292	11,529	10,491
Justice	9,004	9,393	8,777	7,900	7,350	6,533
Law Officers' Departments	719	645	613	586	551	527
Defence	39,383	39,071	35,452	35,021	34,368	34,618
Foreign and Commonwealth Office	2,411	2,279	2,097	2,147	1,872	1,894
International Development	7,993	8,216	8,028	10,159	9,650	9,391
Energy and Climate Change	3,836	2,736	3,269	3,429	3,635	3,877
Environment, Food and Rural Affairs	2,390	2,490	2,353	2,628	2,336	2,057
Culture, Media and Sport	2,199	2,903	2,520	1,118	1,515	1,526
Work and Pensions	10,016	8,148	7,934	7,772	7,225	6,438
Scotland	30,499	28,965	28,879	28,740	28,803	28,322
Wales	16,197	15,371	15,118	15,243	15,528	14,271
Northern Ireland	11,557	10,982	10,796	10,803	10,772	10,555
Chancellor's Departments	4,234	4,085	3,567	3,411	3,582	2,971
Cabinet Office	2,630	2,574	2,597	2,544	2,835	2,762
Small and Independent Bodies	1,763	1,789	1,518	1,577	1,692	1,715
Reserve	–	–	–	–	–	–
Special Reserve	–	–	–	–	–	300
OBR allowance for shortfall	–	–	–	–	-3,000	-3,000
Adjustment for Budget Exchange[6]	–	–	–	–	–	2,000
Total DEL	**401,786**	**382,815**	**368,413**	**363,107**	**361,244**	**353,200**

Table 2: Evolution of departmental expenditure limits in the UK government

The data are reproduced from the Treasury Economic Evidence NCA Remuneration Review Body (HM Treasury, January 2014), Table 1A. They show changes in departmental expenditure limits (DEL) over time across UK government departments. (2) Real terms figures are the cash figures adjusted to 2014–15 price levels using GDP deflators. The deflators are calculated from data released by the Office for National Statistics on 30 June 2015. The forecasts are consistent with the Summer Budget 2015. (3) Personal Social Services (Health) are grants previously paid by the Department of Health that are now included in CLG Local Government's budget. (4) Following implementation of ESA10, Network Rail is now classified to Central Government. Consequently from 2015–16 there is no longer a Central Government capital grant to Network Rail. The actual expenditure of Network Rail appears in the Department for Transport departmental AME budget. (5) Figures from 2013–14 reflect adjustments to budgets for changes to local government funding relating to the localisation of business rates and council tax benefit. (6) Departmental budgets include amounts carried forward through Budget Exchange. These increases will be offset by any deposits at Supplementary Estimates in future years so are excluded from spending totals.

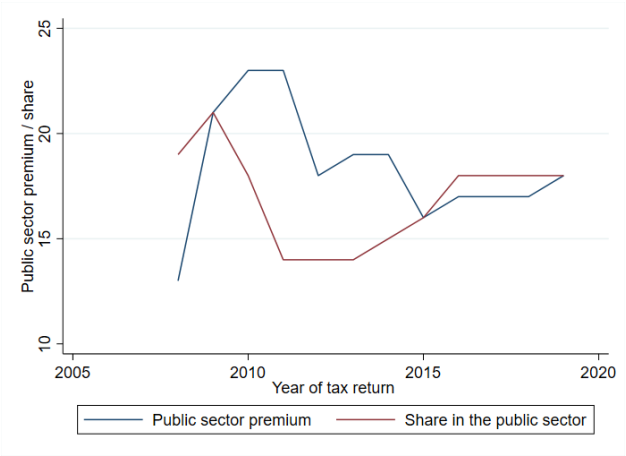

Figure A4: Public sector share and pay premium at labour market entry, 2008–2019.

This line plot shows the public sector share at labour market entry and the public sector pay premium from 2008 to 2019 (X-axis) for all entrants with an undergraduate degree. The public sector pay premium is defined as the percentage difference in average pay in the public and private sector in the first year in the labour market. Values for both series are rounded.