



BRIEFING PAPER

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Education spending in the UK

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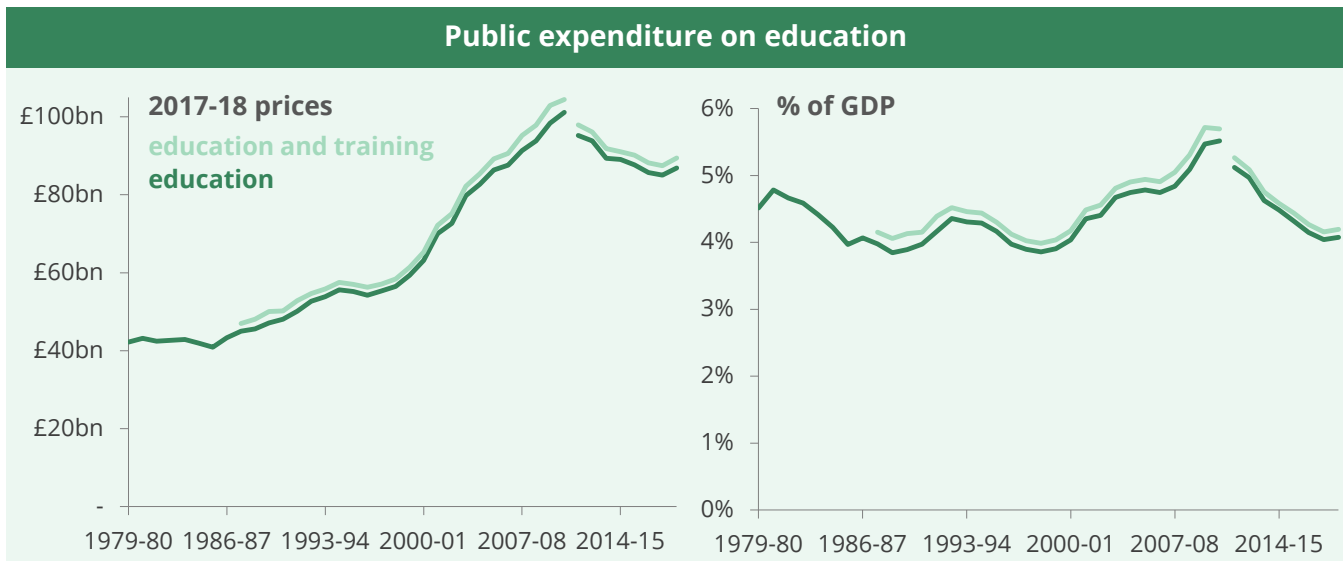
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Summary

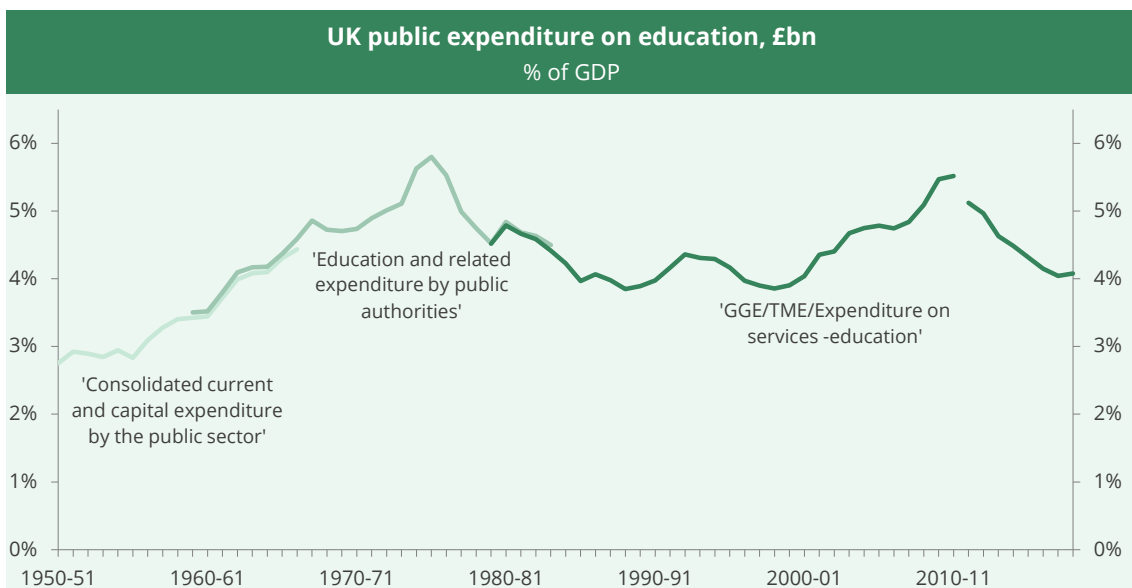
Since 1979...



The real level of public spending on education in the UK was static in the early 1980s. It increased gradually from the mid-1980s to the early 1990s before falling slightly in 1995-96 and 1996-97. After then it increased to new record levels in each year to the peak in 2010-11. The Government has removed spending on the subsidy element of student loans from data from 2011-12 onwards. Despite this break in the series **there was a clear decline in spending in the five years from 2012-13 to 2017-18. The increase in 2018-19 was the first since 2010-11.**

When expressed as a proportion of GDP, **education spending peaked in 2009-10 and 2010-11 at around 5.7%**, its highest since the mid-1970s. **The subsequent decline has taken it down to 4.2%.** There was a small increase in 2018-19, the first since 2009-10.

Since 1950...



Public expenditure on education increased as a proportion of GDP throughout the 1950s, 1960s and early 1970s. It peaked at 5.8% in 1975-76 before declining for the rest of the decade and much of the 1980s. It briefly increased in the early 1990s before

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falling back to a recent low of 3.9% in the late 1990s. **From the late 1990s it increased in each of the next 12 years to 5.5% in 2010-11.** A break in the series in 2011-12 limits the comparisons with later years, however, it is clear that **education spending fell as a % of GDP in each year from 2011-12 to 2017-18. This was the longest continuous period of decline in this measure for the period covered here.**

By level...

Almost 80% of education spending went on schools -primary and secondary education. The relatively low share going on tertiary (higher) education reflects the fact that the data exclude the subsidy element of student loans which forms the majority of higher education spending in England.

Within the UK...

Public spending per head on education in 2016-17 was highest in Scotland at around £1,550, followed by £1,490 in London and £1,440 in Northern Ireland. **It was lowest in the South East and South West of England at around £1,200.**

Where did spending go in 2018-19?		
	£bn	% of total
Pre-primary	4.2	5%
Primary	26.4	30%
Secondary	43.1	49%
Tertiary	4.5	5%
Subsidiary services	3.5	4%
R&D	2.5	3%
Training	2.2	3%
Other	1.4	2%
Total	87.9	100%

If spending on loans was added back in...

Spending still fell in real terms and as a percentage of GDP after 2010, but by a smaller amount than official figures (currently) show. Real spending levels have stabilised or increased slightly in the past few years.

Compared to other countries...

OECD analysis puts UK public spending on education at 4.9% of GDP in 2015. This was 7th highest out of the 26 OECD members with data on this measure and higher than the OECD average of 4.3%. If private expenditure on education is included then **the UK's total spending on education in 2015 was 6.2% of GDP, Only Norway (6.4%) and New Zealand (6.3%) had higher figures.**

This paper looks at trends in public sector education expenditure in the UK. Some more detail can be found in [Public expenditure statistical analysis 2018](#) including a breakdown of total expenditure by type of education and spending in total and per head in the different parts of the UK. The annual report and accounts of the [Department for Education](#) includes more technical detail of spending in the most recent year and, in appendices, plans to the end of the current spending review period. Chapter B of the [OECD's Education at a Glance 2018](#) compares education spending across OECD and other countries.

The briefing paper [Higher education funding in England](#) looks in detail at spending on higher education in England. The Department for Education publishes a wide range of data and analysis on school funding and expenditure in England under different headings. The most useful can be found at: [Statistics: local authority/school finance data](#), [School and college funding and finance](#) and [Section 251 documents](#).

