



Department
for Education

Trends in school spending: 2002-03 to 2016-17

**Ad hoc statistics compiling a time series
using academy and local authority
schools' spending data**

August 2018

Contents

Summary	3
Background	3
Methodology	4
Matching academy spending data to maintained schools spending data	4
Pupil numbers	4
Accounting for inflation so we can observe real spending changes.	4
Anomalies	5
Results	6
Annex A: Pupil counts and deflators used	11
Annex B: List of Spending categories and groupings	11
Annex C: Data used in graphs	13

Summary

In this note we describe how we compiled a single time series of school spending data covering a period from 2002-03 to 2016-17. This involved calculating spending on a per pupil basis and, after 2011-12, combining the separate spending returns for LA maintained schools and academies which have some differences.

The resulting time series allows us to examine trends in total spending and individual spending categories, including:

- **Total spending per pupil has increased in real terms by 42% from 2002-03 to 2016-17.** Spending per pupil was £4,080 in 2002-3 and £5,790 per pupil in 2016-17.
- Spending per pupil on teachers has risen by much less than total spending per pupil from 2002-3 to 2016-17, with **spending on teachers rising by only 17% per pupil in real terms over the period**, compared to the increase of 42% for total spending per pupil.
- Spending per pupil on education support staff has risen by a much greater percentage than total spending per pupil, with **spending on education support staff rising by 138% per pupil in real terms over the period**, again compared to the 42% for total spending per pupil.
- Spending on **Exam fees** was 37% higher in 2016-17 than 2002-03 (although it decreased substantially after 2010), compared to the 42% increase in **total** spending.
- Other spending lines that have seen significant real terms increases in spending per pupil are **education consultancy and back office**.

Background

In this note we describe how we compiled a single time series of school spending data covering a period from 2002-03 to 2016-17. We did this by matching the separate spending datasets for academies and local authority maintained schools over time.

The department publishes data on schools' spending annually. Since 2010-11 spending data for maintained schools has been published through the [Consistent Financial Reporting](#) (CFR) publication. From 2011-12 to 2015-16 spending data for academies was published through the [Academy Accounts Return](#) (AAR) publication¹. Schools spending data prior to 2010 has now been archived but can be found [here](#) and goes back to 2002-

¹ From 2016-17 academy spending data is published on the [financial benchmarking website](#)

03. We describe how we have transformed these different datasets to produce a 15 year trend in school spending.

Methodology

Matching academy spending data to maintained schools spending data

Both the AAR and the CFR break down school spending into just over 30 spending categories (see annex B). Some of these categories are easy to match between the datasets, for example both AAR and CFR have a spending category called “Teaching staff”. Some categories are labelled differently but describe the same type of spending such as “Bought-in professional services – curriculum” in the CFR and “Educational Consultancy” in the AAR. In some cases, it is not possible to match spending categories between datasets, for example in the AAR there is an “Auditor costs” category. This category does not exist for maintained schools which are not required to audit because their spending is controlled by their local authority.

In annex B we set out how we have matched all the categories between the datasets. We have also created 12 spending groups which allow easier comparison between datasets. For example, the “premises” grouping contains all categories of spending related to premises. This group contains slightly different spending lines between the two data sets, but should cover a similar range of school expenses. Revenue funds put towards capital spending (known as “direct revenue financing”) are excluded from the analysis.

Pupil numbers

We are interested in spending per pupil (full-time equivalents) so for each year we need to identify the correct number of pupils that corresponds to the number of schools included in the financial datasets used. In any given year, some schools will be missing from the financial data because they became academies during the period covered. During the transition from the CFR to AAR some schools will have been missed from the AAR or schools will have submitted a part return – spending data covering just a portion of the year. In order to identify the right number of pupils, we match the [pupil census data](#) to the spending data. We then can identify which schools are missing and which schools submitted part returns and scale down our total pupil count accordingly.

For data prior to 2012-13 we use total maintained school pupil counts from the published tables and assume the data includes all schools. See annex A for the annual pupil number totals we used in this analysis.

Accounting for inflation so we can observe real spending changes.

For this analysis we have combined academies and LA maintained school figures. To do this we have treated the spending data for academies as if it was reported on a financial year basis (although it is actually reported on an academic year basis). We have used

