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Evaluation study to Assess the Economic Impact of ESRC Research

**A 'Tracking Backwards' Case Study of the Education
Maintenance Allowance**

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Evaluation Study to assess the Economic Impact of ESRC Research

A 'Tracking Backwards' Case Study of the Education Maintenance Allowance

1. Executive Summary

1.1 Introduction

1. This report is a case study of the role played by social science research in the design of the Education Maintenance Allowance (EMA), a scheme to encourage increased participation in full-time education. The study was commissioned by the ESRC and was conducted between June 2009 and January 2010.
2. The Department for Children Schools and Families (DCSF)¹ funds the EMA¹. It is a current, means-tested benefit payable to 16-18 year olds in full-time education. In 2009/10, the annual EMA budget will approach £500M and comprise varying levels of payment to around 500,000 students within the 2-year cohort of 1.3 million (years 12 and 13).
3. EMA is designed to increase / maintain post-16 participation rates at higher levels than might prevail otherwise, by targeting young people from poorer households. There is an expectation that increased participation might benefit attainment too, although this was not an explicit objective for the scheme.
4. The ESRC case study reported here set out to trial a relatively novel approach to economic impact assessment, "tracking backwards" from the policy measure in question, in this case the EMA, in an effort to detect and dimension the key contributions by social science.
5. The broad objectives of this study are to provide qualitative and quantitative assessments of the impact of social science research, and ESRC sponsored research in particular, on the EMA.

1.2 Brief history of the EMA

6. The historical roots of the EMA might be traced back in some sense to social reforms introduced in the early part of the 20th century. An education allowance might be seen as part of the more general discussions regarding payment of a family allowance as a means by which to help poorer households cope with the costs of having a family, particularly within the context of compulsory schooling and the prohibition of child employment.
7. The 1944 Education Act (the Butler Act) was also a significant milestone, in which the government of the day abolished the fees for state secondary schools and increased the age at which young people were able to leave school, from 14 to 15 in the first instance, and then from 15 to 16 in 1974.
8. In 1938, only one-fifth of all children received a formal education after age 14. Concern over early leavers continued, and political interest in a student allowance ebbed and flowed with successive governments during the 1960s and 1970s.

¹ It should be noted that a change of Government occurred between the completion and publication of this report. The Department for Children Schools and Families no longer exists and the EMA is currently funded by the Department for Education

9. The decision to launch the EMA (in 1999) was made in the early years of the Labour Government which came to power in 1997, although it was not explicitly signalled in their election manifesto – it was one of several major education initiatives, partly with the intention of realising the objective of getting 250,000 young people off benefits and into work.

1.3 EMA Pilot Studies

10. The EMA was a major proposal with substantial implications for both the education system and the public purse, and as a result the Department for Education and Skills elected to run a comprehensive pilot in order to determine the most cost-effective arrangements.
11. The pilots began in September 1999 by introducing four models of the main EMA in 15 Local Education Authority (LEA) areas, and with 11 LEAs signed up as controls (policy off). The pilot was extended to a further 41 areas in 2000/01, following its apparent early success, which amounted to around a 1/3 Of the country.
12. Young people in the pilot areas whose parents' income did not exceed £13,000 per annum were entitled to receive a weekly allowance of £30 or £40 a week during term time (depending on the pilot area in which they lived). For those with a parental income of between £13,000 and £30,000, EMA was progressively tapered, down to a minimum of £5 per week. In addition, two sets of bonuses were available to EMA recipients: (1) termly bonuses, available to all EMA recipients to encourage them to remain in education, and (2) achievement bonuses for those who met their learning goals.
13. The quantitative evaluations of the pilots, commissioned by the DCSF, provide a robust estimate of the scheme's impact on post-16 participation, showing a statistically significant improvement in participation for both cohorts of around 5.9% of eligible students in the pilot areas and an estimated impact for the whole of England of 3.8%, or around 25,000 young people. Impacts on participation actually improved at 17, with EMA reducing the numbers of students that would naturally have left after the first year of sixth form or college.

1.4 National Roll-out

14. Following the pilot studies and the evaluations of them, the EMA was rolled out nationally to 16-year-olds in academic year 2004/05, 17 year olds in academic year 2005/06 and 18 year olds in 2006/07. All young people in the pilot areas continued to be eligible for EMA throughout the phased national roll-out.
15. Features of the national scheme were:
 - A maximum payout of £30 a week, with awards payable to the young people themselves
 - A flexible bonus structure, with two potential payments of £100 (in January and July) depending on satisfactory reports from the academic institution.
16. Take-up has been high, with around 571,500 EMA recipients in 2008, corresponding to about 43% of the 16/17 cohort in England, and about 55% of those in education. The total cost (including administration) in 2008 was about £532m.

1.5 The current study

17. With respect to the influence of social science research on the policy, we divide our analysis into two phases: the period leading up to the announcement of the policy and commencement of the trials (in 1999), and the subsequent evaluation of the trials and the national rollout.

18. On the basis of interviews with former politicians, senior officials and analysts, we find little evidence to suggest that social science research played a direct role in the decision to launch the EMA. Contributors were unanimous that the decision to implement the scheme was essentially political.
19. The proposal was made first in the late 1970s, but was not adopted at that time on affordability grounds. It appeared in a subsequent labour party manifesto too. Ultimately, it was selected by ministers from amongst a longer list of policy proposals two years into the first administration of the 1997 labour government, when the issue of post-16 participation rates had become especially topical.
20. Notwithstanding this, the scheme, and its theoretical foundations, has a history that stretches back far beyond 1999, with intellectual and academic discourse informing political discussions of social and education policy throughout the early, post-war period.
21. The interplay between the ambitions of reforming politicians and the insights of social science research is hard to resolve at this distance in time. However, our interviews and literature review do strongly suggest that social scientists have published concepts and empirical data that have contributed to shaping the accepted mores of the policy teams and analysts inside government in the years and decades before the scheme was launched.
22. By the 1970s, there is a consensus across the academic and political classes that children from poorer households tend to leave school earlier and with less good qualifications, than do their peers in other socio-economic groups. Early leaving tends to result in more uncertain employment and reduced lifetime earnings. Financial hardship is seen as an important factor in the decision to leave school at the earliest opportunity.
23. Contributors argue that these ‘stylised facts,’ which have come in to use amongst academic and policy communities, and across the political spectrum, underpinned proposals for the introduction of an allowance.
24. Social science research has continued to refine these working assumptions, even after the launch of the Allowance, for example, by the helping to demonstrate the importance of several other factors that shape young people’s decisions about staying on, such as prior attainment (qualifications) and the state of the local youth labour market. More recent education research is exploring the influence of family and social networks in shaping young people’s aspirations. Both sets of issues have been reflected upon in periodic reviews of the EMA and its continuing existence and evolution.
25. Interviewees also pointed to other channels connecting research to policy, ranging from the education of the analysts embedded in our departments of state, to discourse within professional networks, to the commissioning of studies from leading academics or their membership of advisory committees or their contributions to strategic reviews and consultations.
26. The manifold and diffuse nature of the transmission mechanisms – from shaping concepts to ad hoc advice – proved too difficult to structure and quantify for this study, however the evident importance of these conceptual and indirect channels suggests this is an area where more work might pay dividends in terms of sharpening our available methods for tracing and weighing these intangibles
27. There was a consensus across stakeholders that the pilot evaluation had been the most obvious and instrumental impact, wherein the world-class institutions that carried out the evaluation produced such comprehensive and robust evidence so as to confirm the ideal design variant and confirm the value of a national scheme. Policy teams were able to argue successfully for design solutions that ran counter to some early preferences of ministers, and launch a scheme that has proved to be so cost-effective that the policy has continued largely unchanged for more than a

decade, where a lifecycle of 3-5 years is more typical. Equally, the scale and rigour of the evaluation are such that the ministry has continued to use the results to model and explore new policy proposals.

28. The trials were extensive, involving testing of a number of alternative specifications with respect to the size of weekly payments and bonuses, and the recipient of the payment (pupil or parent). It is here that the role of social science (in distinguishing between the alternatives, and providing cost-effectiveness comparisons) is clearer, and where quantification of the role of research becomes practicable.
29. It is useful to distinguish between the *effectiveness* of the policy – the extent of its success in realising its primary objective of increasing post-compulsory participation in education – and its *efficiency*, in achieving this objective in a cost-effective manner. The pilot studies indicated that the policy was indeed effective in achieving its primary aim, while the alternative pilot ‘variants’ informed a decision regarding the most efficient option.
30. We view the pilot studies and the subsequent evaluations as ‘social science research’, and hence consider it appropriate to attribute the benefits of this work to social research. These benefits derive from both effectiveness and efficiency – the pilot studies informed decisions on the specification most useful in stimulating post-compulsory education, and informed value-for-money considerations.

1.6 Quantification of net scheme benefits

31. An *economic* assessment of *effectiveness* requires estimation of the net benefits of the scheme - the overall economic benefit gained per individual participant - and appraisal of the extent to which the pilot studies increased participation. The evaluation studies did not include a cost-benefit analysis (CBA), and to date the DCSF has not published such an analysis of the EMA. We have therefore carried out our own CBA of the scheme.
32. The principal economic benefits of the scheme arise from enhanced expected lifetime earnings of participants, which we have estimated in two ways: first, by applying results of research on returns from additional schooling itself, and secondly by estimating earning enhancements resulting from improved qualifications of participants. Both suggest annual EMA benefits of the order of £2bn.
33. Taking account of costs, we obtain a figure for *net* EMA benefits of up to £1bn per annum.
34. Four main variants of the scheme were trialled, and the extent of increased post-compulsory education participation was estimated for each alternative in the subsequent evaluations. The variant of the scheme chosen for national rollout was associated with considerably higher participation than alternatives, suggesting a significant benefit from the evaluation studies.
35. We have also estimated the financial losses in efficiency that would have resulted from alternative scheme specifications – in particular, the choice of a maximum £40 weekly payment rather than £30. Conservatively, the estimated savings are of the order of **£80m**.
36. Such benefits far outweigh the costs of the pilot studies evaluations, understood to have been **£5-6m**.

1.7 Conclusions regarding the role of ESRC / social science research

37. As indicated, we conclude that the basic driver for the implementation of some form of EMA was political rather than based on prior analysis or research, whether ESRC-based or not. The ‘stylised facts’ around which discussion of the need for the policy were based – such as the disproportionately low representation

of children from low-income families in post-compulsory education, with consequent reduced opportunities and reinforcement of the cycle of poverty – were doubtless influenced by research, but that influence is too diffuse for a quantitative contribution to be meaningfully attributed to social science (or ESRC) research.