1. Definitions of education spending and breaks in time series

[Section 2](#) of this paper looks at two main series; total UK public expenditure on education and total UK public spending on education *and training*. These have not been explicitly distinguished in recent official statistics on public spending, but this note uses the former descriptions where 'education' excludes the 'education not elsewhere classified' sub-function¹ and 'education and training' includes it. The definition of this sub-function has not changed, but official statistics now use education to refer to what was known as education and training in the past.

This paper retains the distinction between the terms for two reasons. First the education and training series only goes back to the late 1980s, while the education series goes back much further, even with some breaks in the series the concept remains the same. Second the education and training series is more consistent over the period it is available for. The spending data are regularly revised. These revisions can change the total figure, or move items of expenditure from one sub-function to another. The detailed breakdown by sub-function is only revised back five years. This presents a problem with consistency when trying to compile long-term series based on sub-functions and the authors warn against simply splicing one set of data with another pre and post-revision. The education and training series in this paper is therefore consistent for its entire length, other than the break in 2011-12 detailed below. The education series is not and although revisions are generally quite small, readers should be careful when drawing conclusions from this data, especially those based on small differences.

The Government has recently removed the subsidy element of student loans from its public spending data. Previously a proportion of the face value of loans made each year² counted towards public spending. This causes a break in the series, in 2011-12, but also means that trends afterwards are affected as an increased amount of funding for higher education in England shifted from direct public spending to loans. [Section 3](#) looks at the impact of this and plans to bring it back within public spending data.

The detailed breakdown of education spending by level includes all expenditure on academies in England under 'secondary education' despite many academies being primary or special schools. This skews trends in spending by level and affects comparisons within the UK.

¹ The Government uses the UN Classifications of the Functions of Government to classify spending by function and sub-function.

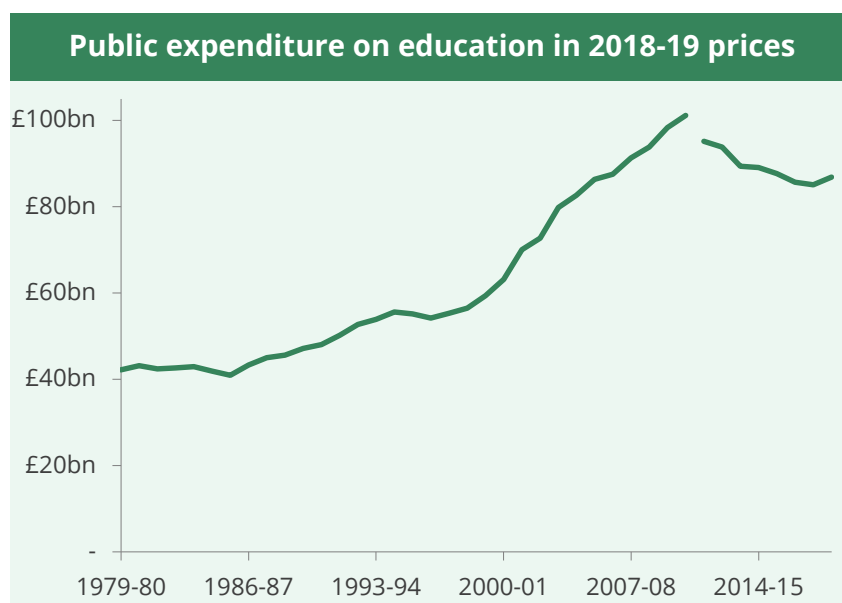
² The present value of the amount the Government forecast would not be repaid.

2. UK public expenditure on education since 1979

2.1 Education expenditure since 1979

Real spending levels have gone through five distinct phases as illustrated below; no change in the early 1980s, growth through to the mid-1990s, no change to the end of the 1990s, rapid growth in spending to 2010-11 and cuts in real spending from 2011-12 to 2017-18. The recent falls in spending were the first since the mid-1990s, but, despite spending falling from its peak, levels in 2017-18 were still higher than in 2004-05 or any previous year. The real increase in 2018-19 was the first since 2010-11.

The growth in spending from 1998-99 to 2010-11 is very clear, as is the fact that absolute annual increases were much larger than in the previous sustained period of increase (mid 1980s to mid 1990s). The only periods where real spending fell for two consecutive years were 1983-84 to 1985-86, 1994-95 to 1997-98 and 2012-13 to 2017-18. Spending in 2018-19 was £86.8 billion; more than double the level seen in the mid-1980s.



Sources: See [table 1](#)

Table 1 at the end of this note shows education spending in cash and real terms and as a percentage of GDP for each financial year since 1979-80 and education and training expenditure since 1987-88.

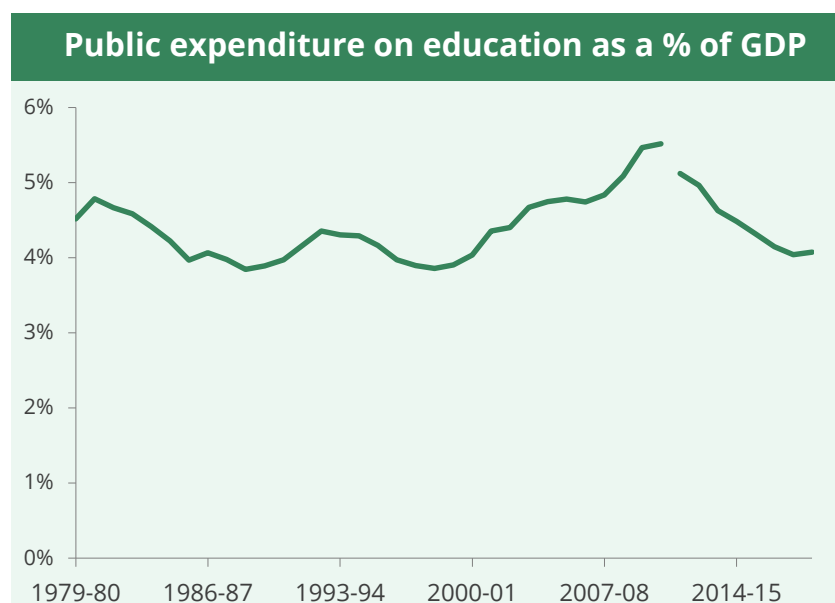
Peak spending in real terms was in 2010-11 at £101.2 billion (2018-19 prices). This figure is inflated to a certain extent by some one-off accounting adjustments to the subsidy element of student loans. These adjustments were to revalue the existing stock of loans to reflect lower than expected repayments.³ The additional expenditure was 'scored'

³ For revised assumptions regarding the base rate cap and the decision to use OBR data on short term earnings and RPI, rather than long term assumptions.

against the year in which these decisions were made, despite the facts that lower repayments will often not be realised for many years to come and the loans in question were taken out from the end of the 1990s onwards. Spending on tertiary education was (at the time) recorded as £15.8 billion in 2010-11 compared to £13.2 billion in 2009-10 and £13.1 billion in 2011-12.

These accounting adjustments are large enough to have a noticeable impact on the trend in overall public spending on education.

Spending has varied less when expressed as a proportion of GDP (below). It fell for much of the 1980s from 4.8% in 1980-81 to 3.8% in 1988-89. It increased to more than 4.4% again in the early 1990s due to increased spending and falling GDP. The lowest level since the late 1980s was in 1998-99 at 3.9% due to several years little or no real spending increases and a strong economy. The increases since then have been less dramatic than in absolute spending levels. Education spending exceeded 5.0% of GDP in 2008-09 and peaked at 5.5% in 2010-11. These particularly high figures reflect increases in spending during a recession and the accounting adjustments for student loans (2010-11) mentioned earlier.



Sources: See [table 1](#)

While the 2010-11 figure was a post-1979 high, earlier data, summarised later in this paper, suggest that spending was higher in the mid-1970s. International comparisons of spending as a share of GDP are given later in this paper.