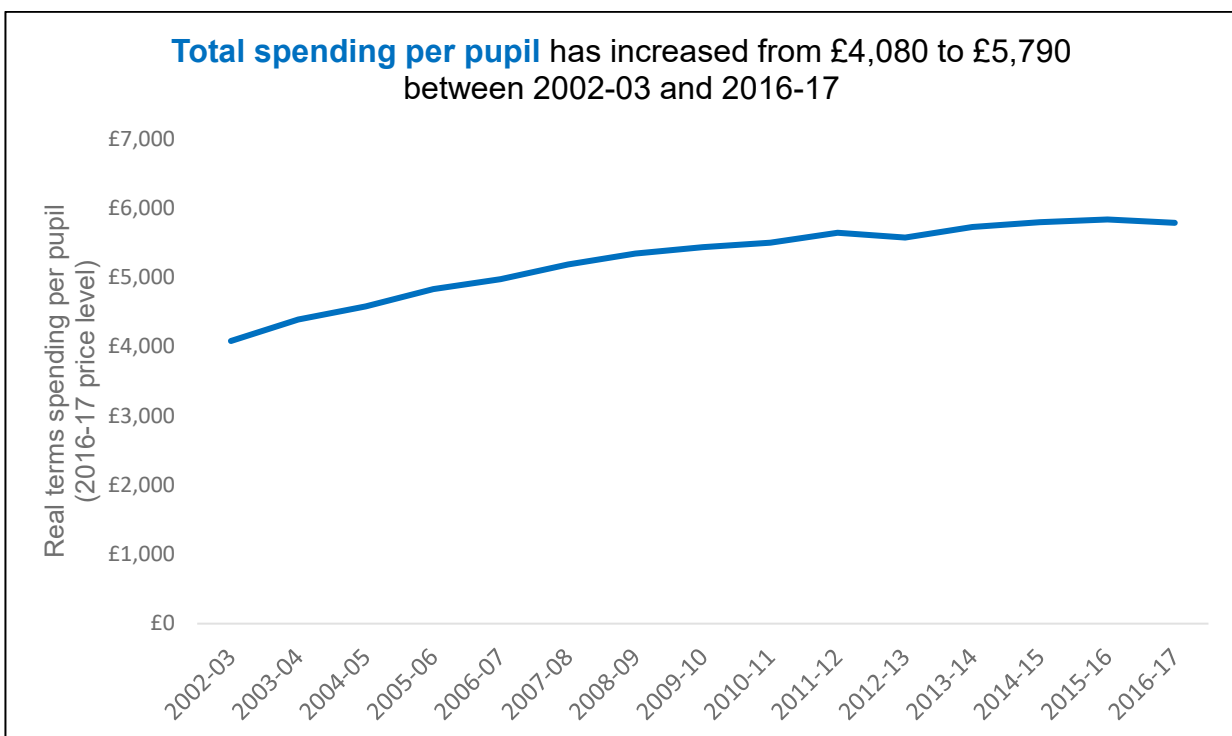
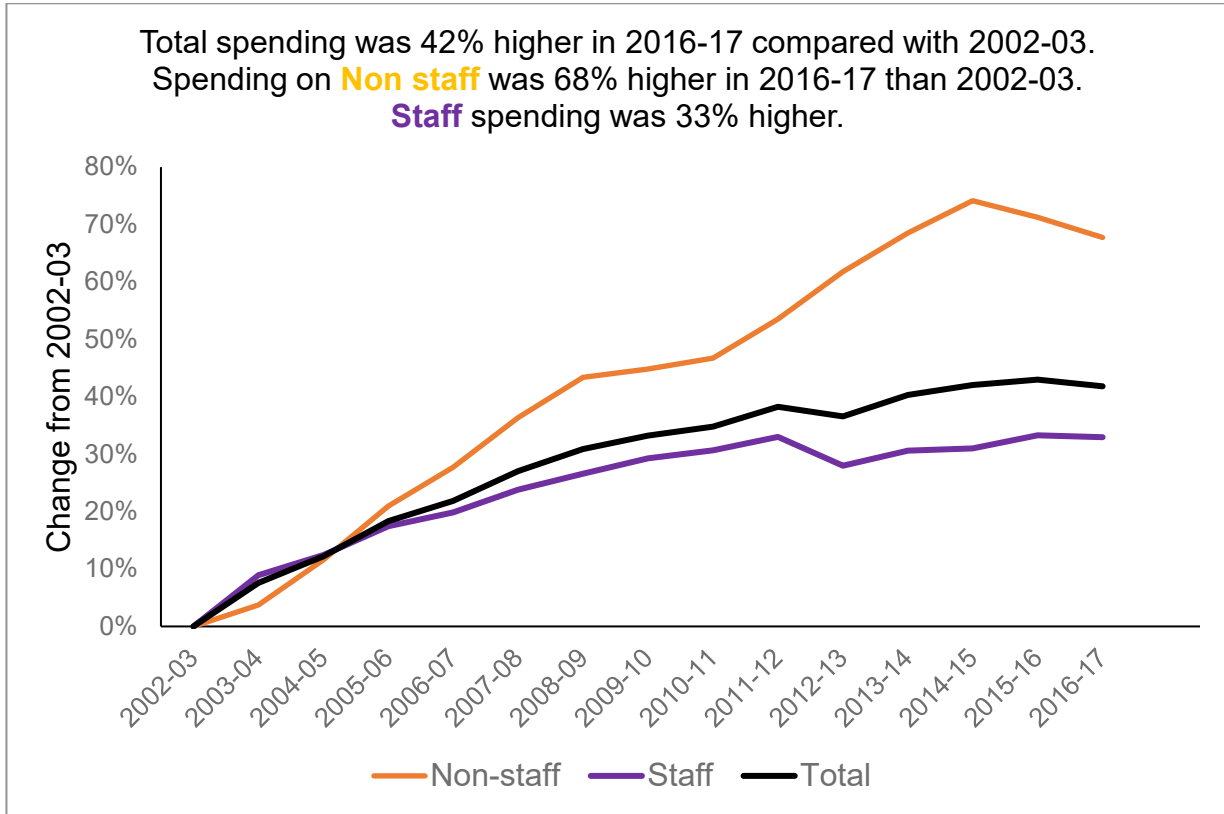
GDP deflators for the financial years to adjust spending figures into real terms. We have used the 2016-17 deflator as per annex A, which is produced by HM Treasury.