38. The pilot evaluations were thus the principal direct contribution of social science to the scheme.
39. There is no way of uniquely attributing shares of the ‘credit’ for the EMA pilots/evaluations between the bodies that might reasonably have a claim. The department (DCSF) was the initiator and sponsor of the pilots, while a major role was played by the Institute of Fiscal Studies (IFS), one of four institutions in the consortium carrying out the studies and a key contributor to the quantitative analyses. The IFS, in turn, receives substantial funding from the ESRC, which sponsors the institute’s Centre for the Microeconomic Analysis of Public Policy, accounting for a quarter or more of IFS income.
40. However, it is reasonable to ascribe one-half of the quantitative evaluation work to the IFS, and to regard a quarter of this as supported by the ESRC. On this basis the net benefit to the evaluations contributed by ESRC is \$80m x 1/8 = **£10m**. This figure requires cautious interpretation, dependent as it is on the particular method of attributing benefits.

1.8 Conclusions regarding the ‘tracking backwards’ methodology

41. Under certain conditions, we conclude that the ‘tracking backwards’ approach can be successful. The key conditions are:
 - The availability of good-quality quantitative policy evaluations, which allow net policy benefits to be estimated
 - That sufficient time has elapsed for impacts to be felt, and their sustainability to be assessed, but the time lapse should not be so great that it is difficult or impossible to track down discussion partners that were in positions of some influence at the time and who may no longer be available to expand on that experience. We have a sense that 10-15 years back is probably the maximum timeframe
42. Apart from the evaluations themselves, we have not identified ESRC-funded research reports written over the last 20 years or so that directly address the policy, which reinforced our interview-based conclusion that research had little impact on its inception. This process was somewhat time-consuming, however, and some way of indexing potentially policy-relevant contributions to the ESRC database could have made the process more speedy and reliable.
43. We have found substantial benefits from the social-science inputs to the EMA evaluations in assisting cost-effective policy implementation, a result that seems to derive from two features of the EMA in particular:
 - Large public financial expenditures are involved; and
 - There is scope for considerable variation in the policy specification, and hence in the possible spectrum of costs and benefits available.
44. These features suggest the likelihood of substantial benefits from the use of social science research to carry out careful evaluation of alternative options.

2. Introduction

2.1 Background to the study

The ESRC has, through its Research Evaluation Committee, developed systematic procedures for evaluating the academic quality and impact of its research, and has also developed qualitative approaches to assessing policy and practice impacts. The Council has now begun to extend its evaluation work to cover aspects of economic impact, the context in which the current study was commissioned.

This extension of evaluation activity is in line with the Government's increasing emphasis on the need for evidence of the economic and social returns from its investment in research, a trend reinforced in the Warry report², which recommended that Research Councils should demonstrate more clearly the impacts achieved from their investments.

This work is one of two evaluation studies commissioned by the ESRC to assess the economic impact of its research, and conducted between June 2009 and January 2010. Our focus is on a case study of the Education Maintenance Allowance (EMA), a scheme to encourage increased participation in full-time education by those reaching the end of the period of compulsory education. The other study, carried out by WM Enterprise, is concerned with Pathways to Work, an initiative aimed at encouraging employment among people claiming incapacity benefits.

2.2 Objectives and intended outcomes of the Study

In line with the above, the broad objectives of the study are to provide qualitative and quantitative assessments of the impact of social science research, and ESRC sponsored research in particular, on the EMA. As specified in the tender reference, this involves a 2-stage process:

(i) Taking as the starting point a national policy or practice initiative [in this case the EMA] where benchmarking evaluation data exists, the evaluation would use qualitative methods to establish how and to what extent social science research in general, and ESRC research in particular, had contributed to that initiative. The outcome of this part of the evaluation study will be a qualitative assessment of the ESRC's impact on the policy or practice initiative.

(ii) During the second stage of analysis, the qualitative evidence would be analysed alongside other contributory factors to establish a broad quantitative estimate of the ESRC's economic impact. The outcome of this part of the evaluation study will be a quantitative estimate of the ESRC's impact on the policy or practice initiative.

2.3 ESRC's earlier work on the Economic Impact of Social Science Research

In 2005, the ESRC hosted an international symposium entitled 'New Approaches to Assessing the Non-Academic Impact of Social Science Research', the main conclusions of which were:

- Impact evaluations of social science research should look beyond dissemination to capture evidence of application by research users
- Assessment methods should seek to capture the wide diversity of social science impact, including improved economic performance and better informed public policy and decision making, and

² Research Council Economic Impact Group (2006): 'Increasing the Economic Impact of Research Councils', London, DTI. <http://www.dti.gov.uk/files/file32802.pdf>

- Evaluations should examine the processes through which impact occurs within a particular setting.³

A subsequent report prepared for the ESRC⁴ recognised the difficulty of measuring the macroeconomic impact of social science research, while proposing new valuation methodologies which ‘might go some way’ towards estimating the value of research activity. A further assessment of two ESRC-sponsored research centres, aimed at identifying what can in practice be done to measure value, found that robust quantitative estimates could only be expected where

- The research centre [responsible for the study] has been commissioned explicitly to develop evidence on which a policy may be based; and
- A robust evaluation of the policy in question has been undertaken.⁵

These conditions can be said to have been realised in the current study. The pilot EMA areas, with controls, were used to collect evidence for the basis of the EMA, even though the decision to go ahead with the policy in some form had apparently already been taken, and the pilot studies were subject to extensive evaluation.

3. The Education Maintenance Allowance (EMA)

3.1 History

The historical roots of the EMA might be traced back in some sense to social reforms introduced in the early part of the 20th century. An education allowance might be seen as part of the more general discussions regarding payment of a family allowance as a means by which to help poorer households cope with the costs of having a family, particularly within the context of compulsory schooling and the prohibition of child employment.

An article entitled ‘Children’s allowances: an economic and social necessity’⁶ describes the progression of this kind of social provision from the 19th century up to the late 1960s. It picks out the work of Eleanor Rathbone in the interwar years, a social reformer who drew on her innate sense of fairness as well as official statistics to advance arguments that were both social and economic.

The 1944 Education Act (the Butler Act) was also a significant milestone, in which the government of the day abolished the fees for state secondary schools and increased the age at which young people were able to leave school, from 14 to 15 in the first instance, and then from 15 to 16 in 1974.

While primarily political acts of social reform, both pieces of legislation were informed by official statistics on (for example) participation rates in secondary education, which reveal that, in 1938, only one fifth of all children received a formal education after age 14.⁷

Concern over early leavers continued, and in 1954 the government commissioned a report from the Central Advisory Council for Education (England) to establish the

³http://www.esrc.ac.uk/_images/non-academic_impact_symposium_report_tcm8-3813.pdf

⁴ Frontier Economics, 2007: ‘Evaluating the impact of ESRC Funding’, report to the ESRC

⁵ Frontier Economics 2009: ‘Measuring the impact of ESRC funding’, report prepared for the ESRC

⁶ David Bull, editor, Family Poverty, published for the Child Poverty Action Group, Duckworth, London, 1971.

⁷ Quoted during a speech to commemorate the 60th anniversary of the 1944 Education Act, given by the chief inspector of schools, David Bell, Wednesday April 21, 2004.

factors influencing young people in their decision to leave full-time education. Patricia Rice, in a paper on demand for post-compulsory education⁸, notes the Council's reference to evident differences in length of school life and attainment at the time of leaving between the 'children of parents in professional or managerial occupations at one extreme to the children of unskilled workers at the other' (Ministry of Education, 1954). In the Council's view, shortage of money was one of a number of factors affecting the decision to leave and it was naturally most significant amongst poorer households.

The political interest in a student allowance ebbed and flowed with successive governments across the 1960s and the 1970s. The Central Policy Review Staff reportedly prepared a proposal for an Education Maintenance Allowance in the late 1970s, prompted in part by immediate concerns over stalled growth in levels of participation and informed by a more long-standing view that financial hardship ought not to be a factor causing 16-year olds to choose to go out to work. Equally, there was a sense of inequity as regards the treatment of 18-year olds who had the possibility of a maintenance grant while no provision was made for 16-18 year olds. The proposal was not taken forward at this point, principally due to the very large cost of the scheme and the financial strictures being faced by the Callaghan government at the time. The proposal was reintroduced in the labour party manifesto at the 1987 general election, and reportedly remained a personal interest of Gordon Brown.

Setting aside the long history, the decision to launch the pilot Education Maintenance Allowance in 1999 was made in the early years of the Labour Government which came to power in 1997. The EMA was one of several major education initiatives, including the introduction of tuition fees and student loans on the HE side (in response to the report of the national committee of enquiry into higher education, chaired by Sir Ron Dearing) and the over-arching system of 16-19 qualifications begun under the previous Conservative administration.

The Education Maintenance Allowance itself was not signalled explicitly in the 1997 Labour Party manifesto. However, the incoming government did commit to getting 250,000 young unemployed people off 'benefit' and into work, which was to be realised in part through increasing the proportion of all young people with access to part-time or full-time education and achieving NVQ Level 2 qualifications. Moreover, the manifesto did set the scene for action more generally around post-16 education:

Every 16 and 17 year-old on the road to a proper qualification by the year 2000. Nearly a third of young people do not achieve an NVQ level two qualification by age 19. All young people will be offered part-time or full-time education after the age of 16. Any under-18-year-old in a job will have the right to study on an approved course for qualifications at college. We will replace the failed Youth Training Scheme with our new Target 2000 programme, offering young people high-quality education and training (1997 Labour-Party Manifesto⁹).

Within a month of Labour's 1997 election victory, the widening participation committee chaired by Helena, later Baroness, Kennedy, and set up by the now defunct Further Education Funding Council, produced its report 'Learning Works':

We must widen participation, not simply increase it ... Widening participation means increasing access to learning and providing opportunities for success and progression to a much wider cross-section of the population than now. Everyone who had underachieved in the past and was continuing not to fulfil their potential had to be drawn into

⁸ Patricia G Rice, The demand for post-compulsory education in the UK and the effects of educational maintenance allowances, *Economica*, Volume 54 No. 216, November 1987, 465-475.

⁹ www.labour-party.org.uk/manifestos/1997/1997-labour-manifesto.shtml

successful learning.
(www.guardian.co.uk/politics/2006/jan/03/furthereducation.uk)

3.2 Factors driving the launch of EMA and the role of social science

In a post-rollout analysis of the evidence from the EMA pilots, Maguire and Thompson¹⁰, from the Warwick Centre for Education and Industry (not itself part of the pilot evaluation consortium) cite two related factors as being the principal impetus behind the DfEE decision to launch a pilot EMA, which were:

- Increases in post-16 education participation rates had stalled at around 70% by the mid-1990s, having risen year-on-year from 55% in 1989. (DfEE 1999); and
- The financial constraints faced by young people from poorer families seeking to progress to FE, post-16, were not being addressed adequately by the discretionary funding arrangements in operation through local education authorities.

The reversal of the mid-1990s contrasted with the quite dramatic increases in post-16 participation levels in the years following the introduction of the GCSE in the mid 1980s. The new system dispensed with norm referencing (where only a certain proportion of candidates was granted a particular grade, no matter how good the cohort overall), allowing a larger proportion of each year group to demonstrate their *absolute* ability as well as permitting schools to sharpen their teaching and more readily convey the effort / quality of work required to attain a given grade. With rising year 11 attainment rates, more young people were encouraged to consider studying post-16, and improving results also gave schools and colleges the confidence to enrol a greater proportion of applicants. There was also an assumption that the demise of the traditional youth labour market had played its part (Maguire and Maguire 1997).

