



National Audit Office

REVIEW

DEPARTMENT FOR EDUCATION

Raising the participation age: an assessment of the cost-benefit analysis

Memorandum

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National Audit Office

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Memorandum

Scope of this memorandum

1 This memorandum examines the Department's cost-benefit analysis for the Government's policy to require young people to continue participating in education and training until the age of 18, drawing out general lessons for the way in which cost-benefit analyses are produced across government.¹ It assesses the reasonableness of the Department's overall conclusion that the policy, which the Government has confirmed will continue², will lead to net economic benefits. In preparing the memorandum, we requested information from the Department to support the assumptions underpinning its analyses, and where possible re-performed its calculations using more recent data.³

Rationale for raising the participation age

2 The 2006 Leitch Review⁴ found that the UK's skills base was 'mediocre' by international standards and needed to improve by 2020 to meet the demand for more highly-skilled workers. The then Government had previously announced in 2005 its ambition to achieve 90 per cent participation in learning among 17 year olds by 2015, to be achieved through a range of initiatives aimed at encouraging young people to participate. The Department⁵ determined, however, that compulsion would be needed to progress beyond 90 per cent participation, with the aim of creating a better skilled workforce. It also anticipated wider benefits, including improved health of young adults and reduced anti-social behaviour.

3 *The Education and Skills Act (2008)* introduced the requirement for all young people to continue in education or training up to age 17 (from 2013) and 18 (from 2015). It will be the first time that the Government has increased the age at which a young person can leave learning since the 1970s. The Department consulted widely on its proposals⁶, including young people, parents, employers, providers and other government departments. Of the nearly 500 responses received, 44 per cent were in agreement with the policy and 40 per cent opposed. The Department also surveyed a representative sample of nearly 1,000 young people, of whom 36 per cent were in agreement and 47 per cent opposed. Despite some respondents' concerns about participation being compulsory, there was a general acceptance that staying in education/training until 18 was beneficial.

4 Raising the participation age is not about simply raising the school leaving age, since young people will be able to participate in a number of ways:

- full-time education, such as school, college or home education;
- work-based learning, such as an apprenticeship; or
- part-time education or training if they are employed, self-employed or volunteering for more than 20 hours a week.

1 The cost-benefit analysis was performed in 2007 and therefore our review is based on the policy as it was at that time.

2 Spending Review, October 2010.

3 Our analysis was performed prior to the decisions announced in the Spending Review on 20 October 2010.

4 Lord Leitch, *Prosperity for all in the global economy – world class skills*, December 2006.

5 The Department for Education (the Department) was formed on 12 May 2010, and succeeded the Department for Children, Schools and Families, which was created in June 2007 as part of the machinery of government changes arising from the winding up of the Department for Education and Skills. In this report 'Department' is used as a general term to refer to the Department for Education or its predecessors.

6 Department for Children, Schools and Families, *Raising Expectations: Staying in Education and Training Post-16 – consultation report*, July 2007.

5 Local authorities will be responsible for securing the participation of young people in their area. Schools, colleges and other providers will be expected to inform their local authority if a young person drops out to enable it to provide support to the young person concerned. Employers of young people working over 20 hours per week and who do not provide accredited training will be required to release them for one day per week to participate in training elsewhere.

Overall conclusion on the cost-benefit analysis

6 The Department estimated that the most likely annual gross benefit to the economy would be £2,400 million (in present value terms at forecast 2016-17 prices), assessed as the productivity gains expected from the increased wages and likelihood of employment resulting from higher qualifications obtained by the additional participants. The Department calculated that the policy would incur annual costs of £774 million, three-quarters of which are the direct, additional costs of education and training. The estimated net annual benefit of the policy was £1,626 million (adjusted to present value), assuming a steady state of full participation by 2016-17.

7 Overall we conclude that the Department's assessment that the policy will lead to a net economic benefit was reasonable. We identified one instance where the Department had underestimated costs by £100 million, relating to the costs to local authorities of tracking, engaging and supporting the additional students. The Department's calculations necessarily involved a large number of assumptions, and while we were unable to validate a large number of these, we found no evidence to suggest that they were not reasonable, and so concluded that the Department's estimate of total costs was broadly sound.

8 With regard to the benefits, we concluded that while the Department showed caution in its assumptions by excluding wider benefits and scaling down predicted attainment rates (which, by necessity, were based on the attainment rates of voluntary participants), the attainment rates remained optimistic. There is therefore uncertainty over the estimated benefits. We also found that while calculated returns to qualifications were based on broadly reasonable assumptions at the time of the analysis, these were likely to have changed significantly since this date (paragraph 20). Therefore, the uncertainty has increased, though not sufficiently for the benefits to be likely to fall below predicted costs.