Anomalies

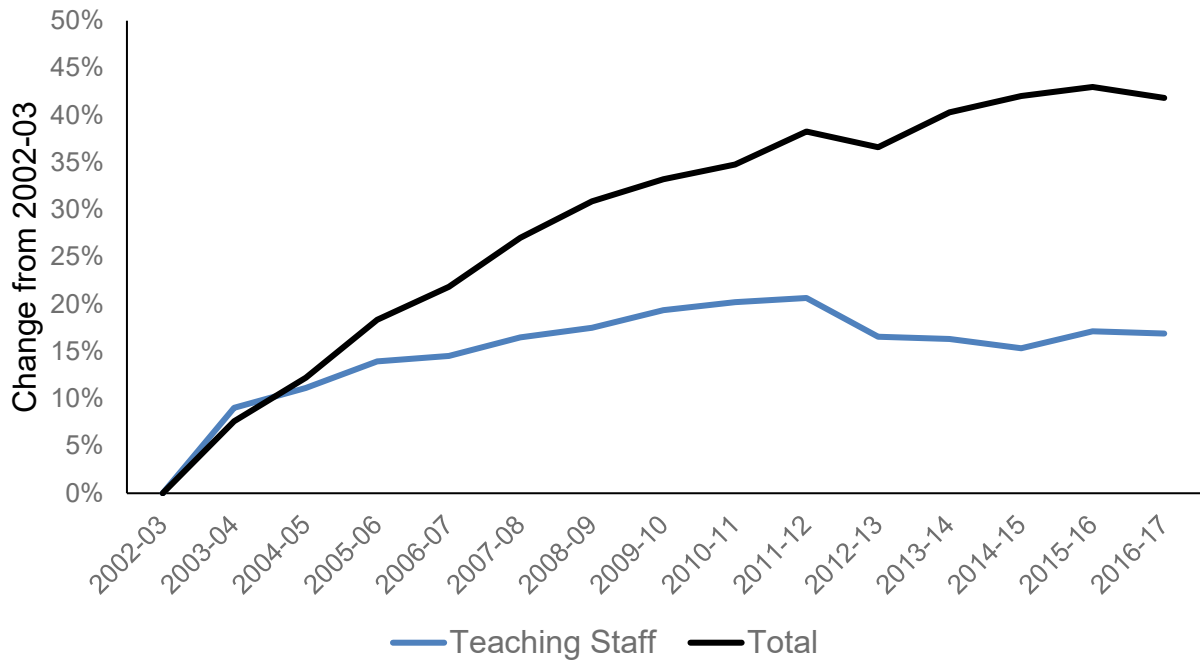
The numbers of academies started to increase significantly around 2011-12. However, the data collected in that year on academy spending was not suitable for this analysis. This data collection was in its first year and had too many anomalies to present a valid picture of spending. We have therefore used data only for LA maintained school spending data for that year. Since the majority of early academy conversions were secondary schools, the 2011-12 figures here are disproportionately made up of maintained primary schools. This is evident from the peaks and dips in spending in 2011-12 which are caused by the missing academy data (and the missing data is predominantly for secondary schools where per pupil spending is higher for most categories of spend).