There was anecdotal evidence that post-16 education rates had reached an upper ceiling in part because young people from poorer households had not responded to the 'opportunity' of the GCSE in the same way as their peers from higher socio-economic groups, and that they continued to achieve poorer qualifications and had lower than average staying-on rates as a result. This insight goes beyond the broad-brush statistics, to an analysis of trends by socio-economic group and an explanation of the revealed differences.

Subsequent work by Clark confirmed that *the main drivers of post-compulsory participation growth were prior attainment and local labour markets*.¹¹ His analysis of a 20-year panel of regional-level data suggested that local youth unemployment has a major impact on the decision to stay in school or seek employment. This effect was particularly acute for boys. On the basis of this finding, Clark argued that improving youth employment conditions in the early 1990s could broadly explain the trend towards levelling-off of increased participation. As if to confirm this influence, demand for EMA grants was high in 2009/10, under the pressure of rapidly weakening youth employment.

3.3 Role of the Pilot studies and Evaluations

The EMA was a major proposal with substantial implications for both the education system and the public purse, and as a result the Department for Education and Skills elected to run a comprehensive pilot in order to determine the most cost-effective arrangements.

¹⁰ Paying young people to stay on at school – does it work? Evidence from the evaluation of the piloting of the Education Maintenance Allowance (EMA), SKOPE Research Paper No. 69, December 2006. Sue Maguire and Jo Thompson, Centre for Education and Industry (CEI), University of Warwick.

¹¹ Damon Clark, Participation in post compulsory education in England: what explains the boom and bust?, Centre for the Economics of Education, April 2002.

The pilots began in September 1999 by introducing four models of the main EMA in 15 Local Education Authority (LEA) areas, and with 11 LEAs signed up as controls. The pilot was extended to a further 41 areas in 2000/01, following its apparent early success, which amounted to around a 1/3 Of the country.

Young people in the pilot areas whose parents' income did not exceed £13,000 per annum were entitled to receive a weekly allowance of £30 or £40 a week during term time (depending on the pilot area in which they lived). For those with a parental income of between £13,000 and £30,000, EMA was progressively tapered down to a minimum of £5 per week. In addition, two sets of bonuses were available to EMA recipients: (1) termly bonuses for attendance, available to all EMA recipients to encourage them to remain in education, and (2) achievement bonuses for those who met their learning goals.

The national scheme was rolled out to 16 year olds in academic year 2004/05, 17 year olds in academic year 2005/06 and 18 year olds in 2006/07. All young people in the pilot areas continued to be eligible for EMA throughout the phased national roll-out.

The pilot ran with four variants to test the impact of alternative arrangements on several of its key parameters. Specific variables were the amount of the weekly payment, the recipient (parents or student), and the amounts paid as bonuses. The pilots also sought to test differences arising from payments being limited to certain types of expenditure, such as transport, as well as several options for administering the scheme including its approach to means testing.

The £50m per annum EMA pilot was subject to a £5-6m 3-year evaluation, and remains one of the biggest evaluations of an education policy initiative ever undertaken.

The (then) Department for Education and Skills (DfES) commissioned a consortium of leading social-science research groups to conduct the evaluation: the work was led by the Centre for Research into Social Policy (CRSP), working in collaboration with the Institute for Fiscal Studies (IFS) and the National Centre for Social Research (NatCen).

The main aims of the evaluation were to assess the impact of EMA on participation, retention and achievement in post-16 education. The design of the evaluation was a longitudinal cohort study. This involved large surveys of random samples of young people in 10 of the original 15 EMA pilot areas and 11 control areas, including four waves of interviews over four years. Two cohorts of young people were involved: those who completed Year 11 in summer 1999 and those who completed in summer 2000.

The evaluation combined both quantitative and qualitative research methods. The intermediate and final results were presented in successive reports, while the evaluation results have provided a platform for a much longer list of publications.

3.4 Results of the EMA evaluations

The quantitative evaluations provide a robust estimate of the scheme's impact on post-16 participation, showing a statistically significant improvement in participation for both cohorts of around 5.9% of *EMA eligible* students in the pilot areas and an estimated impact for the whole of England across the entire cohort of 3.8%, or around 25,000 young people. Impacts on participation actually improved at age 17, with EMA reducing the numbers of students that would naturally have left after the first year of sixth form or college.

The quantitative evaluations also found the strongest impact to have been concentrated on students from households in the poorest areas and with lower levels of attainment at year 11.

The control groups suggest that the majority of ‘additional’ EMA participants would have otherwise gone into work or work with training, with a smaller proportion being drawn from a group that would otherwise have been NEET.¹² EMA was specifically designed to increase participation levels amongst targeted young people, and the original evaluation devoted relatively little effort to dimensioning educational *attainments*. In part as a result of this, the original evaluation was unable to detect a statistically significant increase in attainment by age 19.

Fortunately, with improvements in data availability, which permit one to more readily link enrolled students with their qualifications, the Institute for Fiscal Studies (IFS) was able to re-examine the impact of EMA on post-16 attainment. This evaluation did find a statistically significant link between EMA and educational attainment.

EMA was found to increase overall attainment (recipients and non-recipients combined) at Level 2 and Level 3 by around 2.5% for females and just under 2% for males. For EMA recipients, attainment at Level 2 and Level 3 increased by 7% for females and 5% for males.

None of the published evaluations sought to carry out an economic impact assessment of the scheme, which means that this case study cannot simply re-use and update an earlier analysis. We have therefore carried out our own cost-benefit analysis of the scheme, required in order to assess the contribution of the ESRC to the initiative.

3.5 Structure of the National Scheme

Following the pilot studies and the evaluations of them, the EMA was rolled out nationally in 2004. Features of the national scheme are:

- A maximum payout of £30 per week, with awards payable to the young people themselves
- A flexible bonus structure, with two potential payments of £100 (in January and July) depending on satisfactory reports from the academic institution.

Takeup has been high, with around 571,500 EMA recipients in 2008, corresponding to about 43% of the 16/17 cohort in England, and about 55% of those in education. The total cost (including administration) in 2008 was about £532m.

4. Methodologies Employed in the Current Evaluation

4.1 The ‘tracking backwards’ approach

The ESRC case study reported here set out to trial a relatively novel approach to economic impact assessment, “tracking backwards” from the policy measure in question, in this case the EMA, in an effort to detect key contributions by social science.

In the past, the ESRC’s Research Evaluation Committee (REC) has used a ‘tracking forward’ approach, using research investments as starting points and assessing the subsequent usage by policy makers. ‘Tracking backwards’ involves retrospective consideration of the drivers leading to the formulation and specification of the policy in question.

¹² NEET is an acronym for “Not currently engaged in Employment, Education or Training”. The government applies it to young people aged between 16 and 18 (some 16 year olds are still of compulsory school age) and including both people that might be temporarily ‘disengaged’ as well as those who have major and often multiple issues and are at long-term risk of remaining disengaged.

4.2 Qualitative approaches – the interview programme

The first substantive part of this evaluation has been an iterative programme of qualitative research to construct a narrative about the ways in which ESRC research contributed to the introduction of the Education Maintenance Allowance.

This has comprised a number of open interviews with the present officials in the Department for Children, Families and Schools (DCFS) responsible for EMA, and several of the senior people involved in the conception and development of the scheme in the late 1990s, as well as senior officials within the Learning and Skills Council, which implements the scheme on behalf of the Government. These interviews were used to orient the team, obtain relevant documents and statistics, and identify other discussion partners.

The interviews were semi-structured to permit us to follow respondents' leads on points of interest, with the key interviews being done face-to-face and later interviews being a little more targeted and more typically dealt with by telephone. We present a list of interviewees and our interview checklist in Appendix A to this report. Some interviews covered all issues, while others have been rather narrower and deeper, albeit working from the same basic menu.

For the key interviews, we started with an open discussion about the points at which social science research influenced the Department in its decision to launch the Education Maintenance Allowance and the resultant scheme design. The checklist encompasses both direct and indirect impacts and seeks to explore the contributions of social science from several perspectives, and at different points in the lifecycle of the Allowance: as a concept, a pilot, national scheme and extended scheme.

We also explored respondents' views as to the extent to which the EMA might be having an economic impact, and where and how such an impact might arise. This is about how and how much impact: for example, through expanded economic activity resulting from a reduction in the long-run share of NEETs in the population of working age or the productivity gains resulting from an improvement in the aggregate skills levels of the working population. The interviews also sought to gather any documented material regarding economic impacts.

Lastly, we sought to discuss the issue of a counterfactual. What might have been the outcome had there been no good, relevant social science research available to inform the decision to launch EMA or its design? In essence, were respondents to take the view that the EMA was only launched because of the available evidence, then the net economic benefits arising from the implementation of EMA could, in some sense, be credited to the social sciences. In practice, it seems that EMA had a political imperative – would have gone ahead anyway – and that social science played an important role in determining the design of the scheme. Hence the added value is a little more involved, with improvement in effectiveness and efficiency over other proposed variants.

4.3 Quantitative assessments – cost-benefit and associated analyses

We have estimated the proportionate gains in 'effectiveness' and 'efficiency' attributable to the pilots and their evaluations. 'Effectiveness' relates to the extent that the scheme was taken up by eligible young people; particular variants in the pilot studies are shown in the evaluations to be more or less attractive to young people, and thus result in significant variations in take-up. If the option chosen (on the basis of the pilots and their evaluations) for national rollout encourages higher takeup than other options, the scheme has benefited from the pilot-related work. The extent of the benefit, in financial terms, depends on the extra numbers involved and the net per-person economic benefit attributable to participation, as estimated in the cost-benefit analysis below.

'Efficiency' gains from the pilots involve identification of 'non-productive' expenditures, in particular setting levels of payment higher than is necessary to attract

participants to the scheme. In cost-benefit terms, the ‘ideal’ level of payments is that at which the net benefit of the ‘marginal’ participant is zero (and above which it becomes negative).

The factors included in our analysis of EMA benefits and costs are presented in Figure 1.

Figure 1 EMA costs and benefits

Stakeholder	Costs	Data requirements	Benefits	Data requirements
Participant	Income foregone	Number of participants Proportion of participants otherwise in paid work Wage profiles	EMA receipts	Number of participants Average weekly payments/bonuses
			Enhanced life-cycle earnings	Wage profiles
DCSF	EMA payments	Number of participants Average weekly payments/bonuses		
	Administration	Administration costs		
	Additional education provision for participants	Number of participants Schooling costs per participant		
Economy/wider society	Taxation foregone	Proportion of participants otherwise in paid work	Welfare savings	Proportion of participants otherwise not in paid work Qualifications and unemployment
			Enhanced contributions to GDP	Wage profiles
			Reduced crime	Propensities to crime

4.4 Approaches to assessing ESRC impacts

To some extent at least, the gains resulting from selection of the ‘best’ specification can be ascribed to social science/ESRC. It is not unreasonable to attribute *all* these gains to ‘social science research’, since in principal analytical work informing the choice can be argued to come under its umbrella.