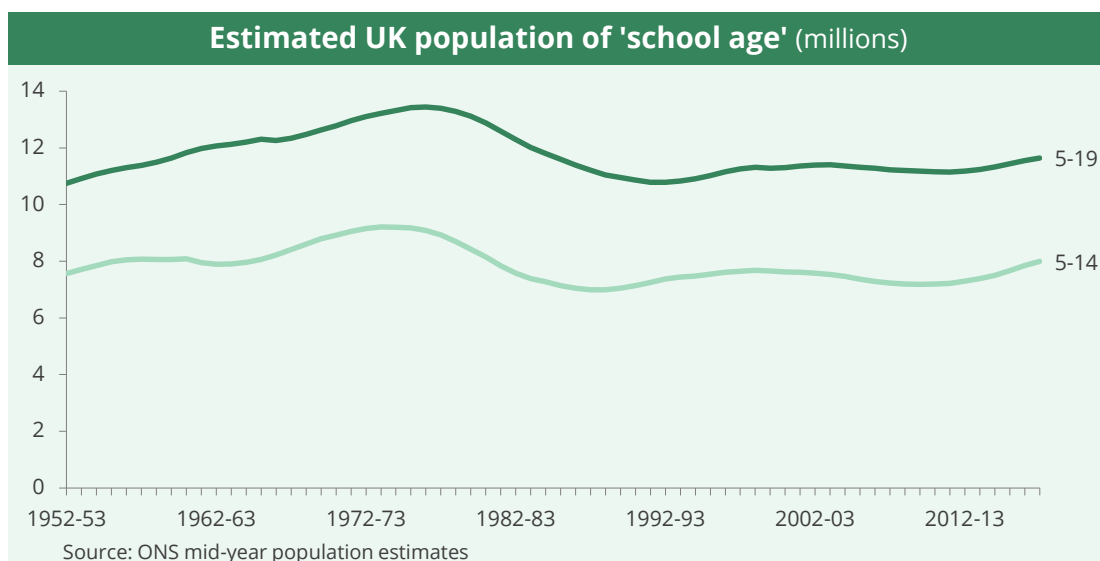
Revised GDP figures

All the data in this note used revised GDP figures issued by the Office for National Statistics following changes to National Accounts methodologies introduced in September 2014. These changed the treatment of R&D and military spending and included estimates of the value of some illegal activities for the first time. The impact on GDP of these and other revisions varies year-

to-year in the range of 2.6% to 6.2 % (increases) since 1997. More detail can be found in [Changes to National Accounts](#).

2.2 Education spending and population change

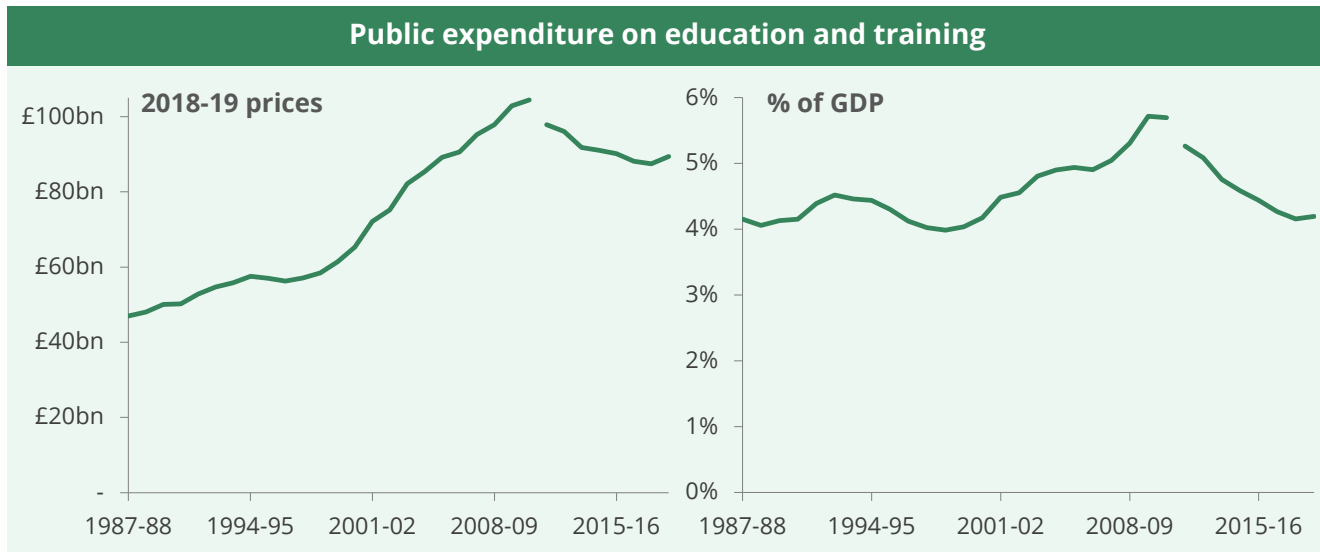
The time periods covered in this section and particularly in [section 4](#) include times when the school age population increased and decreased. The scale of these changes can be large -more than million in less than a decade- so it is important context to help us better understand the significance of differences in spending levels. The [appendix](#) to this paper looks at the issue in more detail, but trends in the size of the 'school age' population are illustrated below. For 5-14 and 5-19 year olds.



The 'school age' population increased during the 1950s, 1960s and early 1970s, before falling quite rapidly during the late 1970s and 1980s. Changes since then have been smaller, but there has been a clear increase since 2010, particularly in the 5-14 which was larger in 2018 than at any time since 1981.

2.3 Education and training since 1987

Trends in expenditure on education and training are also given in Table 1 at the end of this note and illustrated below.



Sources: See [table 1](#)

The inclusion of training expenditure has little impact on the 'shape' of either trend. Real spending on education and training peaked at £104 billion (2018-19 prices) in 2010-11 and at 5.7% of GDP in 2009-10.

The following table concentrates on spending covered by the 2004 and later spending reviews. Readers should note the impact of removing the subsidy element of student loans from 2011-12 onwards (described earlier).

	Education and training expenditure in the UK, 2005-06 to 2018-19					
	Cash prices			2018-19 prices ^(a)		
	Total £ billion	change £ billion	change percentage	Total £ billion	change £ billion	change percentage
2005-06	69.8	+6.8	+10.7%	89.2	+6.5	+7.9%
2006-07	73.0	+3.2	+4.6%	90.6	+1.4	+1.6%
2007-08	78.7	+5.7	+7.7%	95.2	+4.7	+5.1%
2008-09	83.0	+4.3	+5.5%	97.8	+2.6	+2.7%
2009-10	88.5	+5.5	+6.6%	102.9	+5.0	+5.1%
2010-11	91.5	+3.0	+3.4%	104.4	+1.6	+1.5%
2011-12	86.9	..	..	97.9	..	..
2012-13	87.0	+0.1	+0.1%	96.0	-1.8	-1.9%
2013-14	84.7	-2.3	-2.7%	91.8	-4.2	-4.4%
2014-15	85.1	+0.4	+0.4%	91.0	-0.8	-0.8%
2015-16	84.9	-0.1	-0.2%	90.2	-0.9	-1.0%
2016-17	84.9	-0.0	-0.0%	88.2	-2.0	-2.2%
2017-18	85.9	+1.0	+1.2%	87.4	-0.7	-0.8%
2018-19	89.4	+3.5	+4.1%	89.4	+2.0	+2.3%
Ave. change 2011-12 to 2018-19	..	+0.4	+0.4%	..	-1.2	-1.3%

Note: Excludes the subsidy element of student loans from 2011-12 onwards

(a) Adjusted using HM Treasury GDP deflators as at March 2019

Sources: HM Treasury, PESA 2019, and earlier editions

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The next table compares indicators of expenditure and expenditure growth for various time periods since 1987. As student loan subsidy spending is excluded from 2011-12 it is not possible to make direct comparisons in the *level* of spending from before and after this point. Comparisons of *change* can be made.

The average percentages of GDP spent on education were lower in the first two periods than in the following two (which overlap). The average annual increase across the whole of the period 1997-98 to 2010-11 at 4.4% was well above the earlier two periods. It was also higher than the 2007-18 to 2010-11 period (covered by the 2007 spending review). The periods overlap and hence this illustrates the lower than average planned increases from 2007-08 onwards.

How did education & training expenditure vary in selected periods?