Results

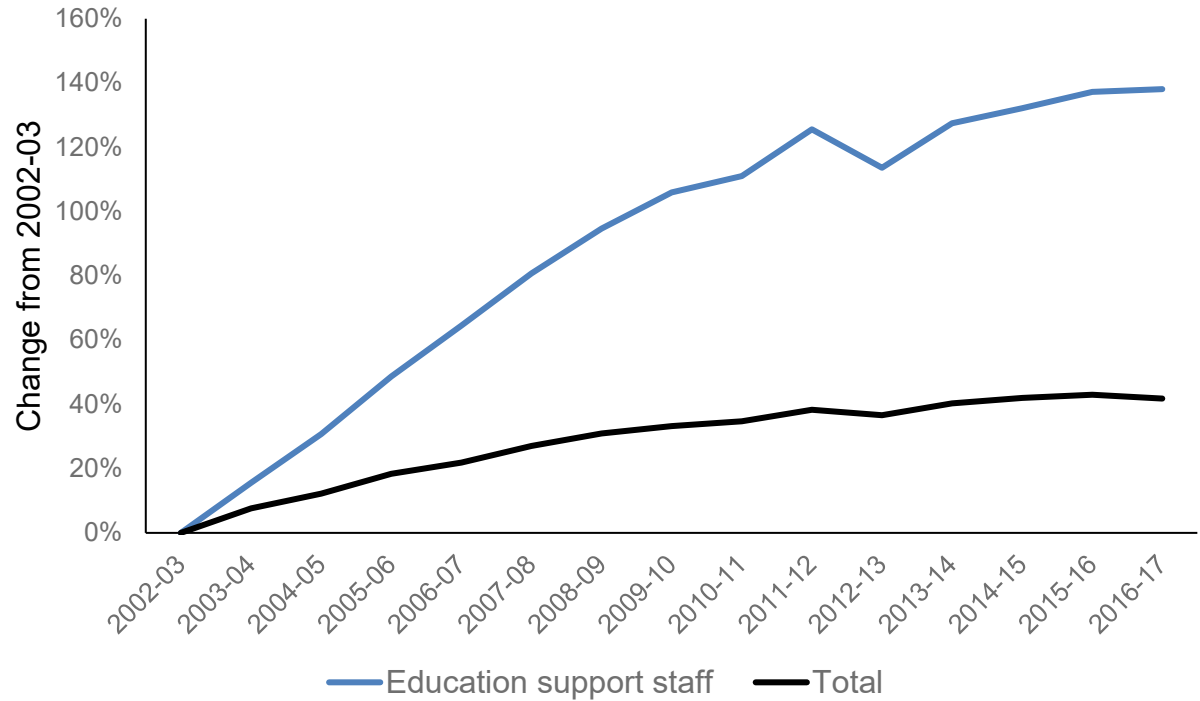
The main trends are presented in the graphs below (with the total spending line shown on all but the per pupil spend chart for comparative purposes). The data used in these graphs is presented in annex C.



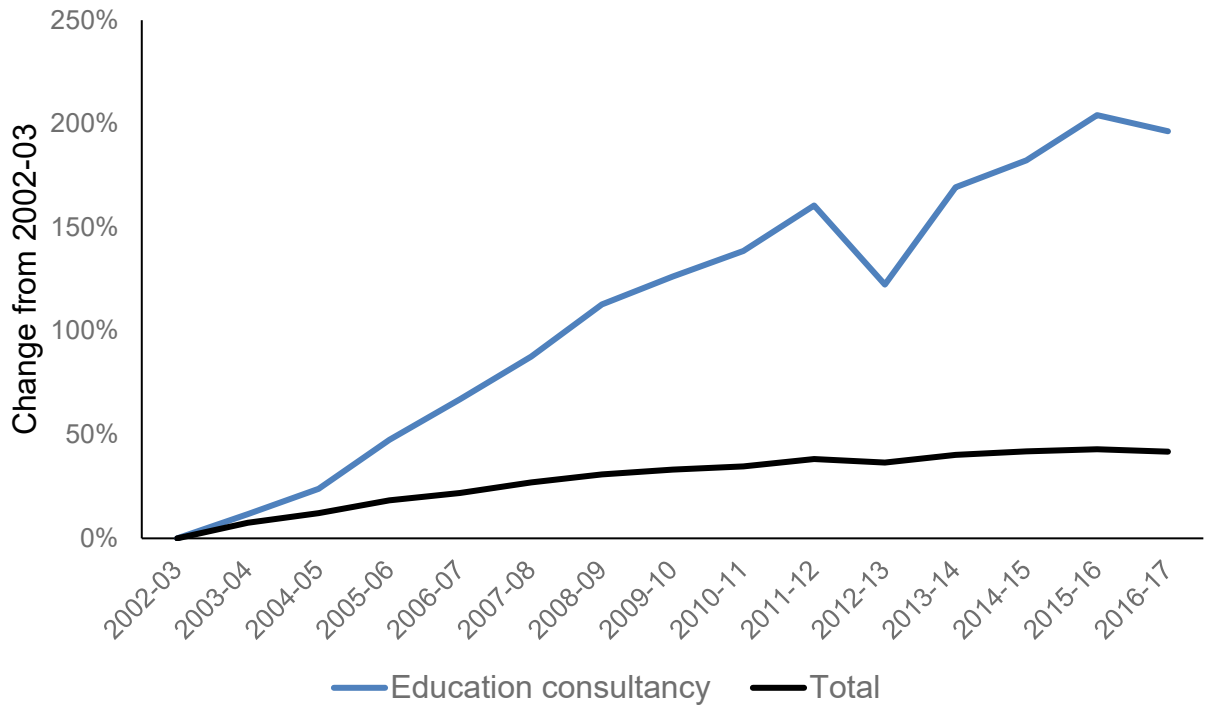
Spending on **Teaching staff** was 17% higher in 2016-17 than 2002-03, compared to a 42% increase in **Total** spending