5. Results of the current evaluation

5.1 Introduction

In describing our findings regarding the impact of ESRC / social science research on the EMA, it is useful to distinguish two phases:

- The years (and decades) prior to the launch of the EMA pilots and the subsequent national rollout, during which numerous forces acted to steer education policy, as described in Section 3.1. Our principal information-gathering mechanism for this phase was a set of interviews with senior civil servants, analysts and a former education minister.
- The period during and since the launch of the pilot studies, when the detailed structure of the policy was being established and the impact of the pilots and the national rollout assessed. Here we have discussed the impact of the pilots and their evaluations, and data on the national rollout, with social scientists who carried out analyses, and contacted and received data from government officials and scheme administrators. On the basis of information gathered, we have carried out a cost-benefit analysis of the scheme and discussed the extent to which the net benefits can be attributed to research.

5.2 Interviews with stakeholders

We managed quickly to identify the senior civil servants and analysts who had been responsible for the implementation of the EMA pilot and its subsequent roll out. We also managed to speak with a former education minister. Overall, we were able to obtain good accounts on the origins of the scheme and its policy rationale.

Current policy and delivery teams were also very happy to give interviews, and provided substantial additional briefing material to complement the comprehensive reports published on the EMA pilot evaluation.

We have also been able to make contact with the principal academics responsible for the EMA pilot evaluation, and have had discussions about the research methods used in the evaluation and the robustness of its results. We have conducted interviews with a wider group of social scientists working in education research, both sociologists and economists.

The great majority of people we approached were comfortable with ESRC's overarching question and were pleased to contribute to the study. Most made themselves available promptly, despite the timing (summer). A small minority had become rather senior in the intervening period and some had moved a long way from the policy area in question, and here response rates were less good. There were only two instances where people had retired.

5.3 Impact of social science prior to launch of pilot studies (up to 1999)

According to interviewees, the trigger to launch a maintenance allowance in the late 1990s, where previous governments had elected not to proceed with such a policy, was partly the change of government, and the incoming administration's commitment to reform and improve education more generally, and partly the recognition of a worsening situation. The mid-1990s witnessed a reversal of a long-run rise in post-compulsory participation rates: statistics show the participation rate had stuck at around 70%, of all 16-year olds progressing to full-time education in schools or colleges. The UK participation rate itself was low in comparison with the G7 and the great majority of OECD countries and this, coupled with the fact that the situation was not improving, emerged as a major point of embarrassment for the new government. Moreover, in the UK, the proportion in education post-16 decreased substantially in year 12 and year 13, unlike France, Germany and Scandinavia (Richardson, Spours, Woolhouse and Young, 1995).

The introduction of the GCSE system had facilitated an increase in participation levels, however this was associated with the changing behaviour of young people from middle-class families to a great extent, and this group was 'saturated' by the early 1990s. The new qualification system had had relatively little impact on the attitudes or behaviour of young people from poorer households. This was the next front in the battle to raise participation levels. (Academic contributor)

This slowdown in participation growth resulted in a slowdown in qualification attainment and in higher education participation, where the former raised concerns about the stock of skills and economic performance (the rate of economic return to post-compulsory education is apparently very high), and the latter development ran counter to ambitions to widen participation in higher education. Thus, results from our interview programme suggest that the basic driver for the implementation of some form of EMA was political rather than being based on in-depth analysis of the situation or more fundamental research, whether ESRC-sponsored or not.

We gathered together interesting policy ideas from across the Department, as a means by which to distil out one or two new proposals to be announced in a pre-budget report. EMA was one of 20 items in the long list, which following internal research we were able to rate on attractiveness and affordability. EMA was close to the bottom of the list, as money was very tight. To our surprise, it progressed through each review, until it was picked. (civil servant)

The 'stylised facts' around which discussion of the need for the policy were based – such as the disproportionately low representation of children from low-income families in post-compulsory education, with consequent reduced opportunities and reinforcement of the cycle of poverty – were doubtless influenced by research, but that influence is too diffuse for a quantitative contribution to be meaningfully attributed to social science (or ESRC) research.

We knew financial hardship was one of several factors that tended to cause young people from poorer households to leave school just as soon as they could. We knew it was not the only factor, however, and that an allowance would not instantly lead to the majority of poorer kids staying on. I didn't believe it then, I don't believe it now. There was an issue of fairness too, we were giving maintenance grants to young people leaving home at 18 to go to college or university, but had no equivalent provision for people at 16. The former tended to benefit the middle classes of course. Some redistribution seemed appropriate. (academic contributor)

The role of social science in a formal sense is hard to divine at such distance, at least without the application of substantial time and effort that goes far beyond the scope of the present exercise. However, it seems clear that political argument, social statistics and research have been cross-fertilising one another across much of the past 50 years.

During the course of the 1950s and 1960s, the work of various independent committees (e.g. Crowther Report), government researchers and social scientists, interspersed with intelligence gleaned from the experiences of other countries, might be said to have confirmed various stylised facts:

- Participation in post-compulsory education is highly skewed, with children from poorer families on average tending to leave school earlier and with less good qualifications
- Financial hardship is one factor amongst several which shape the decision of young people from poorer households to leave school at the earliest opportunity
- Early leaving will tend to result in more difficult employment experiences and reduced life-time earnings, and continue the cycle of poverty

As one moves into the 1970s and 1980s, with participation levels improving steadily, we find these ideas recurring along with a number of additional observations:

- The single most important predictor of participation in tertiary education is attainment at secondary education
- The buoyancy of local youth labour markets is revealed as another strong force shaping leaving decisions at the end of compulsory education
- Parental education and income is closely correlated with the educational achievements of their children, with attainment at 16 being determined to a large extent by performance at earlier stages and the acquisition of core skills
- Uneven participation might have significant economic consequences for the country, with a significant proportion of young people falling short of their natural potential, which lowers the nation's stock of skills and its resultant capacity to improve productivity and innovation
- Higher-levels of educational attainment are associated with disproportionate increases in the levels of lifetime income.

The overall impression from our interviews is that the concept of the EMA might have been significantly influenced by:

- Research on related aspects of education and factors influencing post-compulsory participation, such as the link between relative deprivation and high 'drop-out' rates
- ESRC-sponsored postgraduate education of officials or ministers, increasing awareness among policy-makers of issues involved and the need / scope for policy intervention.

Most of the preceding points have been inferred from our literature review and interviews. However, it is striking that policy makers – for want of a better collective noun – are not especially comfortable on the specifics of such insights and milestones. For the most part, they see social science as a rather amorphous and undifferentiated source of insights.

Several considered that educational research has not yet arrived at a consensus on the operation of the various mechanisms that influence participation, nor on their interaction and changing weights through the ebb and flow of the business cycle and the long run evolution in societal values and norms.

5.4 Education in ESRC research

It is of use to consider the extent to which the ESRC sponsored research of potential relevance to the continuation in post-compulsory education, especially prior to the inception of the EMA. The emphasis given by the ESRC to such research in relation to Government spending on final delivery of the scheme, in comparison to research in other policy areas, might provide a measure of the appropriateness of the allocation of research funds, at least to the extent that 'policy relevance', or potential economic impact, should constitute one (of perhaps many) criteria for such allocation.

We have carried out an analysis of the 675 or so education projects sponsored by the ESRC from 1987 to the present day, using information provided by the ESRC itself. The intention was to identify projects apparently related to the EMA or, more generally, to post-compulsory education, as indicated from the abstracts. From information provided in project abstracts, we have allocated individual projects to categories, as shown in Figure 2.

Figure 2 Breakdown of ESRC-funded education reports

Area	Number	Percentage
1. Non-compulsory participation, 'staying on'	23	3.4

2. Youth training/learning, inclusion	35	5.2
3. Economics, income implications of education/qualifications	37	5.5
4. Sociology of education, social aspects	57	8.4
5. Education policy, teaching practices and strategies	140	20.7
6. Primary, compulsory secondary, special needs, literacy	91	13.5
7. Higher education/adult learning/lifetime learning	56	8.3
8. Home/school learning	28	4.1
9. Subject-specific teaching	65	9.6
10. Teaching technologies	67	9.9
11. International/overseas	30	4.4
12. Other	47	7.0

Source: Derived from ESRC projects awards database – raw data supplied by ESRC

Reports in the first category were not as relevant to the EMA as might be supposed, with a number being regionally based studies and comparisons of post-compulsory education provision, Scottish initiatives, and community and tertiary education. Only two of these are explicitly concerned with determinants of post-compulsory education, and neither of these relates directly to the EMA. This appears to reinforce our broad conclusion that the policy was not directly research driven, the main research contribution deriving from the DCSF-sponsored pilot studies and evaluations.

5.5 General conclusion on the principal area of social science impact

Overall, the most general conclusion, from the analysis of publications but particularly from the interviews, is that *that the pilots and their evaluations were the principal direct contribution of social science to the scheme.*

5.6 Post-launch impact - Cost-benefit analysis of the EMA

5.6.1 The need for a cost-benefit analysis

We have argued that academic research can contribute to the *effectiveness* and the *efficiency* of a policy initiative. By *effectiveness*, we mean the extent to which the policy caused the desired change in behaviour amongst by the target population. Lack of interest by a significant proportion of those at which the initiative is aimed is an immediate indication of failure. By *efficiency*, we mean the cost-effectiveness of the outcome, that is the trade-Off in terms of costs and benefits for the taxpayer. In these terms, the EMA has clearly been highly effective in encouraging increased participation in post-compulsory schooling. Its efficiency is however less clear, but this is a critical part of our analysis.

In any case, we cannot quantify the economic impact of the ESRC's input to the policy without an assessment of the economic impact of the policy overall. To date, the DCSF¹³ has not published a cost-benefit analysis of the EMA. Hence the need to conduct such an analysis as part of this study.

The Institute for Fiscal Studies (IFS) carried out a cost-benefit calculation of the EMA, which yields an essentially positive conclusion: the expected increase in lifetime earnings enjoyed by EMA recipients significantly exceeds the overall costs of the

¹³ It should be noted that a change of Government occurred between the completion and publication of this report. The Department for Children Schools and Families no longer exists and the EMA is currently funded by the Department for Education

scheme.¹⁴ The conclusions of the IFS report are not inconsistent with our own, presented in the next section.

5.6.2 Benefits of the EMA

The steps involved in estimating the *economic benefits* of the EMA are as follows:

- Effects on participation – estimates of increased numbers of 16- and 17-year-olds in education deriving from the EMA
- Increased lifetime earnings (average per-person) from participation in the EMA. This is estimated using two different approaches, as a partial check on veracity: Method (i) makes use of estimates of increased earnings deriving from further years in education, while method (ii) makes use of estimates of the effects of the improved qualifications achieved by EMA ‘stayers on’ on earnings.
- Other benefits considered are reductions in youth crime and welfare benefit savings.

Costs of the EMA taken into account are:

- Costs to DCSF: payments to students, administration costs, and marketing and programme maintenance costs
- Wages foregone by participants
- Additional teaching costs.