	Average £ billion at 2018-19 prices ^(a)	Average percentage of GDP	Average real annual change	
			percentage	£ billion
1987-88 to 1996-97	52.9	4.28%	+2.03%	+1.03
1992-93 to 1996-97	56.3	4.36%	+0.72%	+0.40
1997-98 to 2010-11	81.2	4.85%	+4.75%	+3.64
2007-08 to 2010-11	100.1	5.44%	+3.11%	+3.06
2011-12 to 2018-19 ^(b)	91.5	3.97%	-1.28%	-1.21

(a) Adjusted using HM Treasury GDP deflators as at March 2019

(b) Excludes the subsidy element of student loans

Sources: HM Treasury, PESA 2019, and earlier editions

ONS series YBHA

The relatively large difference seen in the pre- and post-1997 average increases may seem at odds with the relatively small difference in the percentage of GDP figures. The same could be said about the real cuts/relatively high percentage of GDP from 2011-11 compared to large real increases/lower share of GDP from 1997 to 2010. However, as the charts on the previous pages showed, spending as a percentage of GDP was relatively high at the start of the 1980s, but fell in fourteen of the next twenty years. Therefore the average percentage of GDP over this period was relatively high; despite smaller average increases in spending. The reverse is true for the period from 1999-00; it took large real increases in spending to increase the proportion of GDP figure from its low level. The overall cuts in real spending from 2011 reduce the share of GDP going on education, but from a high point.

2.4 Breakdown of spending in recent years

The Government uses the UN Classification of the Functions of Government (COFOG) to breakdown spending within higher level categories such as education. These are:

- **Pre-primary** -under fives education
- **Primary education**
- **Secondary education** -includes 16-18 and similar levels

- **Post-secondary non-tertiary** – education beyond secondary level, but not at tertiary level
- **Tertiary** -higher education, first degree and above
- **Education not definable by level** -mainly adult and community learning that does not need any prior qualification
- **Subsidiary services to education** -spending to support education/students regardless of level, such as general administration and inspection costs.
- **R&D education**
- **Education not elsewhere classified** -here described as training

Definitions of the terms used here can be found on the [UN Statistics Division website](#).

It is important to note that **the Department for Education currently records all spending on academies under secondary education**. Secondary schools account for most of the spending on academies, but there are also include large numbers of primary and special academies. They are looking to improve the separation of spending across the education categories in the future. This skews the primary/secondary breakdown somewhat and limits the comparisons of primary and secondary spending between the home countries of the UK

The table looks at the component parts of education spending from 2013-14 in real terms. Some of the main patterns were:

- Spending on primary and secondary education made up almost 80% of the total in 2018-19
- Tertiary spending fell by more than 30% despite the increase in student numbers. This reflects the shift from direct funding to loans in England.
- Spending on R&D increased in real terms

Major component parts of education spending							
£ billion 2018-19 prices							
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Change 13-14 to 18-19
Pre-primary	3.6	3.1	3.2	3.2	3.5	4.2	-2.4%
Primary	28.8	29.3	29.3	28.5	27.0	26.4	-6.3%
Secondary	39.9	41.2	40.7	39.7	40.9	43.1	+2.5%
Tertiary	8.0	7.0	6.4	6.2	5.4	4.5	-32.5%
Subsidiary services	4.5	3.9	3.7	3.5	3.4	3.5	-24.9%
Training	2.4	2.0	2.5	2.4	2.3	2.5	-2.0%
R&D	1.7	1.7	1.6	1.7	1.8	2.2	+8.3%
Other	1.2	1.4	1.2	1.4	1.5	1.4	+22.9%
Total	90.2	89.5	88.6	86.6	85.9	87.9	-4.8%

Note: Total also includes spending on education not definable by level and post secondary non-tertiary education

Source: HM Treasury, PESA 2018, Table 5.2

The final table in this section breaks spending down into current and capital. This shows that current spending fell gradually in real terms over

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these years. Capital spending has been more erratic with a large cut in 2016-17 and a large increase in 2017-18.

Current and capital spending on education and training

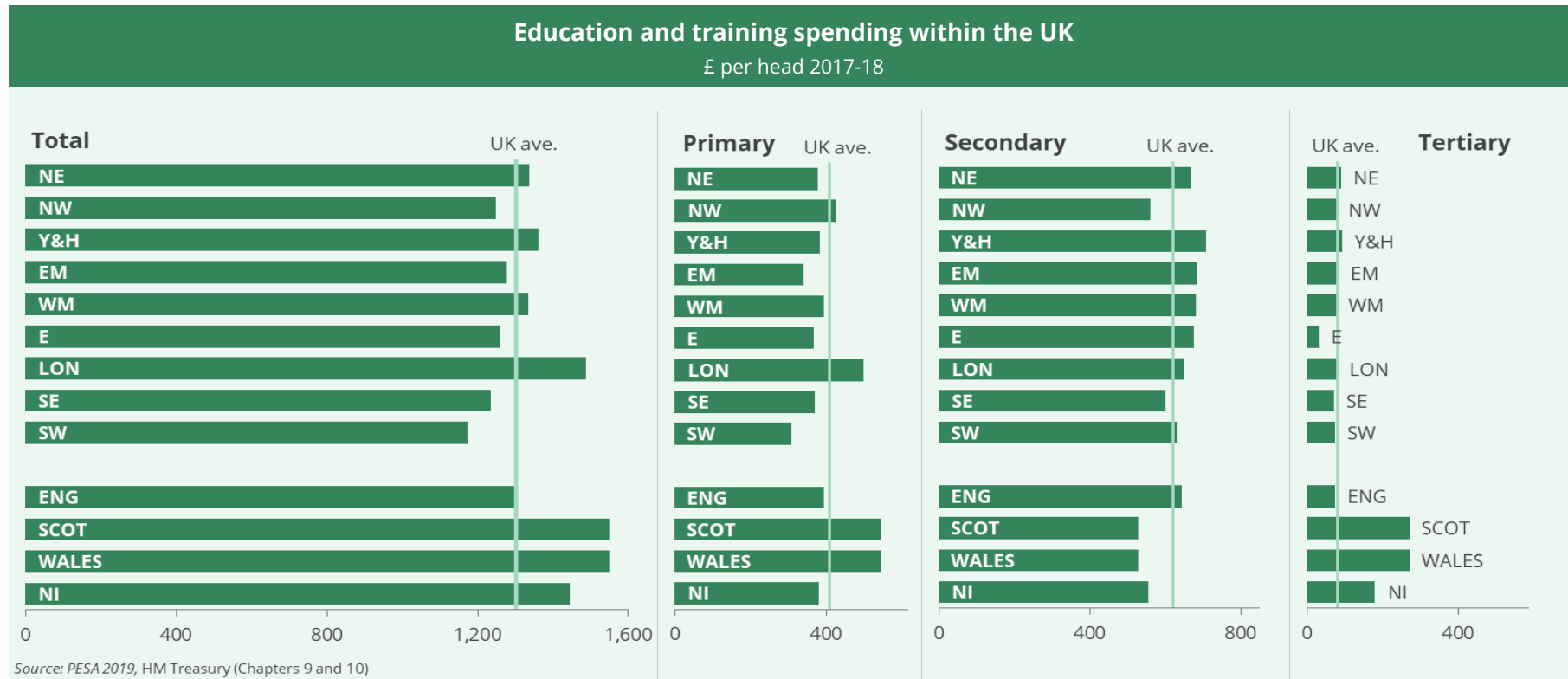
£ billion 2018-19 prices

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Change 13-14 to 18-19
Current	82.2	80.9	80.3	80.3	78.3	80.5	-4.8%
Capital	9.6	10.1	9.9	7.9	9.1	8.9	-4.6%
Total	91.8	91.0	90.2	88.2	87.4	89.4	-4.8%

Source: HM Treasury, PESA 2019. Table 5.4

Expenditure by region and nation

The following charts look at education spending per head in the different parts of the UK in 2017-18. The underlying data is from an annual exercise where departments and devolved administrations assign spending to the regions and nations of the UK based on who it benefits/where it is spent.



