

Evaluation of the National Strategy for Neighbourhood Renewal: Improving educational attainment in deprived areas





Evaluation of the National Strategy for Neighbourhood Renewal: Improving educational attainment in deprived areas

March 2010

Kate Wilkinson, Adam Whitworth and David McLennan, Social Disadvantage Research Centre, University of Oxford Department for Communities and Local Government The findings and recommendations in this report are those of the authors and do not necessarily represent the views of the Department for Communities and Local Government.

Department for Communities and Local Government Eland House Bressenden Place London SW1E 5DU Telephone: 0303 444 0000 Website: www.communities.gov.uk

© Queen's Printer and Controller of Her Majesty's Stationery Office, 2010

Copyright in the typographical arrangement rests with the Crown.

This publication, excluding logos, may be reproduced free of charge in any format or medium for research, private study or for internal circulation within an organisation. This is subject to it being reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the publication specified.

Any other use of the contents of this publication would require a copyright licence. Please apply for a Click-Use Licence for core material at www.opsi.gov.uk/click-use/system/online/pLogin.asp, or by writing to the Office of Public Sector Information, Information Policy Team, Kew, Richmond, Surrey TW9 4DU

e-mail: licensing@opsi.gov.uk

If you require this publication in an alternative format please email alternativeformats@communities.gsi.gov.uk

Communities and Local Government Publications Tel: 0300 123 1124 Fax: 0300 123 1125 Email: product@communities.gsi.gov.uk Online via the Communities and Local Government website: www.communities.gov.uk

March 2010

Product Code: 09ACST06210

ISBN 978-1-4098-2211-0

Contents

	Acknowledgements	4	
	Data quality	4	
	Executive summary	5	
1.	Introduction		
2.	Background		
3.	 Data and methods 3.1 Overview of the methodology 3.2 Key outcomes 3.3 Data 3.4 Methodology 	13 13 13 14 14	
4.	 Improving educational attainment in NSNR districts: Impact assessment 4.1 Impact analysis: strategy-wide effects 4.2 Impact analysis: effects by gender 4.3 Impact analysis: effects by ethnicity 4.4 Impact analysis: effects by region 	30 30 34 39 45	
5.	Summary of main findings5.1Strategy wide5.2Gender5.3Ethnicity5.4Region5.5Treatment group5.6Summary of key findings across all outcome measures	51 51 52 52 52 52 53	
	References	57	
	Appendix A: Control variables used in the education analyses	59	
	Appendix B: Overlap between the four treatment groups, 2002	60	
	Appendix C: Sample sizes of treatment and control groups		
	Appendix D: Characteristics of treatment and control groups, 2002		
	Appendix E: Cases with missing variables		
	Appendix F: Complete listing of DD estimates		
	Appendix G: Key Stage 3 results, by region		

Acknowledgements

The authors are grateful to the Department for Children, Families and Schools (DCFS) for providing access to individual pupil level data on attainment and personal characteristics for use in this study. Thanks also to Amion Consulting and partners within the evaluation consortium for helpful technical comments.

Data quality

Every effort has been made to ensure that the data and analyses contained within this report are accurate. No warranty is given by SDRC as to the accuracy or comprehensiveness of the data provided to SDRC by DCFS.

Executive summary

Aims and objectives

- The overarching focus of this paper is to explore whether there is any evidence that the National Strategy for Neighbourhood Renewal (NSNR), including the Neighbourhood Renewal Fund (NRF), is having a positive impact on educational attainment outcomes in deprived local authority areas.
- Under this broad overarching objective sit a number of sub-questions. These involve testing whether there is evidence of differential impact by:
 - time
 - gender
 - ethnicity
 - region.

Methodology

- Attainment outcomes are measured at individual pupil level.
- Pupils are clustered within schools.
- Attainment outcomes are assessed at Key Stage 3 and Key Stage 4. A total of nine different outcome measures are used across Key Stages 3 and 4.
- Difference-in-difference estimation is used to compare changes in attainment in specified treatment groups with changes in attainment in matched control groups.
- Each pupil can be in either: (i) a specified treatment group; or (ii) a matched control group; or (iii) neither a treatment nor control group. This paper focuses only on those pupils that are in either a treatment group or a control group.
- Treatment groups are drawn from the 88 local authorities that received NRF resources in the year 2000. Propensity score matching is used to select control groups from the remaining 266 local authorities that did not receive NRF resources in the year 2000.
- Four different treatment groups are analysed, each with a matched control group. Multiple treatment groups are used because there is no clearly defined 'target' population that might be expected to be the focus of any intervention. Four different ways of identifying 'potential' (i.e. appropriate/likely) target populations are used, generating four different treatment groups. Pupils may be in one or more treatment group or one or more control group.
- Data for 2002 are taken to represent attainment in the 'pre-intervention' period whilst data for 2003, 2004, 2005 and 2006 are taken to represent attainment during the intervention period.

Assumptions/limitations

- Data at individual pupil level that allows linking of area characteristics to pupils is available from 2002 onwards but not before. It is possible that pupils may have benefited from the NSNR prior to or during 2002 and therefore the findings presented in this report may be regarded as conservative estimates.
- It is not possible to validate the extent to which the four treatment groups accurately reflect pupils targeted by local authorities through the NRF.
- The NSNR is taken to be operating in the 88 local authorities that were allocated NRF funding in 2000 and therefore does not reflect the changes to funding introduced in 2004.
- Pupils in the treatment and/or the matched control groups may have benefited from non-NSNR interventions. If this is indeed the case then it may lead to contamination of the results. Due to the disparate nature of educational attainment initiatives, it was not possible to incorporate all such factors into the analyses.