5.6.2.1 The impact of EMA on post-compulsory participation in education

The evaluations provide a plethora of data regarding the effectiveness of the scheme. Of the various figures produced in EMA evaluations for increased participation, the most appropriate for our purposes is the estimated national impact on all 16 year olds, not just those estimated to be eligible for an award. Propensity Score Matching (PSM, a paired-comparison technique matching individual participants with controls with attributes as similar as possible to the participants other than their non-participation in the scheme) yielded 3.8 percentage points (%pts) as the estimated EMA induced uplift.¹⁵

The 2008 age 16/17 cohort in England comprised 1,321,000 individuals Applying the figure of 3.8% to this cohort yields an estimate of $1321k \times 0.038 = 50,198$, about 50.2k, additional pupils ‘staying on’ as a result of EMA.

5.6.2.2 Enhancement in earnings from participation

Method 1: Earnings enhancement from two extra years of schooling. The returns to ‘staying on’ in education – i.e. the expected enhancements to lifetime earnings – have been estimated elsewhere as 11% for men and 18% for women ‘marginal learners’.¹⁶ Weighting these figures by estimates of the gender split of increased participation

¹⁴ Dearden, L. et al. (2005) ‘Education Subsidies and School Drop-Out Rates’, Institute for Fiscal studies Research Report WP05/11. This study takes account of costs in the form of EMA payments to students, costs of educating those who ‘stay on’, and the income foregone by this group. From the total of these costs, it is concluded that the rate of return required from two years of extra schooling (returns being in the form of additional lifetime earnings), in order for the EMA scheme to break even, is 7.7%. Evidence is cited for actual returns being substantially greater than this, at 11% for males and 18% for females.

¹⁵ Middleton et al. (2005): “Evaluation of Education Maintenance Allowance Pilots: Young People Aged 16 to 19 Years – Final Report of the Quantitative Evaluation, DCSF research Report 678”, p.25. That report also finds increased participation among *eligible* 16 year olds to be 5.9%pts, and increases in full-time education by *eligible* 16 and 17 year olds as 6.1%pts. The similarity between the latter two figures suggests that the impact on *all* 16 and 17 year olds will not be far from the 3.8%pts.

¹⁶ Dearden, L., McGranahan, L., and Sianesi, B. (2004): ‘Returns to Education for the ‘Marginal Learner’; Evidence from BCS70’, Centre for the Economics of Education, London School of Economics

derived from the EMA pilot evaluation (suggesting increases in participation around 1.5 times greater for men than for women¹⁷) gives an average enhancement of 13.8%.

Expected lifetime earnings can be estimated from income by age and qualification, available for 2003.¹⁸ These data are updated using estimated average growth of 25% in average nominal earnings 2002-2008, then increased by 1% per annum to allow for assumed growth in average real earnings over a 40-year lifecycle, then discounted over the lifecycle at 3.5% (Treasury Green Book recommended discount rate).

This yields average expected discounted real lifetime earnings (2008£) of:

- £521k for an individual with no qualifications
- £627k for those attaining Level 2, and
- £706k for level 3 performers.

As further evidence, a person earning £23k in 2008, close to the national average, would receive £600k over 40 years with the same growth and discount-rate assumptions.

From these figures *£550k is taken as expected discounted lifetime earnings of EMA participants if they had left after year 11.*

Applying the estimated EMA wage enhancement factor (13.8%) to this figure gives *£76k as the extra lifetime earnings of a young person staying on under EMA who would otherwise have left.*

This gives an estimated total for additional lifetime earnings resulting from EMA of (number of additional 'stayers on') x (earnings enhancement from 'staying on') = 50.2k x £76k, or £3.8bn across the 2-year cohort, suggesting an earnings benefit of **£1.9bn/year**.¹⁹

Method 2: Earnings enhancement from improved qualifications. Chowdry et al.²⁰ found an impact on both level 2 and level 3 attainment rates of around 2.5%pts for females and just under 2%pts for males. These figures refer to all individuals of appropriate ages in the LEA areas, not just recipients or those eligible for EMA.

From these estimates:

- Given the heavier representation of males among EMA recipients, the overall improvement in attainment across the whole cohort is assumed to be 2.1%pts
- From the data on discounted income by qualification level cited above, level 2 and level 3 achievers can expect to earn £106k and £185k over a lifetime, respectively, more than those with no qualifications. Since the impact on level 2 and level 3 attainment is about the same, the estimate of overall benefit across the whole cohort of 1321k individuals is about (fractional improvement in performance x effect on earnings x size of cohort) = 0.021 x (106+185)/2 x 1321k = £4.0bn, or **£2bn/year**, very close to the estimate based on increased participation.

Overall, we assume a benefit of around **£1.5-2.2bn/year** in lifetime earnings.

¹⁷ e.g. EMA Key Facts Chart 1

¹⁸ Prospects estimates based on the 2003 Labour Force Survey are used. These are updated using estimated average growth of 25% in average nominal earnings 2002-2008, then increased by 1% per annum to allow for growth in average *real* earnings, then discounted over the lifecycle at 3.5% (Treasury Green Book recommended discount rate)

¹⁹ Appendix B gives full details of the CBA calculation.

²⁰ Chowdry, H., Dearden, L., and Emmerson, C. (2007) 'The Impact of the EMA Pilots on Participation and Attainment in Post-Compulsory Education', Institute for Fiscal Studies

5.6.2.3 Other benefits from the EMA

Other actual or potential benefits are:

- Reductions in youth crime. Burglary convictions by 16-18 year old males fell significantly in pilot areas, with about one less conviction per 1000 pupils in EMA areas relative to other LEAs²¹. However, Home Office estimates of the average costs associated with burglary²² at less than £4000 each, suggest a very modest benefit (of less than £200k) per annum from this source (see Appendix B).
- Welfare benefit savings. Of the 5.9%pt increase in year 12 participation among the eligible population in pilot areas, 2.4%pts were estimated to be draw from the NEET group and 3.4 %pts from work or work-based training. This suggests that of the 'additional' pupils in post-compulsory education, about 40%, or around 20,000, would otherwise be NEETS and potentially eligible for welfare benefits. However, 16- and 17-year-olds are entitled to Income Support or Jobseeker's Allowance only in exceptional circumstances, so the overall effect is thought to be small.
- Redistribution. Finally, the income redistributive effects of EMA might be seen as beneficial in their own right, irrespective of EMA's success in terms of increased educational participation and achievements. The extent to which EMA awards can be treated as 'transfer payments' – a redistribution of income not directly absorbing resources or creating output, as with for example social security payments – is debatable. This aspect of potential benefits is disregarded for the purposes of the current analysis.

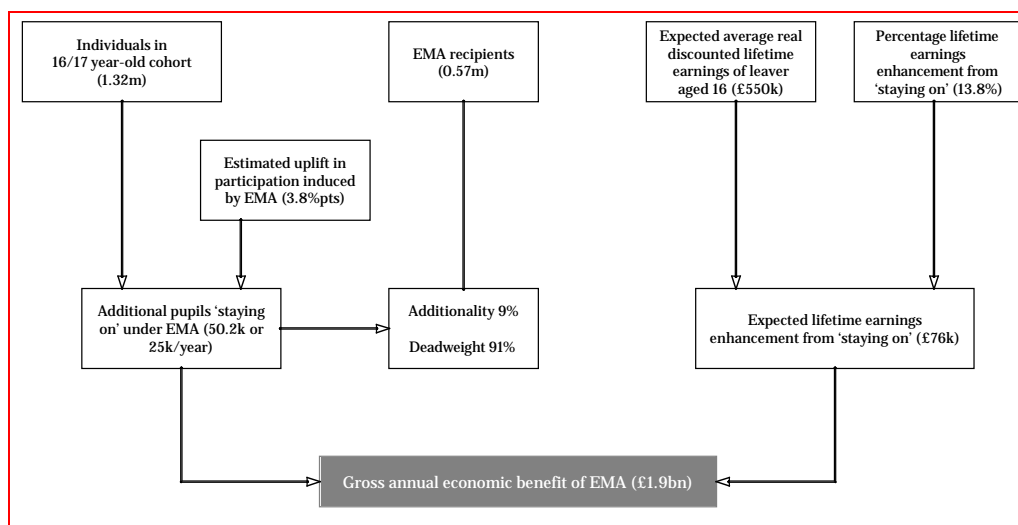
5.6.2.4 Total annual EMA benefits

Hence it appears that enhanced lifetime earnings overwhelmingly represent the principal economic benefit of the EMA, and **£1.5-2.2bn/year** is taken as the estimated total benefit. Figure 3 summarises results of the calculation described above.

²¹ EMA Key Facts, citing Feinstein, L and Sabates, R. (2005): 'Education and Youth Crime: Effects of Introducing the Education Maintenance Allowance Programme', DES Research Brief RCB01-05

²² Home Office (2005): 'The Economic and Social Costs of Crime against Individuals and Households 2003/04', Home Office Online Report 30/05

Figure 3 Benefits of the Education Maintenance Allowance



5.6.3 Costs of the EMA

Costs considered are:

Departmental programme and administrative costs. The LSC Annual Report and Accounts 2008-09 presents the following EMA programme and administrative expenditures (Figure 4):

Figure 4 EMA programme and administration costs

	2007-08	2008-09
EMA student payments	£487.3m	£490.2m
EMA sector administration	£36.2m	£35.0m
EMA marketing	£7.6m	£5.9m
EMA programme maintenance	£1.8m	£0.7m

Source: LSC Annual Report and Accounts 2009

- For calendar 2008, programme plus administration costs of the scheme were thus about **£532m**.
- Wages foregone by EMA participants. Evaluation results suggest that about 60% of additional 16 year olds who 'stayed on' on account of EMA would otherwise have gone into work or training²³ (the remainder being drawn from the NEET group). £12k, a little above the national minimum wage, is taken as an estimate of what they would have earned per year. Then total annual wages foregone can be estimated from one-half the additional participants in 16/17 cohort x proportion drawn from work x average wage over 2 years = 0.5 x 50.2k x 60% x £24k, i.e. around **£360m**.
- Additional teaching costs. Average teaching costs per pupil are estimated at £3600 per annum, payable over 2 years for EMA additionals.²⁴ Multiplying by the number of annual additional learners from EMA gives an estimate of about 2 x £3.6k x 50.2k x 0.5 = **£180m/year**.

²³ Middleton et al., Table 2.1

²⁴ Uprated from Department of Education and Skills (2003): 'Statistics of Education: Education and Training expenditure since 1993-94', issue 04/03. Cited by Dearden et al. (2005)

- Taxation foregone. This is included as part of ‘wages foregone’.

5.6.3.1 Total annual EMA costs

On the basis of the above, total costs equal about **£1.07bn/year**.

5.6.3.2 Overall net benefit of the EMA

From the estimated gross benefits, this suggests a **net benefit from the EMA of the order of £0.5-1.0bn/year**.

More details are presented in Appendix B.

