

KNOWLEDGE ECONOMY

Invest in opportunity



Spending on
post-16 education

SPENDING ON POST-16 EDUCATION

SUMMARY

Higher or tertiary education¹

- In recent years, public spending on higher education by the UK has dropped from 0.9% of GDP to 0.6%.
- The UK's level of public spending on HE as a share of GDP is significantly below that of France, Germany, the USA and the average for OECD member states.
- To catch up with the average level of public spending on HE in the OECD would cost the UK £7.1bn, at 2008-9 prices.
- Annual expenditure per student in the UK at primary, secondary and tertiary levels was above the OECD average in 2009.
- On average in 2000-2010, labour income growth among higher education graduates contributed more than half the annual growth in UK GDP.
- It is worth investing in UK higher education. For every £1 of income for the UK higher education sector, it generates £2.52 in output, including job creation and export earnings.
- There is a considerable net financial benefit to the public through investing in tertiary education, from the greater tax and national insurance payments made by those with this education level, and their lower social security costs, compared with those who were educated to upper secondary or post-secondary non-tertiary level, according to OECD data.
- Those who have attained higher education are more likely to be in employment than those with lower educational attainment.
- The UK has made considerable progress towards achieving the Leitch Review of Skills target that more than 40% of the adult population should be qualified to Level 4 or above by 2020, but further investment is needed to achieve and then maintain this target.

Further education

- UK public spending on further education has fluctuated around 0.6% of GDP in recent years.
- To bring spending on further education up to 1.0% of GDP would cost £6.1bn at 2011-12 prices.
- Vocational qualifications delivered in the workplace and apprenticeships delivered a return of around £35-£40 per pound of funding, according to a government report.
- There is a considerable net financial benefit to the public through investing in upper secondary or post-secondary non-tertiary education, from the greater tax and national insurance payments made by those with this education level, and their lower social security costs, compared with those who stopped education at the end of compulsory schooling, according to OECD data.
- Adults aged 16 or over with higher levels of qualification, at NVQ level 3 or

above, were more likely to report medium or high satisfaction with life overall, and medium or high feeling that life is worthwhile, than those with lower level qualifications; those with no qualifications reported the lowest levels of subjective well-being, according to UK government data.

- The UK is a considerable way from achieving the Leitch Review of Skills target that more than 90% of the UK adult population should be qualified to at least Level 2 or above by 2020; significant and sustained future investment is needed to achieve and then maintain this target.

1 HIGHER OR TERTIARY EDUCATION

1.1 Catching up with the OECD average for public spending on higher/tertiary education

In recent years, public spending on higher education by the UK has dropped from 0.9% of GDP to 0.6%. This has put the UK's level of public spending on HE significantly below that of France, Germany, the USA and the average for OECD member states.

In 2008-9, 0.6% of the UK GDP was spent on public expenditure on higher education; in the same year, the OECD average for public spending on HE was 1.1% of GDP. In 2008-9, the UK's GDP was £1,422,290m.² Total public spending on HE was 0.6% of that, ie £8,534m. The public spending catch-up figure would therefore be 0.5% of UK GDP in 2008-9, ie £7,111m. However, any calculation of the catch-up figure would need to take into account the impact of inflation since 2008-9, and spending differences between the UK nations. Spending on HE is derived from the OECD's *Education At A Glance*. The data include tertiary type A and type B education at ISCED level 5, but not post-secondary non-tertiary level of education (ISCED 4), see appendix.

Expenditure on higher education institutions as % of GDP

	FRANCE			GERMANY			JAPAN		
	Public %	Private %	Total %	Public %	Private %	Total %	Public %	Private %	Total %
1998*	1.01	0.12	1.13	0.97	0.08	1.04	0.43	0.60	1.02
1999	1.0	0.1	1.1	1.0	0.1	1.1	0.5	0.6	1.0
2000	1.0	0.1	1.1	1.0	0.1	1.0	0.5	0.6	1.1
2001	1.0	0.1	1.1	1.0	0.1	1.0	0.5	0.6	1.1
2002	1.0	0.1	1.1	1.0	0.1	1.1	0.4	0.6	1.1
2003	1.1	0.2	1.4	1.0	0.1	1.1	0.5	0.8	1.3
2004	1.2	0.2	1.3	1.0	0.1	1.1	0.5	0.8	1.3
2005	1.1	0.2	1.3	0.9	0.2	1.1	0.5	0.9	1.4
2006	1.1	0.2	1.3	0.9	0.2	1.1	0.5	1.0	1.5
2007**	1.2	0.2	1.4	0.9	0.2	1.1	0.5	1.0	1.5
2008	1.2	0.2	1.4	1.0	0.2	1.2	0.5	1.0	1.5
2009	1.3	0.2	1.5	1.1	0.2	1.3	0.5	1.0	1.6