Total education and training expenditure was £1,301 per head for the UK as a whole in 2017-18. It was highest in Scotland at £1,548 and well above average in London, Northern Ireland and Wales. The South West had the lowest level at £1,174 per head. Comparisons will be affected by demographics –the relative size of the school/college/university age population in each region as well as the propensity for pupils in a given area to attend independent schools.

Comparisons of spending at primary and secondary level will be affected by including all academy spending under ‘secondary’ in England. Spending per head on primary education was an average of £409 across the UK. Again, it was highest in Scotland at £547, lowest in the South West at £307. There was less variation in spending at secondary level. It was highest in Yorkshire and the Humber, here £708 per head, but levels in several other English regions were not far behind.

Relative gaps were largest in tertiary education; from £272 per head in Scotland to around £70 in some English regions. This comparison is affected by the exclusion of the subsidy element of loans which plays such an important part in support for higher education in England.

3. Expenditure on student loans

Expenditure on the subsidy element of student loans has recently been excluded from public spending figures. This is shown in all the charts in this paper with a break in the series between 2010-11 and 2011-12. The impact of this change will have been both a one off (apparent) drop in spending in 2011-12, plus an ongoing reduction in spending as more funding was shifted from direct spending to loans from 2012 onwards.

The change will have exaggerated any cuts after the break in series.

3.1 ONS review

In December 2018 the Office for National Statistics (ONS) [announced](#) that it would change the way that loans are included in public spending figures. In summary this will mean treating the amount which is expected to be repaid as a loan. The remainder will be reclassified as public spending and count towards the deficit.⁴

The ONS plans to include this change in provisional data in June 2019 and fully implement these changes later on in the year, possibly September. For more detail on the impact of these changes see the blog [Student loans: ONS changes accounting rules](#)

This paper will be updated to reflect these changes when they are made. They should make the picture of recent changes to education spending clearer and allow for more meaningful comparisons to earlier years.

3.2 Impact of including estimated costs from 2011-12

The Government estimates that repayments for loans taken out by full-time undergraduates at the moment will eventually be worth around 53% of their face value.⁵ In other words around 47% of their face value will not be repaid. This is the subsidy cost.

The repayment system in England changed in 2012 and the average value of loans has increased substantially since then. This means the 47% figure is not relevant for all years back to 2011-12. A lower rate, 45% was estimated for 2017-18 and some earlier years. This paper therefore only looks at the impact in 2015-16 through to 2018-19 and the costs for full-time undergraduate loans in England only. Results are summarised below:⁶

- In 2015-16 spending is around £5 billion higher in cash terms and the share of GDP on education and training increases from 4.4% (excluding loans) to around 4.7%.

⁴ [New treatment of student loans in the public sector finances and national accounts](#), ONS

⁵ Net present value

⁶ Underlying data taken from [Student loan forecasts, England: 2018 to 2019](#), DfE

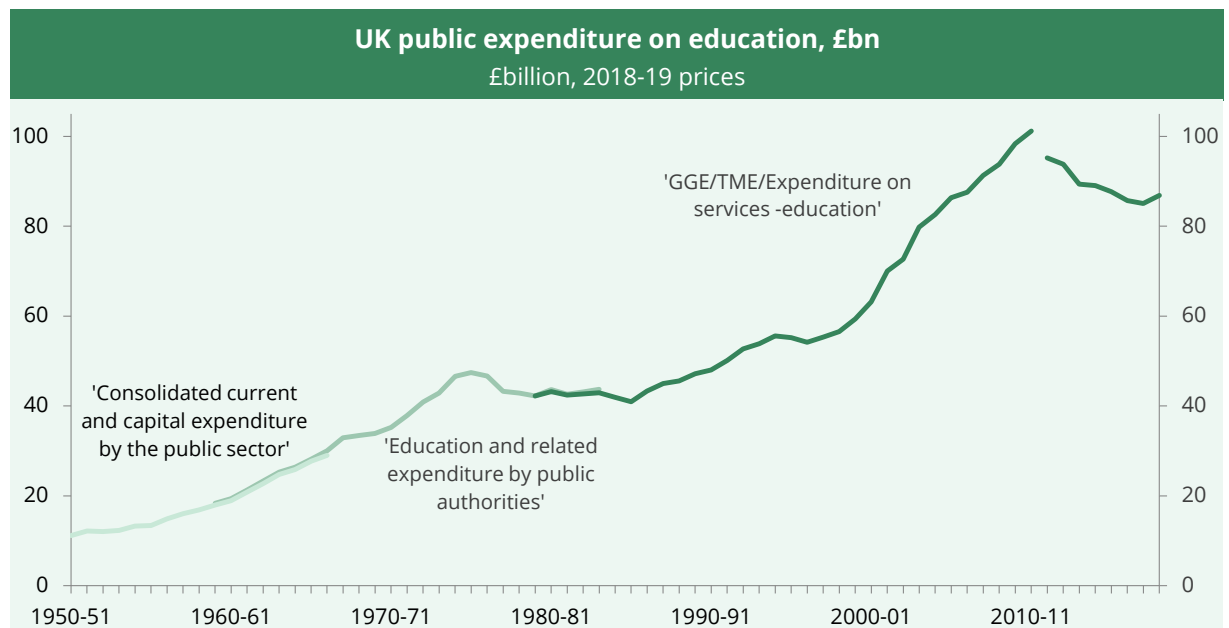
- In 2016-17 spending is around £5.7 billion higher and the share of GDP on education and training increases from around 4.2% to around 4.6%.
- In 2017-18 spending is around £6.3 billion higher and the share of GDP on education and training increases from 4.2% to just under 4.5%.
- In 2018-19 spending is around £7.2 billion higher and the share of GDP on education and training increases from 4.2% to just over 4.5%.

These estimates suggest that even with the subsidy costs of loans added in education spending fell as a proportion of GDP after 2010, possibly by around one percentage point (up to 2017-18) and that most of this fall was in the years immediately after 2010. Spending also fell in real terms, but has stabilised, or slightly increased in the past few years.

4. Long term trends in public expenditure

The data included earlier in this note is the most consistent time series available. To go further back in time means using more than one series and introducing some inconsistencies. Table 2 at the end of this note gives various public education expenditure series back to the early 1950s. Where there is overlap in years the series show little variation, so we can be confident that the overall pattern of change over this period is broadly accurate. See the table footnotes for more detail.

The first chart looks at education spending in real terms. This shows the post 1979 series in context.



The period immediately before this was the most atypical of all. Real spending levels fell in each year from 1976-77 to 1979-80 and together with fairly flat levels of real spending in the early and mid-1980s meant that real spending did not return to its mid-1970s level until the late

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1980s. Before then real spending had increased in each and every year from the early 1950s to the mid 1970s –the longest continuous period of increase.

Sources: See [table 2](#)

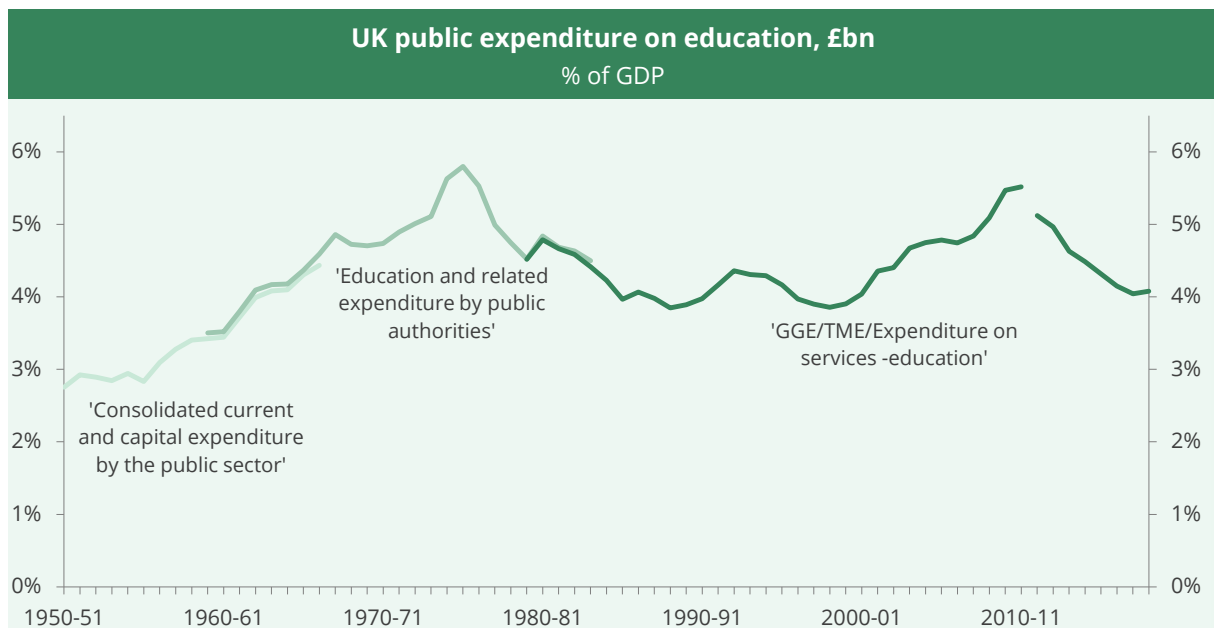
The increases shown in the 1950s and 1960s are not surprising given the changes to public sector education at the time. These are summarised in the paper [Education: Historical Statistics](#). During the 1950s and 1960s:

- The number of primary school pupils increased by 20% and primary teachers by 30%
- The number of public sector secondary school pupils doubled and the number of secondary teachers increased by 150%
- The number of students gaining university qualifications more than tripled

More detail is given in that paper.

The chart shows that the largest annual increases occurred in the 2000s. The fastest *rate* of increase was in the 1950s and early 60s; spending doubled in real terms in the 11 years between 1952/53 and 1963/64. The real increase in the 11 years to 2009-10 was just over two-thirds.

The next chart gives spending as a proportion of GDP. This produces a slightly more erratic trend, although again the main period of increase was in the two decades from the mid-1950s. The increases since the late 1990s were much smaller in comparison and did not take spending to a greater share of national income than the 1975-76 peak of 5.8%. The fall from this peak to 4.5% in 1979-80 was the fastest rate of change in the whole period



Sources: See [table 2](#)

When such a long period is covered it inevitably includes a number of different economic cycles beyond the memory of most readers. GDP fell in 1974-76, 1980-81, 1991-92 and 2008-10. The fastest periods of growth were the early 1960s, early 1970s, late 1980s and mid-1990s.

Before the Second World War the scale of public sector education was much smaller than even that of the early 1950s. During the late 1920s and most of the 1930s public spending on education was 2.2% to 2.4% of GDP. The only exception was in 1931-33 when sharp falls in GDP meant education spending increased to 2.5-2.6%.^{7 8}

The [appendix](#) at the end of this note looks at long term trends in combined public and private spending on education and puts this in the context of changes in the size of the school age population.

⁷ These figures are intended to be indicative only as the coverage of the spending data is different from any included in Table 2

⁸ *Statistical Abstract for the United Kingdom 1924-1938*, Board of Trade; B R Mitchell *British Historical Statistics* (1988)

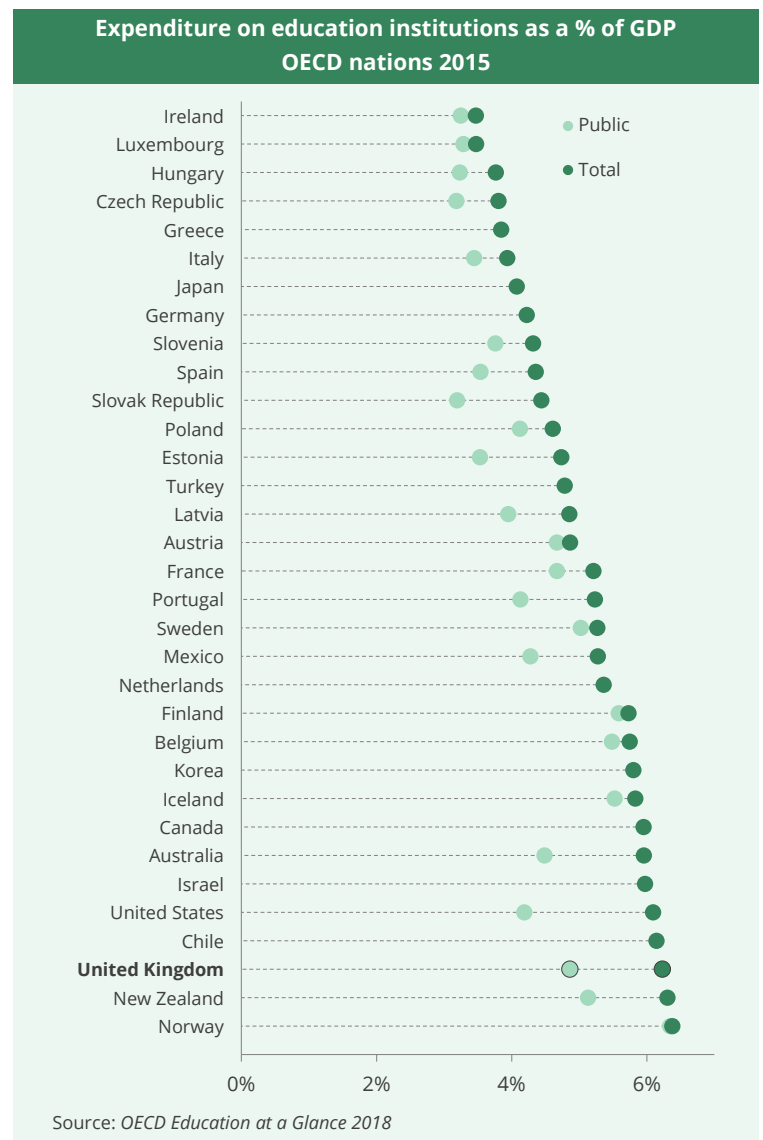
5. International comparisons

The chart opposite illustrates differences in education expenditure⁹ as a proportion of GDP across the OECD. 2015 are the latest available data. These figures cover public and private spending and the public total is indicated in the chart.

Overall spending on this measure in the UK was 6.2%; above the OECD average of 5.0%, above the figure other EU countries and only below Norway and New Zealand. Public spending in the UK at 4.9% was also above the OECD average of 4.3%, but below levels in New Zealand, Belgium Iceland and the Scandinavian countries.

Private education expenditure in the UK at 1.3% of GDP was again above average. The US, Australia, Korea and Chile had higher figures.

The definition of source of funds used here apportions student loan expenditure to the public sector rather than private.



⁹ Expenditure on institutions. This excludes some spending which directly benefits pupils/students such as maintenance support