5.7 Impact of social science during and since launch of pilot (from 1999)

5.7.1 Variants used in the pilot studies

We now use the results of the cost-benefit analysis to estimate the net benefits from the pilot studies. These accrue from the selection of schemes more *effective* than alternatives (i.e. yielding greater increased participation, and hence greater overall benefits) and from more *efficient* schemes, achieving similar results at lower cost.

To the extent that implementation of the policy depended on a positive result (in terms of increased participation) from the evaluation, and also assuming (reasonably) that the pilots and evaluation can be described as ‘social research,’ the full net benefit of the policy could be attributed to research in social science. We have seen, however, that interviewees in the first phase of our study expected that implementation would go ahead without the pilots, or whatever the conclusion of the evaluation – although it is hard to see how that decision could have been made to appear politically acceptable in the light of a very negative evaluation.

A more conservative view of the net benefit of the evaluation work is derived from the counterfactuals regarding specification of the policy – the extent to which the policy as rolled out nationally, as determined (or at least guided) by the evaluation, was more cost-effective than alternatives. We therefore discuss below the impacts of the pilot studies and the evaluations of them.

The pilot studies involved trials of four different variants of the EMA, summarised in Figure 5. For comparison, the arrangements for the (ongoing) national rollout are also shown.

The ‘baseline’ pilot (variant 1) was applied in eight urban areas and one rural area, the other three being applied in two urban areas. The maximum weekly award was payable to those with household incomes below £13k. Weekly payments were linearly reduced down to £5 for households with incomes between £13k and £30k, the latter being the limit for receipt of an award²⁵.

²⁵ Dearden et al. (2005). A sample of peers of EMA recipients who opted for full-time work received a median net wage of £100 per week, while over a year the average per participant weekly EMA receipt was about £14 (note that EMA is payable only during term time). This suggests that, on average, EMA replaced around one-seventh of post-tax earnings.

Figure 5 Pilot variants

Variant	Maximum weekly award	Recipient of payments	Retention bonus	Achievement bonus
1	£30	Student	£50 per term	£50
2	£40	Student	£50 per term	£50
3	£30	Parent/guardian	£50 per term	£50
4	£30	Student	£80 per term	£140
National rollout	£30	Student	Flexible, by arrangement	

In addition to the above, a suggestion was made that EMA payments should be such as to cover only students' transport costs to and from the learning venue. Another possible alternative was to improve scheme targeting by more precise means-testing of applicant families.

The variants used in the trials can be translated into a set of counterfactuals against which the effectiveness and efficiency of the scheme as implemented in the national rollout can be compared. Figure 6 summarises the cost/benefit implications of such a set of counterfactuals.

Figure 6 Costs and benefits of alternative EMA specifications

Alternative specification (counterfactual)	Potential consequences of counterfactual on effectiveness/efficiency
Upper weekly payment of £40 rather than £30	Increased programme costs (reduced efficiency)
Retention bonus of £80 rather than current bonus arrangements	Increased programme costs (reduced efficiency)
Achievement bonus of £140 rather than current bonus arrangements	Increased programme costs (reduced efficiency)
Payment to primary carer rather than young person	Reduced take-up (reduced scheme effectiveness)
Subsidies targeted to transport costs	Reduced take-up (reduced scheme effectiveness); possibly lower costs (increased efficiency)
Alternative approaches to means testing	Possible reductions in take-up (reduced scheme effectiveness); efficiency implications from more targeted complex/costly means testing, possibly offset by reductions in deadweight

5.7.2 Results from the pilots

The second (2002) EMA evaluation report²⁶ compared different variants of EMA, using matching techniques with, respectively, 'non-overlapping' and 'overlapping' samples. In the former case, controls are matched with their counterparts (participants) *within* each variant separately, while in the latter case only matches involving control area young people who can be found matches in *all four* variants are included. Results are shown in Figure 7.

²⁶ Ashworth et al. (2002): 'Education Maintenance Allowance; The First Two Years. A Quantitative Evaluation', CRSP/IFS for SES, DES Research Report 352

Figure 7 Percentage point increases in participation by variant, non-overlapping and overlapping samples

Variant	Non-overlapping samples	Overlapping samples
1	8.4	10.2
2	3.9	4.7
3	5.1	5.4
4	8.3	7.1

Non-overlapping samples involve the use of control individuals matched to participants in one variant which may not have the same characteristics as controls matched to participants in another, so that compositional differences in individual characteristics between areas may affect estimated EMA impacts. This problem is overcome with the use of overlapping samples, although differences between local LEAs, for example in administrative procedures, can affect take-up and impact, and neither sampling procedure controls for these.

Results from the two procedures are reasonably consistent. They suggest that variants 1 and 4 – the core variant and the variant with the larger retention bonuses – are the most successful in increasing participation. A further method of comparison, involving pairwise comparisons of variant 1 with each of the other three variants in turn,²⁷ broadly reinforces these results.

Local conditions may account for the counterintuitive result that variant 2, with the higher weekly payments, shows the lowest impact on increased participation. But the results do suggest that variant 1, with its comparatively modest payouts, is as successful as any in encouraging participation, and hence that higher weekly payments do not significantly add to the attractions of the scheme for young people. The implications of these results for the impacts of different levels of bonus payment are a little more equivocal.

The following year's EMA evaluation²⁸ addressed this issue further. That evaluation employed descriptive analysis to explore the relative effects of the four pilot variants on behaviour, in this case focussing on stoppages in payments. Further details are presented in Appendix B.

5.7.3 Cost-benefit implications of the variants

Variant 1 was regarded as the 'core' variant in the pilot studies, and was essentially the Version adopted for the national rollout, *except* that more flexible bonus arrangements were adopted for the latter, with twice-yearly payments of £100 in January and July payable on receipt of a satisfactory report on attendance and achievement from the educational establishment. There follows a cost-benefit assessment of the alternative variants, which the pilot studies effectively 'weeded out'.

Variant 2: Higher weekly payments. The estimated annual saving from use of an upper weekly payment limit of £30 rather than £40 is one-third of estimated annual

²⁷ This approach allows a larger sample size to be used than the overall 'overlapping sample' approach where controls are required to be simultaneously common across all four areas/variants, but still cannot control for variations in local conditions. The following is a simple example to illustrate the three approaches. Suppose we select five individuals from the controls who successfully match with participants in area/variant 1. All five matched pairs are usable for the 'non-overlapping' sample comparisons. But perhaps only two of these find matches in variants 2, 3 and 4 (for the 'overlapping' sample comparisons) while four may find matches in (for example) variant 2 alone, giving a larger sample size for the third approach.

²⁸ Middleton et al. (2003): 'The Evaluation of the Education Maintenance Allowance Pilots: Three Years Evidence. A Quantitative Evaluation', CRSP/IFS for DCSF, DCSF Research Report 499

payout in the form of weekly payments, which in turn is some 75-80% of annual payments to students. This suggests a saving of around £125m.

From the pilot evaluation, the higher weekly payment appears to be associated with lower increased participation, to the extent of around five percentage points. If this were a 'real' effect caused by some perverse disincentive from the higher payment, it would correspond to some 27,000 fewer individuals participating in the scheme than actually observed in the national rollout.²⁹ Given an average net benefit of £(0.5-1.0)bn/50.2k = £10-20k per additional pupil, suggests an further 'loss' of the order of £250-500m had this variant been adopted – although the implausibility of this result leads us to assume that the lower participation in variant 2 arose from local effects.

Variant 3: Payment to the parent/guardian. Lower participation here (compared with variant 1) is more credibly a consequence of the different payment system, which may well have significantly reduced the incentive to the young person to remain in education. A calculation similar to the above leads to an estimated reduction of 22,000 additional pupils annually, a net loss in benefits of around £220-440m per annum.

Variant 4: Higher termly bonuses. There is no statistically significant difference between increased participation found in variants 1 and 4. There is some suggestion from the 2003 evaluation that the higher bonus has an incentive effect, possibly being associated also with higher attainment. Overall, however, if we can assume that three termly bonuses of £80 per annum, rather than the actual bonus structure of up to £200 per annum, would have no significant implications for participation, the 'savings' through adoption of the latter would be £40 x 571.5k, or about £23m annually.

Subsidies for transport costs. Five variants of the option to subsidise transport costs to and from the educational institution were piloted. Averaging across these, EMA participants paid £3.72 less than their non-participant peers weekly on travel, so presumably received this sum during term time (about 36 weeks, £134/annum). The pilot evaluation found no effect on participation in this case. Thus, the implication is that, had this option been implemented nationally, all EMA recipients would have been 'deadweight'. The number of participants, by implication, would be the number observed in the actual national rollout minus the estimated 'additional' who would not have continued in education anyway: 571.5k-50.2k = 521.3k. This suggests that £134 x 521.3k = £70m would have been 'wasted' had the transport subsidy option been implemented nationally. Much more significantly, the overall net benefit of the scheme, £0.5-1.0bn, would not have been realised.

In conclusion, with the possible exception of variant 4, the variants discussed above appear to be significantly less efficient and/or effective than the scheme specification actually implemented. From the above, we estimate that the additional costs of the pilot variants not adopted for national rollout were as shown in Figure 8.

²⁹ The evaluation results suggest that increased participation in variant 2 was less than half that of variant 1. Taking the latter as essentially equivalent to the national rollout, which we have estimated yielded 50.2k additional pupils 'staying on', suggests that this figure would have been around 23k under variant 2.

Figure 8 Additional costs of non-adopted variants

Variant	Additional net cost (compared with variant 1)
2	£100-150m
3	£220-440m
4	£20-25m
Transport support	£500-1000m

If we can assume that, without the pilot, any one was equally likely to have been chosen as the actual, we can calculate an ‘expectation value’ for the savings from the pilot studies, based on the average additional costs from the variants (including zero additional cost from variant 1).

In order to derive a conservative estimate, we can take the lower values for additional net costs of variants 2-4 from the table and disregard the transport variant, which yields an average net saving of around **£85m**. This comfortably exceeds the costs of the pilot studies and associated evaluations themselves, estimated at **£5-6m**.

Can a net benefit of around £80m therefore be ascribed to social science research? From our interviews, the strongest opinion expressed suggests that the robustness of the social science research methods employed in the evaluation had permitted the department to implement a successful measure, which has proved effective and popular with all parties, and has stood the test of time. Some observers suggested that other implementation models under consideration, and reportedly favoured by senior officials, special advisors and politicians, might have been less consequential and certainly more costly, as reinforced by the above analysis. Others countered that the scheme would have proceeded with or without the evaluation, and moreover, had the work not been carried out by the three leading centres of excellence – all ESRC recipients - the contract would still have been let to a competent evaluator or evaluators. Such issues need to be borne in mind in assessing the particular role of the ESRC, considered below.

5.7.4 Contribution of ESRC sponsorship to evaluations of the pilot studies

The evaluations were commissioned by the (then) Department for Education and Skills (DfES), and were carried out by a consortium of organisations, led by the Centre for Research in Social Policy (CRSP), and including the National Centre for Social Research, the Institute of Fiscal studies (IFS) and the National Institute for Careers Education and Counselling (NICEC).