	UK			USA			OECD average		
	Public %	Private %	Total %	Public %	Private %	Total %	Public %	Private %	Total %
1998*	0.83	0.28	1.11	1.07	1.22	2.29	1.06	0.29	1.33
1999	0.8	0.3	1.1	1.1	1.2	2.3	1.0	0.3	1.3
2000	0.7	0.3	1.0	0.9	1.8	2.7	1.0	0.3	1.3
2001	0.8	0.3	1.1	0.9	1.8	2.7	1.0	0.3	1.4
2002	0.8	0.3	1.1	1.2	1.4	2.6	1.1	0.3	1.4
2003	0.8	0.3	1.1	1.2	1.6	2.9	1.1	0.4	1.4
2004	0.8	0.3	1.1	1.0	1.9	2.9	1.0	0.4	1.4
2005	0.9	0.4	1.3	1.0	1.9	2.9	1.1	0.4	1.5
2006	0.9	0.4	1.3	1.0	1.9	2.9	1.0	0.5	1.5
2007**	0.7	0.6	1.3	1.0	2.1	3.1	1.0	0.5	1.5
2008	0.6	0.6	1.2	1.0	1.7	2.7	1.0	0.5	1.5
2009	0.6	0.7	1.3	1.0	1.6	2.6	1.1	0.5	1.6

*Includes private expenditure on institutions subsidised by public funds

**Source: OECD, Education at a Glance (series), table B2.1b, B2.3 (data for earlier years was not in a directly comparable series)

1.2 Spending per student

Annual expenditure per student by educational institutions, 2008

Annual expenditure per full-time equivalent student by educational institutions for all services in the UK at primary, secondary and tertiary levels (excluding expenditure by tertiary institutions on research and development activities) was above the OECD average in 2009. At primary level, UK spending per student was higher than in France, Germany and Japan, but lower than in the United States. At the secondary level, UK spending per student was higher than in Germany and Japan, but lower than in France and the United States. At the tertiary level, UK spending per student was lower than in France and the United States, but higher than Germany.

In equivalent US\$ converted using Purchasing Power Parity for GDP, by level of education, based on full-time equivalents

Source: OECD (2012) Education At A Glance, Table B1.1a

2009	Primary \$	Secondary \$	Tertiary (excl R&D) \$
France	6,373	10,696	10,042
Germany	6,619	9,285	9,594
Japan	7,729	9,256	n/a
UK	9,088	10,013	9,889
USA	11,109	12,550	26,313
OECD average	7,719	9,312	9,341

1.3 Higher education and economic growth

In 2000-10, more than half the annual GDP growth in the UK on average was related to labour income growth among those with higher education. In the UK, labour income growth among higher education graduates contributed 1.08% in annual GDP growth of 1.66% on average in 2000-10. By contrast labour income growth among those educated to upper secondary or post-secondary non-tertiary level of education contributed only 0.06% on average in annual GDP growth over the same period, and those whose level of education was below this actually made a negative contribution to GDP growth.³

1.4 The economic value of public spending on higher education

Numerous studies have shown the economic value of investing in higher education. For example, recent research by Universities UK has indicated that, for every £1 of income for the higher education sector, it generates £2.52 in output, including job production and export earnings. From an income of £23.4 billion, the higher education sector generates about £59 billion of output through direct and secondary effects, generates about 2.6% of UK jobs, and earns about £5.3 billion in exports.⁴