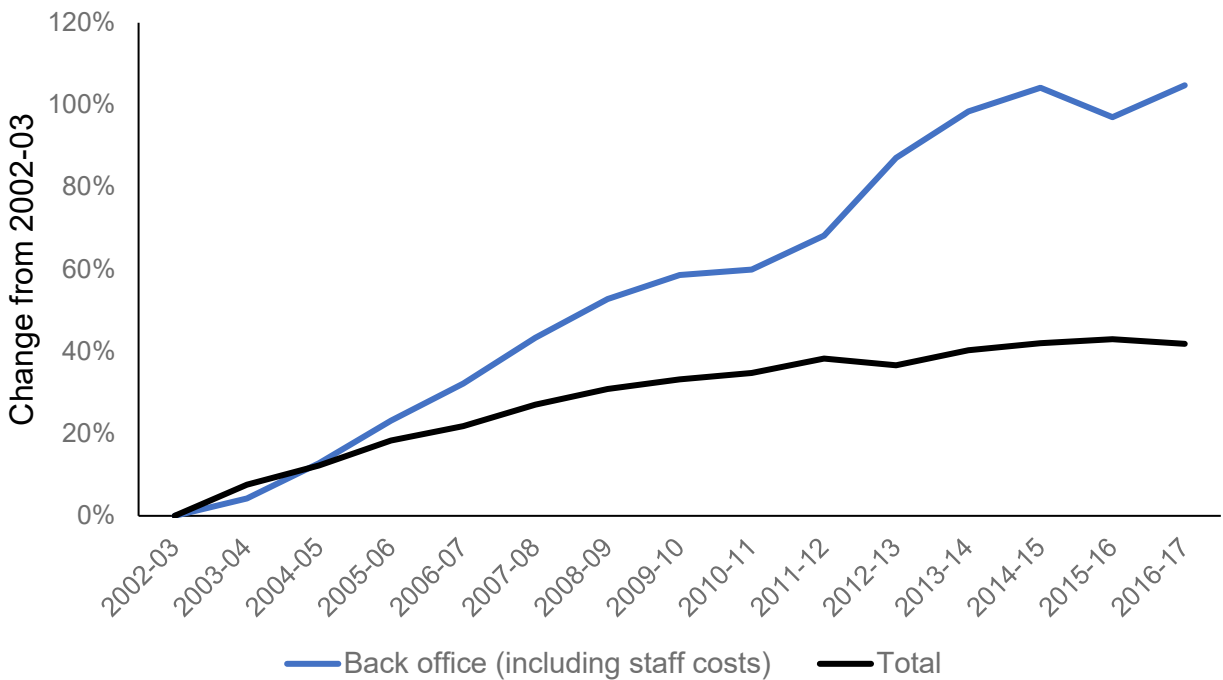
Spending on **Education support staff** was 138% higher in 2016-17 than 2002-03, compared to a 42% increase in **Total** spending



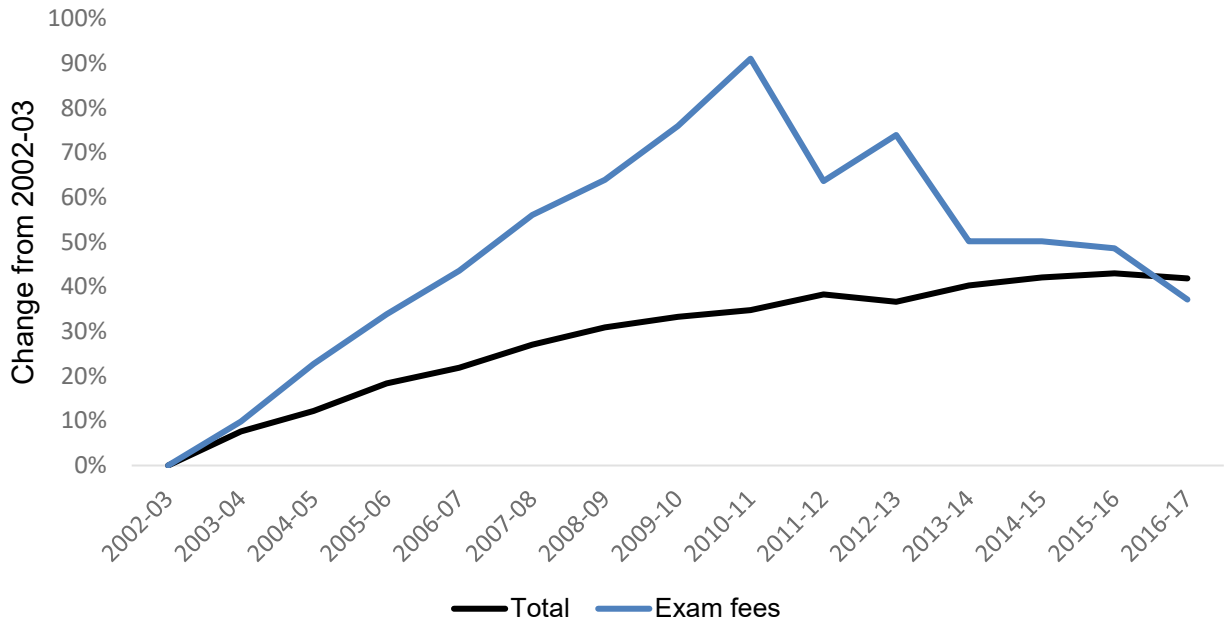
Spending on **Education consultancy** was 196% higher in 2016-17 than 2002-03, compared to a 42% increase in **Total** spending