Attribution of benefits is necessarily arbitrary to a high degree. It seems appropriate, however, to consider the role of the ESRC in supporting the bodies carrying out the evaluations, and pro-rate a proportion of the benefits accordingly.

Of the four organisations commissioned for the evaluations, the quantitative work was conducted primarily by the CRSP and the IFS. The CRSP receives some funding from the ESRC, but its primary funding sources are Government departments (including DCSF and DWP), and also the Joseph Rowntree foundation. ESRC funding is particularly important to the IFS. The ESRC has funded a Research Centre there since 1991 (now known as the Centre for the Microeconomic Analysis of Public Policy), which between 1999 and 2004 accounted for between 25% and 35% of IFS income. This support also allows IFS to leverage funding from other organisations. ESRC also contributes a large number of individual awards to IFS members. Overall, without ESRC support, it seems unlikely the IFS could have become the international centre of excellence it is today.

Additional evidence from the evaluation was analysed by SKOPE, the ESRC-funded centre on Skills, Knowledge and Organisational performance.³⁰

Again conservatively, it is reasonable to ascribe one-half of the quantitative evaluation work to the IFS, and to regard a quarter of this as supported by the ESRC. On this basis the net benefit to the evaluations contributed by ESRC is £80m x 1/8 = **£10m**. This figure needs cautious interpretation – there is no unique way of attributing benefits – but it does suggest an important role for the ESRC.

6. Conclusions and Lessons Learned

6.1 The EMA and research

We have found no evidence that the ESRC, or any sponsored social science research, had a direct influence on the original conception of the EMA. It might, of course, have influenced official thinking indirectly through support for research or training, but this is an elusive concept. The role of the ESRC in contributing to ‘capacity building’ – through research centres, individual research awards, postgraduate training etc. – for informed thinking on social issues (and for encouraging post-compulsory education in particular) is extremely difficult to assess, as indicated by the diverse range of views on this issue among our interviewees, and certainly cannot be meaningfully quantified.

In general, it seems that Government departments themselves are most likely to undertake ex-ante, policy-relevant research, while research-council-funded academic research groups are unlikely to contribute unless explicitly commissioned.

We have found, however, that social science research had a far greater – and certainly more clearly identifiable – influence in shaping the details of the EMA than in the initial inception of the initiative. This should not be seen as a minor, or even secondary, role – the pilot studies were critical in establishing the effectiveness of the policy and in determining the most efficient structure for its national implementation, and we have established that, despite considerable uncertainties, the potential value (in financial cost-benefit terms) was substantial.

To the extent that the ESRC financed the institutions carrying out the evaluations, its particular contribution is also seen to be significant.

6.2 Methodological implications

Under certain conditions, we conclude that the ‘tracking backwards’ approach can be successful. The key conditions are:

- The availability of comprehensive, good-quality, quantitative evaluations, which allow net policy benefits to be estimated
- That sufficient time has elapsed for impacts to be felt, and their sustainability to be assessed, but the time lapse should not be so great that it is difficult of impossible to track down discussion partners that were in positions of some influence at the time and who may no longer be available to expand on that experience. We have a sense that 10-15 years back is probably the maximum timeframe
- In particular, the interplay between political thinking and social science research in the decades leading up to the inception of the EMA is hard to resolve at this distance in time. However, it does appear that observational data and

³⁰ Maguire, S. and Thompson, J (2006): ‘Paying Young People to Stay On at School – Does It Work?’ SKOPE Research Paper no. 69

fundamental research have contributed to shaping the accepted mores and stylised facts of the policy teams and analysts working in the Department in the years before the scheme was launched. Some further methodological work to disentangle these manifold and various influences might be worthwhile, helping future evaluations to make a more structured assessment of the roles of for example ESRC-support for the training of policy analysts (post-graduate courses / studentships) or international centres of excellence (providing pro bono / ad hoc advice as well as expanding the intellectual capacity of ministries with 'tight' science headcounts and extramural budgets)

- The uncertain and historical nature of the work appears to benefit from the use of small teams of experienced analysts, with the calendar time to progress sequentially through the chains of influence. As with research proper, it is not clear a priori where the evidence is going to lead: key contributors and documents are not always obvious at the outset of a study
- The particular interests of the ESRC suggest that one should view the policy or scheme owner as a subject of the study, and while this can pose challenges, in respect to ease of access or approval for use of key documents, it does appear to help keep the team / work from re-briefings of negotiated findings
- Apart from the evaluations themselves, we have not identified ESRC-funded research reports written over the last 20 years or so that directly address the policy, which reinforced our interview-based conclusion that research had little direct impact on its inception. This process was somewhat time-consuming, however, and some way of indexing potentially policy-relevant contributions to the ESRC database could have made the process more speedy and reliable
- The quality of the publications produced by the academic centres hint at the potential for using bibliometric techniques to detect policy relevance of ESRC-supported social science research. While there were too few documents published to merit detailed analysis, it seems possible that one might be able to match bibliographic data (authors, references, citations) associated with departmental publications (for a broad policy area) with listings of ESRC grantholders
- The interplay of literature review, interviews and analysis has been important to our ability to prompt further reflection by discussion partners

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Appendix A - Interview Checklist

1. Do you know anything at all about the origins of the Education Maintenance Allowance (EMA), and the DFES decision to launch a pilot in the mid-1990s?
2. Did UK social science influence the decision to launch the Education Maintenance Allowance (EMA)?
3. If yes, was there a particular study or programme of work that provided the main stimulus (Name and location of person who could tell us more)?
4. Or perhaps there was a more diffuse / long run influence on inequality or child poverty or whatever (please specify)?
5. Was there a particular focus / theme, which unlocked the issue?
 - a. Education, class and life experience (sociology of education)
 - b. Poverty, education participation and social class
 - c. Economic impacts of education / qualifications (education economics)
6. If yes, where did social science research have an influence?
 - a. Recognition of the existence of the problem?
 - b. Understanding the significance of the problem?
 - c. Understanding options for action?
 - d. Scheme design and operating parameters?
7. How did this knowledge reach DFES policy teams?
 - a. Policy teams' participation in academic / professional networks (e.g. strategic forum for research in education)
 - b. Specific advice from members of specialist advisory groups
 - c. Insight from studies commissioned by policy teams from specialists
8. How important has the ESRC been in all of this?
 - a. New programmes
 - b. New interdisciplinary research centres
9. Is there anyone you would recommend we speak with in order to understand things in a little more depth?
 - a. Other academics?
 - b. Former DFES policy people?
 - c. Please can you give me contact details?
10. Is there any key references you would recommend we read?
 - a. Academic books / articles?
 - b. Policy evaluations or studies?
 - c. Please can you give me contact details?
11. Spectrum of work that might have contributed
12. Developing understanding amongst DFES policy teams regarding the phenomenon (the link between family circumstances, educational attainment and work / income; a cycle of poverty)
13. Documenting / mapping the extent of the problem and its escalation / resistance to measures to address / remedy the situation
14. Developing understanding of the various factors that contribute to the problem, from social values to financial circumstances to changing framework conditions (possibly inc comparative studies of the situation in other places / countries)
15. Evaluations of solutions / measures in operation in other countries

Appendix B - Cost-Benefit Analysis

Benefits of the EMA

By far the major component of economic benefit attributable to the EMA is the enhancement in life-cycle earnings of those who remain in education as a result of it. This is estimated below in two ways, and the results compared. The first method is based directly on income gains associated with continued participation in education, while the second is based on gains associated with improvements in qualifications achieved by EMA participants.

Other categories of benefit briefly considered below are possible reductions in youth crime, and welfare savings benefits.

The base year used in the calculations is, where possible, 2008. Inevitably, given uncertainties involved, some fairly crude approximations are necessary, but in any case ballpark figures are all that are required for present purposes. Only 16 and 17 year old recipients of EMA are accounted for here.

Earnings enhancements associated with increased participation

The following data are used:

- The 2008 age 16/17 cohort in England comprised 1321k individuals³¹
- Participation in full-time education and vocational training by 16 and 17 year olds in England 2006/07 was 78.2%³². From the size of the cohort, this implies around 1033k young people
- Number of EMA recipients in 2008 is estimated to be 571477 (or 571.5k)³³, i.e. 43.3% of total 16/17 cohort and approximately 55% of 16/17 year olds in education. The annual throughput of EMA 'graduates' is roughly half this number
- The returns to 'staying on' in education – i.e. the expected enhancements to lifetime earnings – have been estimated as 11% for men and 18% for women 'marginal learners'.³⁴ Weighting these figures by estimates of the gender split of increased participation derived from the EMA pilot evaluation (suggesting increases in participation around 1.5 times greater for men than for women³⁵) gives an average enhancement of 13.8%

Expected lifetime earnings can be estimated from income by age and qualification, available for 2003.³⁶ These data are updated using estimated average growth of 25% in average nominal earnings 2002-2008, then increased by 1% per annum to allow for assumed growth in average real earnings over a 40-year lifecycle, then discounted over the lifecycle at 3.5% (Treasury Green Book recommended discount rate). This yields average expected discounted real lifetime earnings (2008£) of £521k for an individual with no qualifications, £627k for those attaining Level 2, and £706k for level 3

³¹ www.dcsf.gov.uk/rsgateway/DB/SFR/s000835/index.shtml

³² www.deni.gov.uk/participation_rates_200607_press_release.doc

³³ Weighted average of 2007/8 and 2008/9 figures. Thanks to DCSF for supplying these

³⁴ Dearden, L., McGranahan, L., and Sianesi, B. (2004): 'Returns to Education for the 'Marginal Learner'; Evidence from BCS70', Centre for the Economics of Education, London School of Economics

³⁵ e.g. EMA Key Facts Chart 1

³⁶ Prospects estimates based on the 2003 Labour Force Survey are used. These are updated using estimated average growth of 25% in average nominal earnings 2002-2008, then increased by 1% per annum to allow for growth in average *real* earnings, then discounted over the lifecycle at 3.5% (Treasury Green Book recommended discount rate)

performers. A person earning £23k in 2008, close to the national average, would receive £600k over 40 years with the same growth and discount-rate assumptions. From these figures £550k is taken as expected discounted lifetime earnings of EMA participants if they had left after year 11.

Applying the estimated EMA wage enhancement factor (13.8%) to this figure gives £76k as the extra lifetime earnings of a young person staying on under EMA who would otherwise have left.

- Earnings benefits of EMA are then given by this figure multiplied by increased participation from EMA. Of the various figures produced in EMA evaluations for increased participation, the most appropriate for our purposes seems to be the estimated national impact on all 16 year olds, not just those estimated to be eligible for an award. Propensity Score Matching (PSM, a paired-comparison technique matching individual participants with controls with attributes as similar as possible to the participants other than their non-participation in the scheme) yielded 3.8 percentage points (%pts) as the estimated EMA induced uplift.³⁷
- Applying the figure of 3.8% to the 16/17 year old cohort yields an estimate of $1321k \times 0.038 = 50,198$, about 50.2k, additional pupils 'staying on' under EMA.³⁸
- This gives an estimated total for additional lifetime earnings resulting from EMA of $50.2k \times £76k$, or £3.8bn across the 2-year cohort, suggesting an earnings benefit of £1.9bn/year.