1.5 The individual benefit of tertiary education

While the benefits of education are far wider than the simply financial, the data on the private and public rate of return for individuals who have obtained tertiary education clearly indicate the benefits of investing in learning. People who have education to this level will have considerably higher lifetime earnings than those who have been educated to the level of upper secondary or post-secondary non-tertiary education; they will make greater contributions to the state through higher tax and national insurance payments, and require less in the way of transfer of funding through social security benefits. The OECD has estimated that the public net value including income tax and social security payments for males in the UK who have obtained tertiary education, compared with those who have attained an upper secondary education, over their lifetime is \$86,550, and \$91,365 for females. This compares favourably with the direct cost to the state for their education of \$15,151.⁵ While only 64% of those adults in the UK whose education level is below secondary report electoral participation, that proportion rises to 69% for those who have an upper secondary level of education and to 77% for those who have had tertiary education.⁶ While only 10% of those adults in the UK whose education level is below secondary report volunteering, that proportion rises to 12% for those who have an upper secondary level of education and to 19% for those who have had tertiary education. While only 63% of those adults in the UK whose education level is below secondary report life satisfaction, that proportion rises to 66% for those who have an upper secondary level of education and to 77% for those who have had tertiary education.⁷

1.6 Employment rates

Those who have attained higher education are more likely to be in employment than those with lower educational attainment. In 2010 85.1% (OECD average 83.1%) of 25-64 year olds in the UK who had attained higher education were in employment, compared with 76.8% (OECD average 73.7%) of those who had

attained upper secondary education and 56.0% (OECD average 55.5%) of those who had attained below upper secondary education.⁸

1.7 Leitch Review targets

The Leitch Review of Skills said that achieving world class skills for the UK – in order to secure prosperity and fairness in the global economy – would require more than 40% of the adult population qualified to Level 4 or above by 2020, up from 29% in 2005.⁹ At the time of writing the most recent data were for 2010, and estimated that 37% of the UK working age population had achieved National Qualifications Framework level 4 or above,¹⁰ so although considerable progress has been made towards achieving this target, continued funding is needed to ensure it is reached, and maintained.

2 FURTHER EDUCATION

2.1 Post-secondary non-tertiary public spending

UK and OECD data for the post-secondary non-tertiary sector are problematic. The UK does not submit public spending data on for post-secondary non-tertiary (PSNT) to the OECD. The Treasury's Public Expenditure Statistical Analyses for the UK have not provided comparable spending data for PSNT public spending since 2009. While PESA 2009 showed £8,114m for post-secondary non-tertiary public spending for the UK in 2010-11, in PESA 2012 this figure for 2010-11 had been revised downward to £426m. PESA 2012 (published July 2012) showed post-secondary non-tertiary public spending for the UK of £558m for 2011-12. The table below shows how spending totals in PESA 2009 and PESA 2012 have changed for 2008-9, with much of PSNT spending being included within the secondary education total in PESA 2012, making it difficult to see how much is being spent by the government on PSNT education.

	UK public sector spending on education	2008-9 £m
PESA 2009	Secondary	24,224
	Post-secondary non-tertiary	8,827
	Total	33,051
PESA 2012	Secondary	34,980
	Post-secondary non-tertiary	513
	Total	35,493

Table 5.2: PESA

http://www.hm-treasury.gov.uk/d/pesa_complete_2012.pdf

http://www.hm-treasury.gov.uk/d/pesa09_chapter5.pdf

2.2 UCU 2010 Spending Review target

In our submission to the 2010 Spending Review, UCU said: "UK public spending on post-secondary non-tertiary education should be maintained in the short-term at 0.6% of GDP, rising to 1.0% when conditions allow." This policy could be retained for the proposed funding campaign.

* Central Government own expenditure on services, including capital – excludes local authority expenditure

Money GDP cash data at http://www.hm-treasury.gov.uk/data_gdp_fig.htm

Last updated 12 July 2010 (accessed 25.8.10). Education spending data: HM Treasury, Public Expenditure Statistical Analyses 2009, table 6.4. % calculations: UCU

UK public spending on post-secondary non-tertiary education

	Post-secondary non-tertiary education spending*	
	£ million	FE as % GDP
2003-04 out-turn	6,672	0.58%
2004-05 out-turn	6,891	0.57%
2005-06 out-turn	7,266	0.57%
2006-07 out-turn	7,922	0.59%
2007-08 out-turn	8,174	0.57%
2008-09 estimated out-turn	8,386	0.58%
2009-10 plans	8,619	0.61%
2010-11 plans	8,114	0.55%