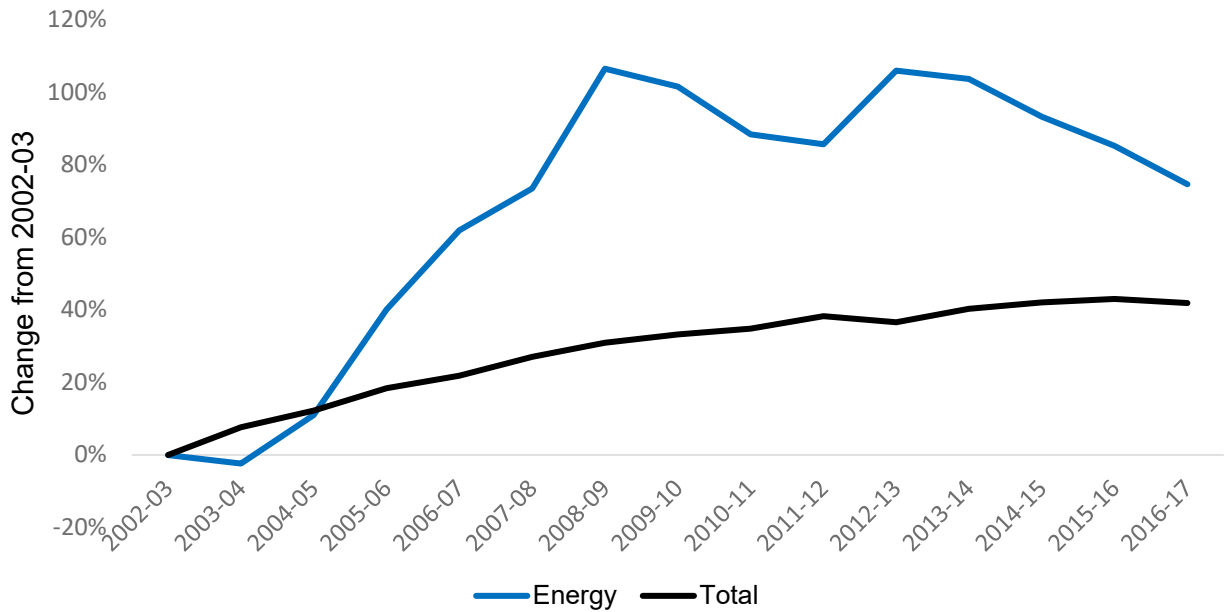
Spending on the **Back office** was 105% higher in 2016-17 than 2002-03, compared to a 42% increase in **Total** spending



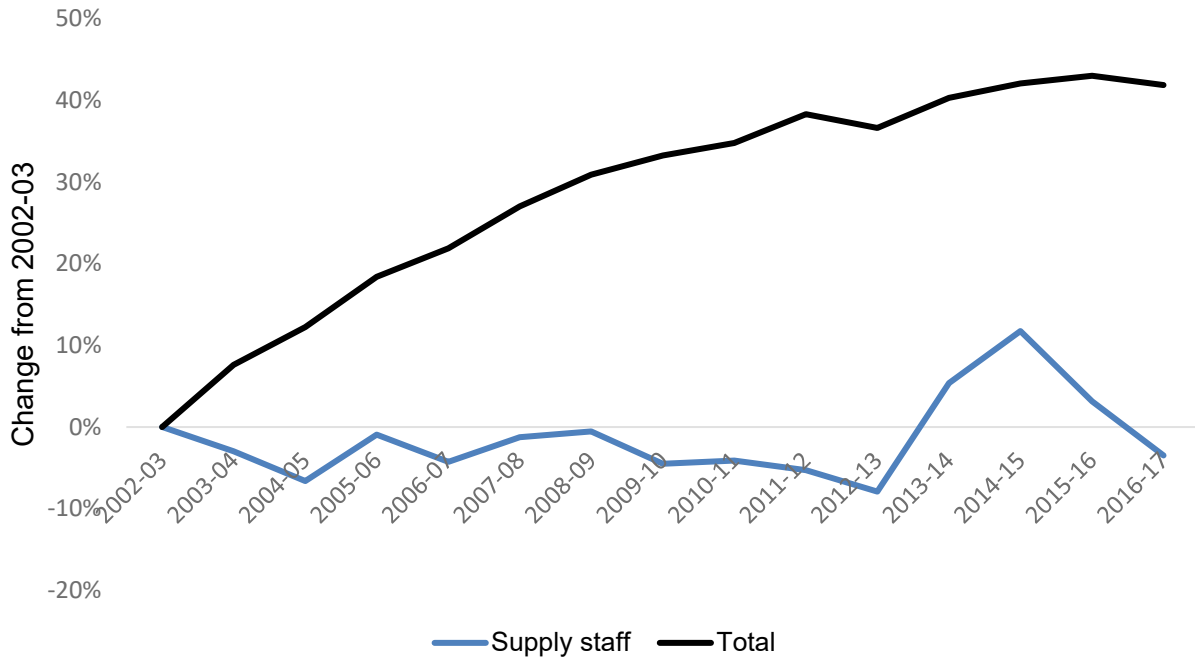
Spending on **Exam fees** was 37% higher in 2016-17 than 2002-03, compared to a 42% increase in **Total** spending