B.1.1. Earnings enhancements associated with improved qualifications

Difficulties were experienced in the quantitative evaluation of the pilot studies regarding the impact of EMA on attainment. Administrative records were used to identify qualification attainment among EMA pilot survey respondents, on the grounds that self-reporting was subject to significant errors, both intentional and unintentional. However, there were problems matching administrative records with survey returns; in addition, non-random attrition of respondents in the course of the longitudinal studies, with which PSM analysis cannot adequately cope. As a result, the evaluation consortium concluded that their analysis could not be used to estimate the impact of EMA on attainment following national implementation.

The 'best' estimates of impact on attainment are provided by Chowdry et al., who use multiple regression models to estimate impact in two ways – by comparing outcomes in the pilot areas that received the EMA in 1999 with those in the control areas, and by comparing outcomes across all EMA pilot areas with the rest of England. The models included controls for individual, school and local factors thought likely to affect participation and attainment in post-compulsory education. The second method, using more comprehensive datasets and far larger sample sizes, found an impact on both level 2 and level 3 attainment rates of around 2.5%pts for females and just under 2%pts for males. These figures refer to all individuals of appropriate ages in the LEA areas, not just recipients or those eligible for EMA.

From these estimates:

- Given the heavier representation of males among EMA recipients, the overall improvement in attainment is assumed to be 2.1%pts
- From the data on discounted income by qualification level cited earlier, level 2 and level 3 achievers can expect to earn £106k and £185k over a lifetime, respectively, more than those with no qualifications. Since the impact on level 2 and level 3

³⁷ Middleton et al. (2005): "Evaluation of Education Maintenance Allowance Pilots: Young People Aged 16 to 19 Years – Final Report of the Quantitative Evaluation, DCSF research Report 678", p.25

³⁸ Comparing this figure with the number of EMA recipients suggests a very considerable 'deadweight' – EMA recipients who would have stayed on in any case - of about 91%

attainment is about the same, the estimate of overall benefit across the whole cohort of 1321k individuals is about $0.021 \times (106+185)/2 \times 1321k = \text{£}4.0\text{bn}$, or $\text{£}2\text{bn}/\text{year}$, very close to the estimate based on increased participation.

Overall, we assume a benefit of around **£1.5-2.2bn/year** in lifetime earnings.

Other actual or potential benefits are as follows.

B.1.2. Reductions in Youth Crime

Burglary convictions by 16-18 year old males fell significantly in pilot areas, with about one less conviction per 1000 pupils in EMA areas relative to other LEAs³⁹. The fall was higher (between 1.1 and 1.5 fewer offences per 1000 pupils) in areas also operating the Reducing Burglary Initiative (RBI).

The Home Office has published estimates of the average costs associated with burglary⁴⁰. These comprise:

- Costs incurred in anticipation of crime, such as expenditures on security and insurance
- Costs as a consequence of crime, including value on non-recovered stolen property, damage caused, and physical and emotional impact on victims
- Costs in response to crime, as incurred by the criminal justice system.

The average total cost of burglary in a dwelling is estimated at $\text{£}3,268$ (2003 prices), uprated using the RPI to approximately $\text{£}3.9\text{k}$. Assuming that one burglary is, on average, averted for each *additional* 1000 16/17 year olds in education as a consequence of the EMA, the overall benefit is $(\text{£}3.9\text{k} \times 50.2) = \text{£}196\text{k}$.

B.1.3. Welfare benefit savings

Of the 5.9%pt increase in year 12 participation among the eligible population in pilot areas, 2.4 %pts were estimated to be drawn from the NEET group and 3.4 %pts from work or work-based training. This suggests that of the 'additional' pupils in post-compulsory education, about 40%, or around 20k, would otherwise be NEETS and potentially eligible for welfare benefits.

In practice, however, people aged 16 or 17 are not usually eligible for Income Support or Jobseeker's Allowance. Income support is potentially payable to 16/17s who have a child or are pregnant, or are on certain kinds of training course. Jobseeker's Allowance is only paid to 16/17s in 'special cases'. No data to allow quantification of the EMA impact on this appear to be available, but the effect is probably small.

B.1.4. Redistribution

Finally, the income redistributive effects of EMA might be seen as beneficial in their own right, irrespective of EMA's success in terms of increased educational participation and achievements. The extent to which EMA awards can be treated as 'transfer payments' – a redistribution of income not directly absorbing resources or creating output, as with for example social security payments – is debatable. This aspect of potential benefits is disregarded for the purposes of the current analysis.

B.1.5. Total annual EMA benefits

Hence it appears that enhanced lifetime earnings overwhelmingly represent the principal economic benefit of the EMA, and **£1.5-2.2bn/year** is taken as the estimated total benefit.

³⁹ EMA Key Facts, citing Feinstein, L and Sabates, R. (2005): 'Education and Youth Crime: Effects of Introducing the Education Maintenance Allowance Programme', DES Research Brief RCB01-05

⁴⁰ Home Office (2005): 'The Economic and Social Costs of Crime against Individuals and Households 2003/04', Home Office Online Report 30/05

Costs of the EMA

B.1.6. Departmental programme and administrative costs

The Learning and Skills Council publish data on EMA programme and administrative expenditures, the most recent being shown in Figure 9.

Figure 9 EMA programme and administration costs

	2007-08	2008-09
EMA student payments	£487.3m	£490.2m
EMA sector administration	£36.2m	£35.0m
EMA marketing	£7.6m	£5.9m
EMA programme maintenance	£1.8m	£0.7m

Source: LSC Annual Report and Accounts 2009

For calendar 2008, programme plus administration costs of the scheme were thus about **£532m**.

B.1.7. Wages foregone by EMA participants

Evaluation results suggest that about 60% of additional 16 year olds who 'stayed on' on account of EMA would otherwise have gone into work or training⁴¹ (the remainder being drawn from the NEET group). £12k, a little above the national minimum wage, is taken as an estimate of what they would have earned per year. Then total annual wages foregone can be estimated from one-half the additional participants in 16/17 cohort x proportion drawn from work x average wage over 2 years = 0.5 x 50.2k x 60% x £24k, i.e. around **£360m**.

B.1.8. Additional teaching costs

Average teaching costs per pupil are estimated at £3600 per annum, payable over 2 years for EMA additional.⁴² Multiplying by the number of annual additional learners from EMA gives an estimate of about 2 x £3.6k x 50.2k x 0.5 = **£180m/year**.

B.1.9. Taxation foregone

For the moment, this is included as part of 'wages foregone'. Improved estimates will enable separation of the personal (after-tax wage) and public (taxes) benefits foregone.

B.1.10. Total annual EMA costs

On the basis of the above, total costs equal about **£1.07bn/year**.

Overall net benefit of the EMA

From the estimated gross benefits, this suggests a **net benefit from the EMA of the order of £0.5-1.0bn/year**.

Discontinued payments and bonuses

During year 12, about 80% of young people in all four pilots reported continuous receipt of EMA weekly payments, about 20% reporting stoppages. Stoppages can result from failure to meet attendance criteria (young people must achieve 95% attendance in a given week), omissions from application forms, or administrative problems in LEAs schools or colleges. Overall, these factors applied to 42.8%, 11.6%, and 25.9% of stoppages, respectively, other reasons applying to the remainder.

⁴¹ Middleton et al., Table 2.1

⁴² Uprated from Department of Education and Skills (2003): 'Statistics of Education: Education and Training expenditure since 1993-94', issue 04/03. Cited by Dearden et al. (2005)

Across the four variants, the largest difference was between variants 2 and 3, with the former, paying the highest weekly EMA allowance, accounting for the highest proportion of reported stoppages (27.6%) across all pilot areas, with variant 3, where EMA was paid to the parent, accounted for the lowest (14.4%). Regarding reasons for stoppage, attendance problems were most frequently reported in variant 2 areas (45.5%, as opposed to 42.8% overall) closely followed by variant 3 (45.0%). This implies that the higher weekly payment did not encourage better attendance, although the evaluation report cautions that there is evidence that absence monitoring and the interpretation of authorised absence varied between EMA pilot areas.

About 90% of participants across all pilot areas received termly retention bonuses, with 'attendance problems' being the principal reason for non-receipt (about 40%), followed by 'coursework problems' (around 25%) and 'behaviour' (15%). Payments declined from the Autumn term onwards across all variants - the smallest decline in variant 3, which, with variant 4, showed the largest proportions of young people reporting receiving bonuses. Variant 3 (under which only the bonus was paid to the student, weekly payments going to the parent) and variant 4 (with the higher £80 bonus) thus appear to have offered the more effective incentives.

The 2003 evaluation also presents results on receipts of achievement bonuses (section 5.5), with £50 (£140 in variant 4) payable at the end of one- or two-year courses. Variant 2 had the lowest proportion of young people reporting that they qualified for a bonus (51.8%) and variant 4 the highest (71.1%), 11%pts ahead of the second highest (variant 3). It therefore appears that the higher bonus provided a significantly greater incentive to achievement than the lower bonus (average qualification rates in variants 1-3 was 56.1%, 15%pts lower than variant 4).

Appendix C - EMA specification and levels of participation

Payment rules

EMA currently consists of two forms of payment:

- (a) A *weekly* payment to the young person; and
 - (b) Intermittent *bonus* payments.
- (a) The weekly payment is determined according to Figure 10.

Figure 10 EMA entitlements by household income

Household income	Weekly amount to be paid
Up to £20,817	£30
£20,817 to £25,520	£20
£25,521 to £30,810	£10

Source: DCSF

(b) The system of bonuses is less rigid than those applied in the pilot studies. Different rules apply to those in 'work-based' environments and those in academic institutions, but in both cases the rules are flexible, with considerable discretion and monitoring required by the education/training providers.

- For those in 'work-based' colleges, payments of £5 per week during term time are accrued according to satisfactory attendance and achievement of learning goals. The maximum payment is thus about £100 per year. Total payments are of the order of £50-£60m per year.
- For those in the academic (primarily GCSE) system, two bonus payments, each of £100, are available per year: One in July, payable if attendance, behaviour and effort, and performance in exams, is deemed satisfactory; the other in January, originally little more than a reward for returning after Christmas. It too is based on a combination of attendance and achievement. 75-80% Of those eligible receive these 'yes of no' bonuses.

Altogether, bonuses account for 20-25% of EMA payments to young people.

Participation

Figure 11 shows numbers of participants and their total receipts since 1999.

Figure 11 Numbers of EMA participants and their receipts

	Numbers on EMA	Expenditure on EMA (£m)	Average annual expenditure per participant (£)
1999/2000*	14,135	11	778
2000/2001*	73,230	52	710
2001/2002*	114,254	109	954
2002/2003*	124,351	120	965
2003/2004*	126,871	142	1119
2004/2005*	297,567	260	874
2005/2006	430,327	406.6	945
2006/2007	534,566	502.9	941
2007/2008	550,166	532.9	969
2008/2009	578,580	532	919
* prior to national rollout			

Source: DCSF, Personal communication

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