2.3 The economic benefit of public investment in further education

It is worth investing in further education. A report published in 2011 by the government's Department for Business Innovation and Skills showed that vocational qualifications delivered in the workplace and apprenticeships delivered a return of around £35-£40 per pound of funding. The report also said that the Net Present Value¹¹ of further education qualifications started in 2008-09 was estimated to be £75bn over the years in which successful learners remain in the workplace.¹²

2.4 The individual benefit of upper secondary or post-secondary non-tertiary level of education

While the benefits of education are far wider than the simply financial, the data on the private and public rate of return for individuals who have obtained upper secondary or post-secondary non-tertiary education over those who have not obtained that level indicate the benefits of investing in learning. People who have education to this level will have considerably higher lifetime earnings (the equivalent of \$139,877 in net value for males and \$33,414 for females)¹³ than those who have not been educated to the level of upper secondary or post-secondary non-tertiary education; they will make greater contributions to the state through higher tax and national insurance payments, and require less in the way of transfer of funding through social security benefits. The OECD has estimated that the public net value including income tax and social security payments for males in the UK who have obtained upper secondary or post-secondary non-tertiary education over their lifetime is \$74,468, and \$62,140 for females, when compared with those who have not attained that level of education. This compares favourably with the direct cost to the state for their education of \$17,187.¹⁴ While only 64% of those adults in the UK whose education level is below secondary report electoral participation, that proportion rises to 69% for those who have an upper secondary level of education and to 77% for those who have had tertiary education.¹⁵ While only 10% of those adults in the UK whose education level is below secondary report volunteering, that proportion rises to 12% for those who have an upper secondary level of education and to 19% for those who have had tertiary education. While only

63% of those adults in the UK whose education level is below secondary report life satisfaction, that proportion rises to 66% for those who have an upper secondary level of education and to 77% for those who have had tertiary education.¹⁶

2.5 Employment rates

Those who have attained upper secondary education are more likely to be in employment than those with lower educational attainment. In 2010 76.8% (OECD average 73.7%) of 25-64 year olds in the UK who had attained upper secondary education were in employment, compared with 56.0% (OECD average 55.5%) of those who had lower levels of educational attainment.¹⁷

2.6 Education and well-being

Recent research by the UK's Office for National Statistics has concluded that 'Higher levels of qualifications and continued formal and informal learning have been found to be associated with greater individual subjective well-being'.¹⁸ The ONS found that data collected in 2011 suggested that adults aged 16 or over with higher levels of qualification, at NVQ level 3 or above, were more likely to report medium or high satisfaction with life overall, and medium or high feeling that life is worthwhile, than those with lower level qualifications; those with no qualifications reported the lowest levels of subjective well-being.¹⁹ In addition, those in either formal or informal part-time education or who had undertaken part-time education at some point in the previous year reported a greater level of well-being than those who were either not in part-time education or had not recently undertaken part-time education.²⁰

The same report also points out the negative impact of not being in education, employment or training. 'Over the last decade there have been a growing number of young people leaving compulsory education who are not continuing in education and who are also not in employment or training. Not being in education, employment or training (NEET) can waste young persons potential and reduces their contribution to society. Research shows that disengagement at this age negatively impacts in social terms and those who are disengaged from education and training can cause problems in the community in the form of nuisance and crime.'²¹

2.6 Leitch Review targets

The Leitch Review of Skills said that achieving world class skills for the UK – in order to secure prosperity and fairness in the global economy – would require more than 90% of the adult population qualified to at least Level 2 or above by 2020, up from 69% in 2005; and 500,000 Apprentices by 2020.²² At the time of writing the most recent data were for 2010, and estimated that 77% of the UK working age population had achieved National Qualifications Framework level 2 or above;²³ so although some progress has been made towards achieving this target, continued funding is needed to ensure it is reached, and maintained. In 2010-11 there were 200,000 Apprenticeship achievements in England, at Intermediate and Advanced level, up from just over 100,000 achievements in 2006-7.