6. Reference tables

Table 1

Total public expenditure on education in the UK ^(a)						
	Education only			Education and training		
	Cash prices £ billion	2018-19 prices ^(b) £ billion	Percent of GDP ^(c)	Cash prices £ billion	2018-19 prices ^(b) £ billion	Percent of GDP ^(c)
1979-80	10.5	42.2	4.52%	..	..	..
1980-81	12.8	43.2	4.79%	..	..	..
1981-82	13.9	42.4	4.67%	..	..	..
1982-83	15.0	42.7	4.59%	..	..	..
1983-84	15.8	42.9	4.42%	..	..	..
1984-85	16.3	41.9	4.23%	..	..	..
1985-86	16.8	40.9	3.97%	..	..	..
1986-87	18.5	43.3	4.07%	..	..	..
1987-88	20.3	45.0	3.98%	21.2	47.0	4.15%
1988-89	21.9	45.6	3.85%	23.1	48.1	4.06%
1989-90	24.4	47.1	3.89%	25.9	50.0	4.13%
1990-91	26.9	48.0	3.97%	28.1	50.2	4.15%
1991-92	29.7	50.2	4.17%	31.3	52.9	4.39%
1992-93	32.0	52.7	4.36%	33.2	54.7	4.52%
1993-94	33.5	53.9	4.31%	34.7	55.8	4.46%
1994-95	35.0	55.6	4.29%	36.2	57.5	4.44%
1995-96	35.8	55.2	4.16%	37.0	57.0	4.30%
1996-97	36.4	54.2	3.97%	37.8	56.3	4.12%
1997-98	37.4	55.3	3.90%	38.6	57.1	4.02%
1998-99	38.7	56.5	3.86%	40.0	58.4	3.99%
1999-00	40.8	59.4	3.90%	42.2	61.4	4.04%
2000-01	44.4	63.2	4.04%	45.9	65.3	4.18%
2001-02	49.7	70.0	4.35%	51.2	72.1	4.49%
2002-03	52.9	72.7	4.40%	54.7	75.2	4.56%
2003-04	59.2	79.8	4.67%	61.0	82.1	4.81%
2004-05	63.0	82.7	4.75%	65.1	85.4	4.90%
2005-06	67.6	86.3	4.78%	69.8	89.2	4.94%
2006-07	70.6	87.6	4.74%	73.0	90.6	4.91%
2007-08	75.4	91.3	4.84%	78.7	95.2	5.05%
2008-09	79.6	93.8	5.09%	83.0	97.8	5.31%
2009-10	84.6	98.3	5.47%	88.5	102.9	5.72%
2010-11	88.6	101.2	5.52%	91.5	104.4	5.70%
2011-12	84.5	95.2	5.12%	86.9	97.9	5.27%
2012-13	85.0	93.8	4.97%	87.0	96.0	5.09%
2013-14	82.4	89.4	4.63%	84.7	91.8	4.75%
2014-15	83.2	89.0	4.48%	85.1	91.0	4.59%
2015-16	82.6	87.7	4.32%	84.9	90.2	4.44%
2016-17	82.5	85.7	4.15%	84.9	88.2	4.27%
2017-18	83.6	85.1	4.04%	85.9	87.4	4.16%
2018-19	86.8	86.8	4.08%	89.4	89.4	4.20%

Notes: Figures from 2011-12 exclude the subsidy element of student loans and are therefore not comparable to earlier figures. Expenditure calculated on a resource basis from 2000-01 onwards. These figures may not be directly comparable with earlier years that were calculated on a cash basis.

.. Not available

(a) General Government Expenditure to 1982-83. Total Managed Expenditure to 1987-88, total expenditure on services thereafter.

(b) Adjusted 2018-19 prices using HM Treasury GDP deflators from March 2019

(c) Calculated using GDP figures revised after September 2014 changes to National Accounts methodologies

Sources: HM Treasury, PESA 2019, and earlier editions
ONS series YBHA

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Table 2

UK public expenditure on education						
	£ billion 2018-19 prices ^a			% of GDP		
	Series 1	Series 2	Series 3	Series 1	Series 2	Series 3
1950-51 ^b	11.1	..	..	2.75%	..	..
1955-56	13.4	..	..	2.83%	..	..
1960-61	18.9	19.3	..	3.44%	3.52%	..
1965-66	27.7	28.1	..	4.30%	4.37%	..
1970-71	..	35.2	..	..	4.74%	..
1975-56	..	47.4	..	..	5.80%	..
1980-81	..	43.6	43.2	..	4.84%	4.79%
1985-86	..	42.1	40.9	..	4.08%	3.97%
1990-91	48.0	..	..	3.97%
1995-96	55.2	..	..	4.16%
2000-01	63.2	..	..	4.04%
2005-06	86.3	..	..	4.78%
2010-11	101.2	..	..	5.52%
2011-12	95.2	..	..	5.12%
2012-13	93.8	..	..	4.97%
2013-14	89.4	..	..	4.63%
2014-15	89.0	..	..	4.48%
2015-16	87.7	..	..	4.32%
2016-17	85.7	..	..	4.15%
2017-18	85.1	..	..	4.04%

Notes:

Series 1 Annual abstract series 'Consolidated current and capital expenditure by the public sector'.[□]
Excludes spending on school meals and milk

Series 2 Education in the UK series 'Education and related expenditure by public authorities'.[□]
Includes expenditure on teacher training and the youth service

Series 3 Public Expenditure Statistical Analysis series. General Government Expenditure to 1982-83.
Total Managed Expenditure to 1987-88, total expenditure on services thereafter. Expenditure calculated on a resource basis from 2000-01. Excludes the subsidy element of student loans from 2011-12 onwards

(a) Adjusted using March 2019 GDP deflators

(b) GDP and GDP deflator data before 1955-56 is on a calendar year basis

Sources: *Annual abstract of statistics 1967, and earlier editions, CSO*
Education statistics for the United Kingdom, various years, DES
HM Treasury, PESA 2018, and earlier editions
ONS series ADIE and YBHA

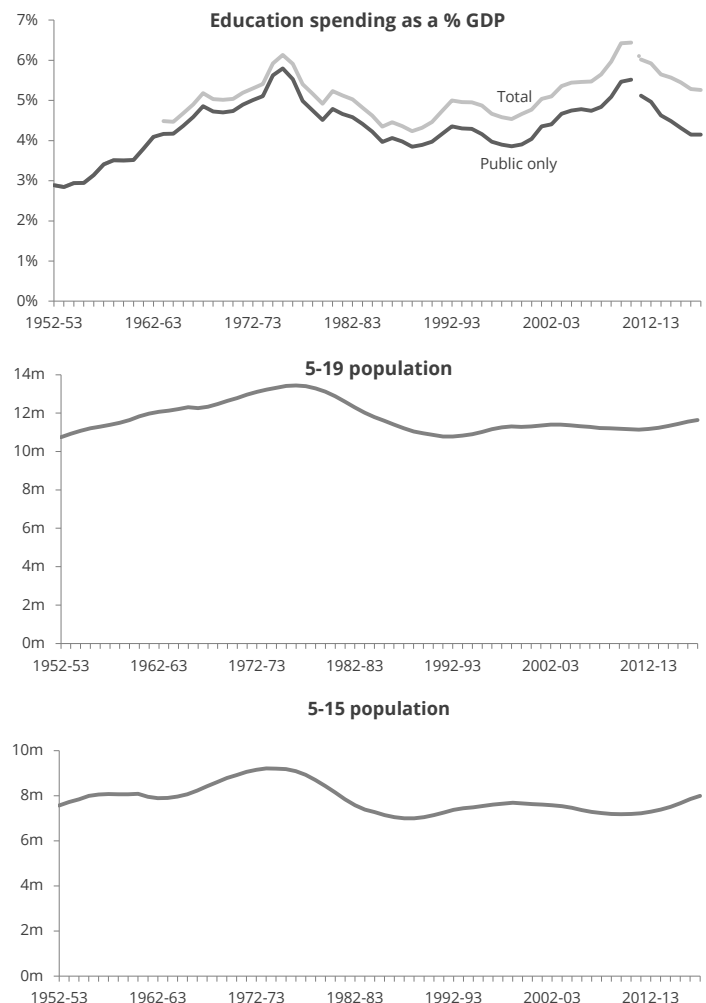
7. Appendix – Trends in education spending v population change

In 2017 an estimated £23 billion was spent privately on education.¹⁰ Including this spending with the earlier figures gives a more complete picture of the amount of national income that we have devoted to education. A series that only looks at public spending will be affected by shifts in the liability for costs from the public to private sections (tuition fees) and vice versa (free early years education). So a total private and public series more accurately reflects overall spending at any one point in time and is not affected by shifts from one sector to another. It is not perfect though. Data on private spending on education start in the 1960s, there is a break in the series in 1997 due to revised data and the figures cover fees for education only. This means that private spending on books and other education resources for school pupils is excluded, as is student maintenance and loan repayments. Excluding student maintenance should not be a problem as the costs of 'pupil maintenance' are not included. However, up to the late 1980s all maintenance support was included in the public education figures. Since the introduction of loans the burden has shifted to the private individual, but is not picked up in the private education figures.

The impact of including private education expenditure on the long term spending series is illustrated opposite. It shifts spending up by around one percentage point in recent years, but much less in the early part of this period. Until recently peak spending (as a proportion of GDP) was of 6.6% in 1975-76, but this was beaten in each of the last three years.