Other findings, conclusions and recommendations

9 The findings set out below are derived from our assessment of the Department's cost-benefit analysis against best practice and principles, as set out in HM Treasury's 'The Green Book – Appraisal and Evaluation in Central Government'. The Green Book allows for a proportional assessment commensurate with the scale and potential impact of the policy change. Given the large scale of the *Raising the Participation Age* policy, we would expect to see a relatively comprehensive assessment against the Green Book requirements. Our conclusions and recommendations are applicable to cost-benefit analyses that the Department undertakes in future, subject to proportionality, and should be considered as part of continuously improving the Department's cost-benefit assessments.

The Department's overall approach to the cost-benefit analysis

10 The National Audit Office reviews impact assessments across government, and in 2010 reviewed 50 such assessments to assess the quality of the supporting analyses.⁷ This review found wide variation in the extent to which sources were identified for evidence used in impact assessments. It also found that 40 per cent of the impact assessments reviewed did not contain any quantification of benefits, while 10 per cent had not monetised either costs or benefits of the preferred option.

11 We consider that the Department's cost-benefit analysis for the policy on *Raising the Participation Age* was thorough and comprehensive relative to the quality of those across government that the National Audit Office has previously assessed. It used data from a variety of sources, including information from other government departments and the Labour Force Survey, to estimate the likely costs and benefits of the policy. The analysis provided a detailed review of existing evidence to identify likely impacts and challenges. In particular, the Department worked with economists at the University of Sheffield with expertise in the calculation of wage returns to qualifications to obtain assurance from experts over the quantification of likely benefits. The results of the analyses that the Department produced were placed in the public domain.

12 The Department took a cautious approach to the quantification of both costs and benefits. For example:

- The Department chose to exclude wider health and social benefits from its analysis, on the basis that they were too difficult to quantify robustly. It therefore considered that the benefits that were quantified, which cover increased productivity gains resulting from the higher qualifications expected, were very likely to be a conservative estimate of the total benefits expected from the policy.

- The Department used data on current participants to model the likely course choices of non-participants; however, to reflect the element of compulsion, the Department scaled down their expected success rates and the projected returns to the qualifications obtained.
- To quantify likely enforcement costs, the Department doubled its cost estimates, to reflect the uncertainties inherent in a new system.
- The Department undertook sensitivity analysis on the estimated benefits and published the results separately. We consider the Department should have included the results of the sensitivity analysis within the published impact assessment to bring them more readily to the attention of decision-makers (paragraph 14).

All of the assumptions used as the basis for the Department's analysis were explained.

13 Our main criticism of the Department's approach to the analysis is that it had not retained the data and information used to undertake the cost-benefit analysis in an accessible form for use later by others. Baseline information that is developed in preparing a cost-benefit analysis is important in informing the subsequent monitoring of policy implementation and assessments of the realisation of benefits. Retention of a clear audit trail is particularly important where a policy extends over a Spending Review period, or election, where it is likely that policies will need to be re-evaluated.

Recommendation 1: The Department should preserve a clear audit trail for all major cost-benefit analyses for reasons of transparency and to inform straightforward and cost-effective re-analysis of long-term policies.

⁷ National Audit Office, *Assessing the Impact of Proposed New Policies*, July 2010.

Clear and transparent presentation of the cost-benefit analysis

14 The main purpose of the cost-benefit analysis was to inform a decision by politicians on whether to proceed with the policy. While cost-benefit analyses are only one method of communicating relevant information to decision-makers, their presentation needs to be complete and transparent, so as to give all the information necessary on which to make a decision. The presentation of the cost-benefit analysis document was of a generally good standard, though we noted two important areas where the presentation could have been clearer.

- The Department performed a detailed sensitivity analysis on the benefits, presenting 11 possible scenarios, each based on changing the assumptions behind the benefits (for example, assumptions on students' achievement levels) within plausible limits. The estimated benefits ranged from £285 million to £5,383 million per year, with £2,400 million per year assessed as the most likely gross benefit. The justification for this assessment was provided in a separately published benefits paper.⁸ In our view, the cost-benefit analysis document should have included a summary of the justification for the selected estimate, in addition to a statement of the range of estimated benefits.
- The cost-benefit analysis document could also have presented more information on the inherent uncertainty in the Department's benefit assumptions, and how far changes in key assumptions would alter the balance of benefits versus costs.

Recommendation 2: The Department should include an explanation of the range of possible results in the summary of its cost-benefit analyses. Implications of variations in key assumptions and their possible effects on the result should also be prominently explained, to alert decision-makers to areas of risk. The Department should also use the information to manage the risks that have been identified.

Completeness of the cost-benefit analysis

15 The Department's calculations necessarily involved a large number of assumptions to support the valuation of costs in the cost-benefit analysis. Participation costs made up 75 per cent of the total estimated costs. These were based on unit costs agreed with HM Treasury. Though recommended practice in the Green Book, the Department did not perform sensitivity analyses on the costs. It would have been helpful to indicate the impact of changing these costs within an appropriate range, to provide decision-makers with an indication of the level of potential variation in the total costs.