Notes

- ¹ 'Tertiary' education in this report means higher education; 'tertiary' is used by the OECD to refer to education at level 5 and above, that is, beyond upper secondary (level 3) or post-secondary non-tertiary (level 4: such as further education) (see Appendix)
- ² http://www.hm-treasury.gov.uk/data_gdp_fig.htm data as at 28 June 2012
- ³ OECD (2012), Education at a Glance 2012, Table A10.1
- ⁴ <http://www.universitiesuk.ac.uk/Publications/Documents/EconomicImpact4Full.pdf>
- ⁵ OECD (2012), Education at a Glance 2012, table A9.4
- ⁶ OECD (2012), Education at a Glance 2012, table A11.2
- ⁷ OECD (2011), Education at a Glance 2011, table A11.1
- ⁸ OECD (2012), Education at a Glance 2012, table A7.3a
- ⁹ The Leitch Review of Skills (2006) Prosperity for all in the global economy – world class skills. London: HM Treasury. http://www.hm-treasury.gov.uk/d/leitch_finalreport051206.pdf p.14
- ¹⁰ Department for Education (2011) Education and Training Statistics for the United Kingdom, 2011. Table 3.8. <http://www.education.gov.uk/researchandstatistics/statistics/allstatistics/a00200448/education-and-training-statistics-2011>
- ¹¹ The discounted benefits (wages, employment returns and other benefits to employer and employee) of achieving a qualification minus the costs associated with undertaking the qualification (government funding, fees, and forgone output).
- ¹² BIS (2011) Measuring the Economic Impact of Further Education. London: BIS, research paper No. 38, p5.
- ¹³ OECD (2012), Education at a Glance 2012, table A9.1
- ¹⁴ OECD (2012), Education at a Glance 2012, table A9.2
- ¹⁵ OECD (2012), Education at a Glance 2012, table A11.2
- ¹⁶ OECD (2011), Education at a Glance 2011, table A11.1
- ¹⁷ OECD (2012), Education at a Glance 2012, table A7.3a
- ¹⁸ ONS (2012) Measuring National Well-being – Education and skills http://ons.gov.uk/ons/dcp171766_268091.pdf p.3
- ¹⁹ ONS (2012) Measuring National Well-being – Education and skills http://ons.gov.uk/ons/dcp171766_268091.pdf p.32
- ²⁰ ONS (2012) Measuring National Well-being – Education and skills http://ons.gov.uk/ons/dcp171766_268091.pdf p.33
- ²¹ ONS (2012) Measuring National Well-being – Education and skills http://ons.gov.uk/ons/dcp171766_268091.pdf p.13
- ²² The Leitch Review of Skills (2006) Prosperity for all in the global economy – world class skills. London: HM Treasury. http://www.hm-treasury.gov.uk/d/leitch_finalreport051206.pdf p.14
- ²³ Department for Education (2011) Education and Training Statistics for the United Kingdom – 2011. Table 3.8. <http://www.education.gov.uk/researchandstatistics/statistics/allstatistics/a00200448/education-and-training-statistics-2011>
- ²⁴ http://www.thedataservice.org.uk/NR/rdonlyres/F062DDAF-DCDD-4D5F-82FD-BE37624B29F6/0/SFR_commentary_June_2012.pdf

APPENDIX

Tertiary-type A education (ISCED 5A)

Tertiary-type A programmes (ISCED 5A) are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine, dentistry or architecture. Tertiary-type A programmes have a minimum cumulative theoretical duration (at tertiary level) of three years' full-time equivalent, although they typically last four or more years. These programmes are not exclusively offered at universities. Conversely, not all programmes nationally recognised as university programmes fulfil the criteria to be classified as tertiary-type A. Tertiary-type A programmes include second degree programmes like the American Master. First and second programmes are sub-classified by the cumulative duration of the programmes, ie, the total study time needed at the tertiary level to complete the degree. See also International Standard Classification of Education (ISCED) and Tertiary-type B education (ISCED 5B).

Tertiary-type B education (ISCED 5B)

Tertiary-type B programmes (ISCED 5B) are typically shorter than those of tertiary-type A and focus on practical, technical or occupational skills for direct entry into the labour market, although some theoretical foundations may be covered in the respective programmes. They have a minimum duration of two years full-time equivalent at the tertiary level. See also International Standard Classification of Education (ISCED) and Tertiary-type A education (ISCED 5A).

Separate UK funding data for **Post-secondary non-tertiary level of education (ISCED 4)**, which includes at least some of FE, is not provided in the OECD's Education At A Glance.