The proportion of our national income we devote to education has varied over time, but so has the population. If spending only focussed on primary or secondary pupils it would be straightforward to work out the relevant population or 'demand' for education spending. However, over these years the school leaving age increased to 16, free early education places were offered to all three and four year olds and there has been a very large expansion in the post-16 education of all types.

In theory someone of almost any age can benefit from education, especially if we include private payment of fees. In practice those in education are concentrated in a much smaller age range. Population estimates back to the



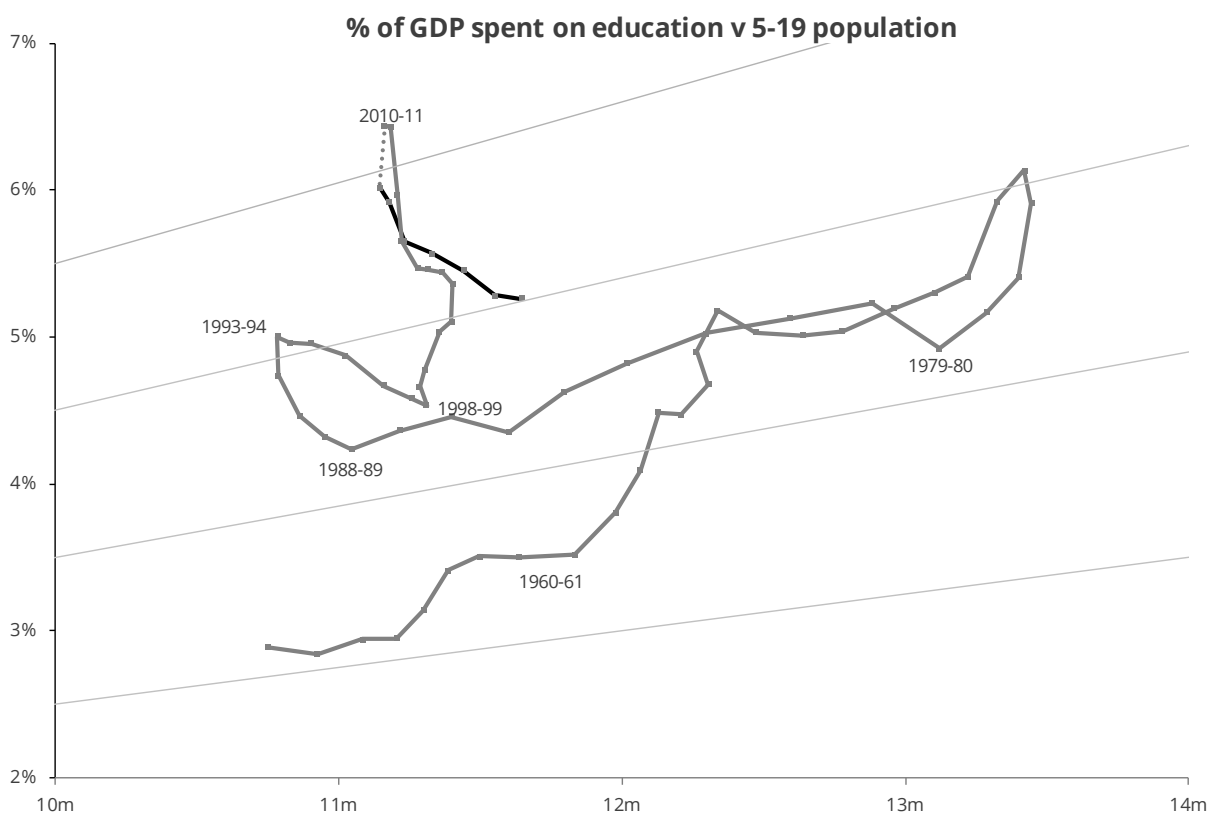
¹⁰ *Consumer trends*, ONS

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early 1950s are grouped in five year bands. The charts above compare trends in two age ranges which are meant to reflect the core group benefitting from education.

The shape of the trends is broadly similar, although the 5-15 age group is slightly more volatile.¹¹ The 5-19 age group is used below as a measure of the population group most likely to benefit from education.

Looking across the charts on the previous page it is clear that the increase in spending in the first two decades happened when the 5-19 population was increasing. Falls in population in the late 1970s and 1980s coincided with falls in spending. The population increased in recent years but spending has fallen. This is a rough and ready form of analysis only. The scatter plot below reveals more detail. It compares total spending on education as a % of GDP¹² to the population aged 15-19. Here the 'gridlines' are constant ratios of education spending as a % of GDP to population since. Hence shifts above and to the left mean a greater share of national income is going to education compared to population and *vice versa*.



The key growth periods of education spending compared to population were in the 1960s, late 1980s/early 1990s and the first decade of this century. The major falls were in the late 1970s, the mid to late 1990s and, after the break in series, the period from 2012-13 to 2017-18. Here most of the 1980s is characterised by falling population and spending which cancel each other out in each year.

¹¹ *Mid-year population estimates, ONS; Annual abstract of statistics, various years, CSO/ONS*

¹² Public spending only in the first decade

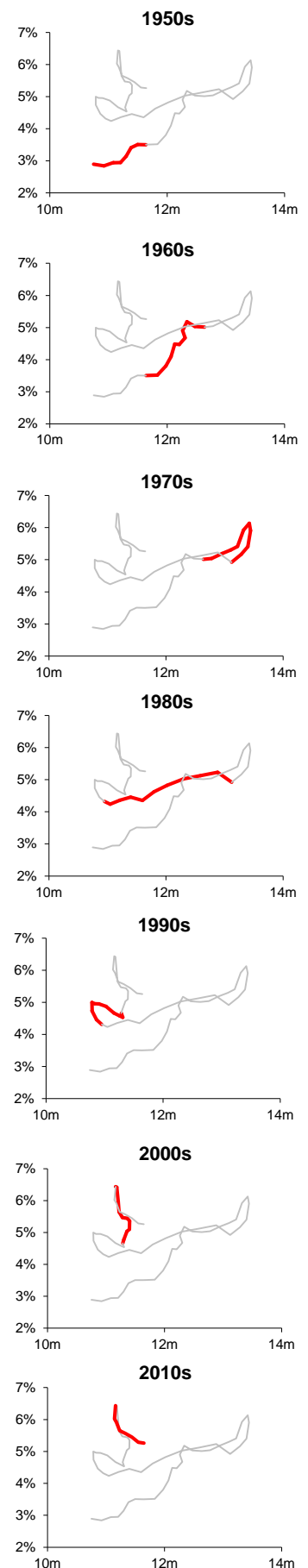
The cuts in education spending relative to GDP and the growing population of the mid/late 1990s was reversed in the early part of this decade, but it took five years of large spending increases just to get back to a virtually identical position as in 1993-94. The recent cuts in spending and increased young population take the ratio back to a similar position.

The chronological order of this series can be difficult to follow through all its loops over time. The charts opposite give the same data, but highlight one decade at a time. If time is cut up this way then it is clear that the 1950s and 1960s saw the share of national income devoted to education increase at a faster rate than the (increasing population). This continued into the first half of the 1970s, but was reversed in the second half. During the 1980s the population aged 5-19 fell consistently and education spending as a % of GDP fell at a similar rate.

The early 1990s saw increases in education spending at a time when GDP and population fell. Spending stagnated in the second half of the decade as GDP and population grew and the earlier 'gains' were lost. The 2000s saw the smallest changes in population and some of the most consistent increases in spending as a proportion of GDP. The young population increased consistently in the 2010s while spending fell by its greatest amount since the late 1970s.

Some unexpected patterns emerge after we 'adjust' long term education spending for changes in the size of the economy and population. Changes in the proportion of national income we devote to education can only be 'explained' by demographic changes in the early 1970s and most of the 1980s. During most of the rest of the last 60 years spending has not closely followed population. The pattern shown in the chart has been more influenced by falls in GDP. Education spending has continued to rise during most recessions and hence spending as a proportion of GDP has risen more rapidly. 2008-09 and 2009-10 saw two of the largest single year jumps as spending increases were coupled with falls in GDP and relatively little change in population.

Real levels of education spending have followed different paths *after* recessions of the past, falling after the mid-1970s, stagnated after the early 1980s, increasing after the early 1990s and falling in the 2010s.



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