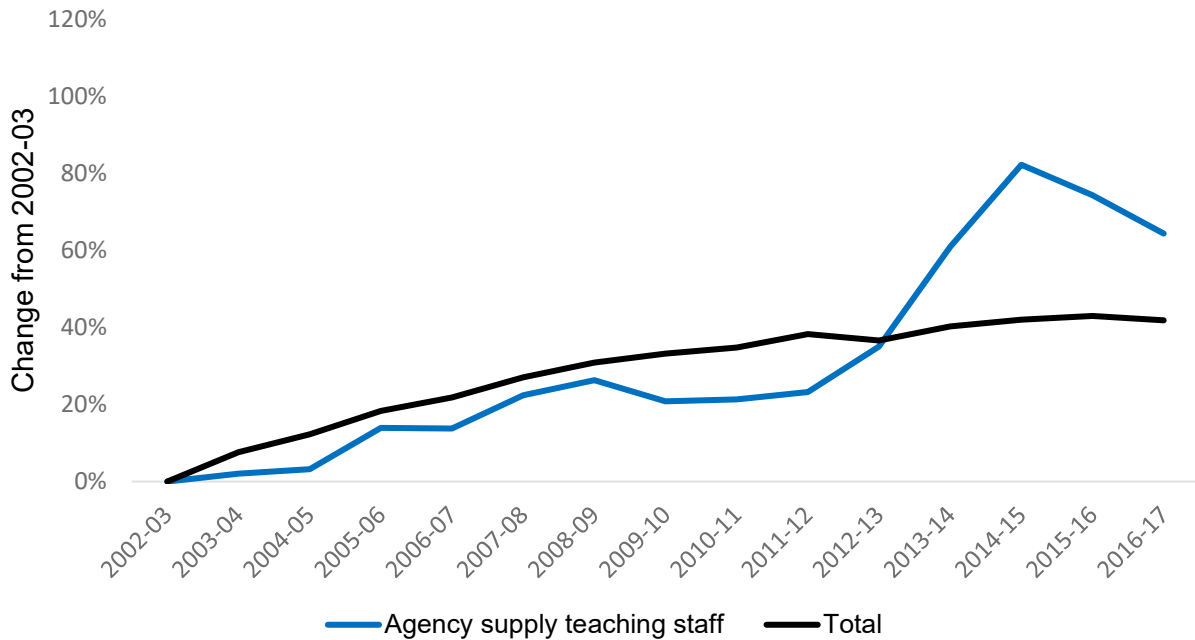
Spending on **Energy** was 75% higher in 2016-17 than 2002-03, compared to a 42% increase in **Total** spending



Spending on **Supply staff** was 3% lower in 2016-17 than 2002-03, compared to a 42% increase in **Total** spending



Spending on **Agency supply teaching staff** was 64% higher in 2016-17 than 2002-03, compared to a 42% increase in **Total** spending



Annex A: Pupil counts and deflators used

GDP deflators used can be found [here](#).

Pupil numbers are derived from the pupil census data, annual summaries of which are published [here](#). In order to identify the right number of pupils we match the pupil census data to the spending data. We then can identify which schools are missing and which schools submitted part returns and scale down our total pupil count accordingly.

Year	Number of pupils in schools included in spending data	GDP deflator (for 2016-17)
2002-03	7,597,310	75.337
2003-04	7,559,910	76.986
2004-05	7,507,030	79.129
2005-06	7,447,330	81.194
2006-07	7,368,680	83.737
2007-08	7,288,720	85.816
2008-09	7,213,500	88.048
2009-10	7,137,450	89.327
2010-11	7,007,935	90.960
2011-12	6,079,845	92.270
2012-13	7,317,565	94.186
2013-14	7,421,499	95.795
2014-15	7,575,716	97.184
2015-16	7,691,922	97.839
2016-17	7,640,436	100.000

Annex B: List of Spending categories and groupings

Definitions of the spending categories can be found [here](#).