16 Potential benefits of the policy include reduced costs to society of improved health and reduced likelihood of crime that have been shown by research to be associated with staying in education longer. The Department decided not to attempt to place a value on such wider health and social benefits because of the difficulty in monetising and measuring them, and made its decision not to do so explicit. Some broad assessment of the scale and value of these benefits, drawing on existing research, would, in our view, have improved transparency and have been useful to decision-makers.

⁸ The Department for Children, Schools and Families and The University of Sheffield, *Raising the Participation Age: An Assessment of the Economic Benefits*, (November 2007).

17 The Department excluded transfer payments (for example, Child Benefit payments) from the cost-benefit analysis on the basis that their net effect was nil. Economic transfers do, however, reflect a cost to the organisation making the payment and a benefit to those receiving it. Their existence should therefore be made visible to decision-makers, as well as the impact of any possible difference in timing of costs and benefits.

Recommendation 3: To assure completeness of cost-benefit analyses the Department should include:

- sensitivity analyses of costs, particularly where levels of uncertainty and potential variations are high;
- an indication of the possible value of wider benefits, drawing on relevant research; and
- information on the impact on different groups that arise from any transfer payments.

Testing and dealing with subsequent changes to assumptions

18 The Department used actual data from current participants to predict attainment rates for additional participants, scaled down to reflect the element of compulsion under the policy. Based on these data, the Department predicted that 11 per cent of additional learners with no prior qualifications would achieve A levels. The Department agreed that the prediction seemed counter-intuitive, but was clear that it had confirmed that the data were correct. The Department's investigations suggested that the data relate to those participants who do not take exams in Year 11 due to health reasons, and those for whom Year 11 attainment was not recorded. We nevertheless consider that the data should have been validated further, because the reasons given for the counter-intuitive results do not necessarily support the use of the data to calculate a scaled-down prediction of the attainment rates for additional participants.

Recommendation 4: The participation and attainment rates were based on actual data for voluntary participants. In relating them to young people who are compelled to participate, where the implications of the data do not appear to be logical the reasons should be fully investigated to provide assurance that the data are not flawed or being used inappropriately.

19 With long-term policies like *Raising the Participation Age*, it is possible that key assumptions and evidence underpinning the original cost-benefit analysis may change. The costs and benefits of major policies need to be monitored on an ongoing basis, and reviewed periodically to assess their affordability, and decide whether there is a need for a fundamental reassessment of the original cost-benefit analysis, for example, as part of the cross-government Spending Review process.

20 The following are aspects of the *Raising the Participation Age* policy where key assumptions have been affected by changes since the cost-benefit analysis was undertaken in 2007:

- **Much lower take-up of Diploma qualifications.** Diplomas were expected to be taken by 25 per cent of young people aged 14-19 by 2013. The cost-benefit analysis assumed that 23 per cent (around 15,000) of young people remaining in education as a result of the policy would study for vocational qualifications at levels two and three, of which the majority would be Diplomas.⁹ The current take-up of Diplomas is much lower than forecast. In 2009-10, 38,000 young people undertook Diplomas, one quarter of the Department's original forecast of 150,000. Only 10,000 of these 38,000 young people were aged 16 or above. The uncertainty around the economic benefits expected from the policy has therefore increased, as young people predicted to follow Diplomas opt for alternative vocational or academic qualifications, which have varying returns.

⁹ The qualifications system was undergoing extensive reform at the time of the Department's analysis and therefore it was not possible to model precisely the qualifications that new participants would undertake or their future labour market value.

- **The returns to the qualifications that young people remaining in education as a result of the policy will obtain.** The Department assumed that the returns to traditional vocational qualifications would be equivalent to BTECs and Craft City and Guilds qualifications, while the rate of return for Diplomas was assumed to be the mid-point between these and academic qualifications. NVQs were excluded as the Department assumed that they would be replaced by the Diplomas, for which take-up is now lower than expected. Returns to GCSEs and A levels are well evidenced but the returns to some vocational qualifications, particularly NVQs, are low, zero, or negative.¹⁰
- **The impact of the withdrawal of Educational Maintenance Allowances.** Educational Maintenance Allowances have been withdrawn from January 2011. Possible impacts include changes to the numbers of young people who voluntarily participate in education and changes in levels of attainment. Such changes, if any, should become apparent during 2011-12.

Recommendation 5: As part of its ongoing programme management, and the Spending Review process, the Department should periodically assess the validity of the key assumptions and evidence underpinning the original cost-benefit analysis of its policies. The assessments should be undertaken at appropriate points to fit the timing of policy implementation.

¹⁰ Alison Wolf, *Review of Vocational Education – the Wolf Report*, March 2011.

Where to find out more

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