LA maintained data(CFR)	Academies data (AAR)	Grouping	Staff/Non-staff
E01 (Teaching staff)	Teaching staff	Teaching staff	Staff
E02 (Supply staff)	Supply teaching staff	Supply staff	Staff
E10 (Supply teacher insurance)	Supply teacher insurance		
E26 (Agency supply staff)	Agency supply teaching staff		
I10 ((minus) Receipts from supply insurance claims)	(minus) Supply insurance claims		
E04 (Premises staff)	Premises staff	Premises (including staff costs)	Non-staff
E12 (Building maintenance and improvement)	Building and Grounds maintenance and improvement		
E13 (Grounds maintenance and improvement)			
E14 (Cleaning & caretaking)	Cleaning and caretaking		
E15 (Water & sewerage)	Water and sewerage		

E18 (Other occupation costs)	Other occupation costs		
E07 (Cost of other staff)	Other staff	Other staff related costs	Staff
E08 (Indirect employee expenses)	Indirect employee expenses		
E09 (Staff development & training)	Staff development and training		
E11 (Staff related insurance)	Staff-related insurance		
E05 (Administrative & clerical staff)	Administrative and clerical staff	Back office (including staff costs)	Non-staff
E22 (Admin supplies)	Administrative supplies - non educational		
E28 (Bought in professional services – other)	Legal & Professional		
E06 (Catering staff)	Catering staff	Catering	Non-staff
E25 (Catering supplies)	Catering supplies		
I09 ((minus) Income from catering)	(minus) Income from catering		
E19 (Learning resources)	Learning resources (not ICT equipment)	Learning resources (not ICT equipment)	Non-staff
E20 (ICT learning resources)	ICT learning resources	ICT learning resources	Non-staff
E16 (Energy)	Energy	Energy	Non-staff
E27 (Bought in professional services – curriculum)	Educational Consultancy	Educational consultancy	Non-staff
E03 (Education support staff)	Education support staff	Education support staff	Staff
E17 (Rates)	Rent and Rates	Other expenditure	Non-staff
E21 (Exam fees)	Examination fees		
E23 (Other insurance premiums)	Other insurance premiums		
E24 (Special facilities)	Special facilities		
E29 (Loan interest)	Interest charges for Loan and Bank		
	Auditor costs		
	Other supplies and services		
	PFI Charges		

Annex C: Data used in graphs

Real terms per pupil spending

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Total spending per pupil	£ 4,081	£ 4,392	£ 4,580	£ 4,831	£ 4,973	£ 5,184	£ 5,342	£ 5,438	£ 5,500	£ 5,643	£ 5,575	£ 5,726	£ 5,797	£ 5,836	£ 5,789
Edu support staff	£ 376	£ 434	£ 491	£ 558	£ 618	£ 679	£ 731	£ 774	£ 793	£ 847	£ 802	£ 854	£ 872	£ 891	£ 894
Non staff	£ 7,957 m	£ 8,225 m	£ 8,792 m	£ 9,467 m	£ 9,913 m	£ 10,510 m	£ 11,008 m	£ 11,132 m	£ 11,313 m	£ 11,917 m	£ 12,679 m	£ 13,351 m	£ 13,984 m	£ 13,963 m	£ 13,879 m

Real terms per pupil percentage change in spend from 2002-03

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Staff	0%	9%	12%	17%	20%	24%	27%	29%	31%	33%	28%	31%	31%	33%	33%
Non staff	0%	4%	12%	21%	28%	36%	43%	45%	47%	54%	62%	69%	74%	71%	68%
Total spending per pupil	0%	8%	12%	18%	22%	27%	31%	33%	35%	38%	37%	40%	42%	43%	42%

Real terms per pupil percentage change in spending categories from 2002-03

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Teaching Staff	0%	9%	11%	14%	15%	16%	18%	19%	20%	21%	17%	16%	15%	17%	17%
Edu support staff	0%	16%	31%	49%	64%	81%	95%	106%	111%	126%	114%	127%	132%	137%	138%

Edu' consultancy	0%	12%	24%	48%	67%	88%	113%	126%	139%	161%	122%	169%	182%	204%	196%
Back office	0%	4%	13%	23%	32%	43%	53%	59%	60%	68%	87%	98%	104%	97%	105%
Exam fees	0%	10%	23%	34%	44%	56%	64%	76%	91%	64%	74%	50%	50%	49%	37%
Energy	0%	-2%	11%	40%	62%	73%	106%	101%	88%	86%	106%	104%	93%	85%	75%
Supply Staff	0%	-3%	-7%	-1%	-4%	-1%	-1%	-4%	-4%	-5%	-8%	5%	12%	3%	-3%
Agency supply	0%	2%	3%	14%	14%	22%	26%	21%	21%	23%	35%	61%	82%	74%	64%



Department
for Education

© Crown copyright 2018

You may re-use this document/publication (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence v2.0. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/version/2
email psi@nationalarchives.gsi.gov.uk

About this publication:

enquiries www.education.gov.uk/contactus
download www.gov.uk/government/publications

Reference: DFE-00250-2018



Follow us on Twitter:
[@educationgovuk](https://twitter.com/educationgovuk)



Like us on Facebook:
facebook.com/educationgovuk