Key findings

- There is consistent evidence of positive impacts for pupils in treatment groups in both Key Stage 3 and Key Stage 4 outcome measures. There is evidence of consistency of positive impacts across the four treatment groups and across time.
- While there is consistent evidence of a positive policy impact the effect sizes can sometimes be relatively small. For example, Key Stage 3 results represent average improvements in the NRF treatment groups of around one-tenth of one level in each subject.
- There is evidence that positive impacts increase in size over the course of the post-policy time period analysed i.e. 2003–2006. There are also several instances where there is evidence of positive impacts on measures being seen in the later years studied but not in earlier years. Both findings suggest that policy impact appears to increase over time and that the policy needs time to become established prior to evaluation.
- Improvements in the percentage of pupils achieving the Key Stage 4 target of gaining five or more A*–C grades were consistent and relatively large in size: pupils in the specified treatment groups see improvements of between 3.2–4.5 percentage points in the percentage of pupils reaching this target in 2006 for instance.
- Whilst there is evidence of positive impacts for the two Key Stage 4 targets relating to A*–C grades, there is no evidence of positive change relating to the two Key Stage 4 measures of A*–G passes.
- In terms of gender differences, females show consistent positive impacts in the percentage achieving level 5 in maths at Key Stage 3 in all four years studied, while males only show positive impacts in later years. Males, but not females, show consistent evidence of improvements in English at Key Stage 3. In contrast

females, but not males, show evidence of improvements in science at Key Stage 3.

- At Key Stage 4, males show consistent evidence of positive impacts in the 'best of eight' Total Point Score measure and in the percentage gaining five or more A*-C grades at GCSE. There is only limited evidence of positive impacts at Key Stage 4 for females.
- In terms of differences by ethnic group, there is evidence of positive impacts across all ethnic groups with the exception of Indian pupils for Key Stage 3 outcomes. At Key Stage 4 evidence of positive impacts on the percentage of pupils gaining five or more A*–C grades is concentrated amongst pupils of black Caribbean, black other, white British and white other ethnic origin. When looking at the two outcome measures relating to A*–G passes, however, mainly Bangladeshi, Pakistani and Indian ethnic groups show evidence of improvements.
- Regional analyses show that improvements at Key Stage 3 are concentrated in the London region and are relatively large in size. At Key Stage 4 several regions show evidence of positive impacts.
- There is some limited evidence to suggest isolated instances of negative impacts of the strategy on A*–G passes at Key Stage 4 for black other and white British pupils living in the East and London regions.

1. Introduction

Improving the skills of people living in the most deprived neighbourhoods in England is one of the five priority goals of the National Strategy for Neighbourhood Renewal (NSNR). As part of the NSNR, it has been estimated that approximately 20 per cent of Neighbourhood Renewal Fund spend has been on education interventions. These interventions have fallen into six main categories:

- General attainment raising comprising a large of number of projects targeted at Key Stage 1 to Key Stage 4. Particular focus is given to attainment in maths, English and reading at all levels as well as attainment at GCSE (Key Stage 4)
- Targeted attainment raising specifically targeted on raising attainment in key groups experiencing difficulties in mainstream education
- Reducing exclusions
- Out of school activities
- Parental involvement
- Basic skills.¹

This paper presents a series of analyses exploring whether there is any evidence that the Strategy is having a measurable effect on pupil attainment levels.

Difference-in-difference estimation is used to compare changes in outcomes for children in specified 'treatment' groups against changes in outcomes for children in matched 'control' groups. Data are analysed at individual pupil level and a wide range of explanatory factors are included in the model to control for individual, school and neighbourhood level effects. Changes in outcomes in both the treatment and control groups are assessed by comparing outcomes at a series of 'intervention' time points with outcomes at a 'pre-intervention' time point. The pre-intervention time point selected is 2002 and the intervention time points selected are 2003, 2004, 2005 and 2006.

Section 2 of this report sets out a short summary of aggregate level attainment rates for children in various different groups to show the extent of the 'gap' that exists between children in deprived local authority areas and specified comparator benchmarks.

Section 3 explains the data and methods used in the analyses, including a discussion of the outcome measures chosen, the methods of selecting the treatment groups and their associated control groups, the principles and

Cowen, G., Wilton, M., Russell, G. and Stowe, P. (2008) *Impacts and Outcomes of the Neighbourhood Renewal Fund*. London: CLG. www.communities.gov.uk/publications/communities/nrfimpactsoutcomes

application of difference-in-difference modelling, and an explanation as to how to interpret the results of the models.

Section 4 represents the bulk of the report and presents the key results from the modelling analyses. A series of charts are used to present those results which are statistically significant at the 95 per cent confidence level and the discussion around these charts prioritises identifying consistency in findings across time and across the treatment groups. The section is structured to explore first the overall Strategy wide results, then to examine results for each of the sub-groups analysed (gender, ethnicity and region).

Finally, **Section 5** presents a summary of the key results and offers a short discussion of the main messages emanating from the research.

A number of **appendices** are also presented which include further details on the methods and a comprehensive set of results tables.

2. Background

In order to provide some context to the results presented later in the report, **Figure 2.1** sets out five key government targets for educational performance in 2002 at Key Stage 3 and Key Stage 4 broken down into NSNR districts, non-NSNR districts and the England average. In addition, **Figure 2.1** also presents data for the combined treatment groups and the combined control groups described in **Section 3** and used in this evaluation. As discussed in detail in **Section 3**, treatment groups are made up of pupils attending the most poorly performing schools in the NSNR districts or those schools in NSNR districts that serve children from the most deprived neighbourhoods and are considered therefore to be those schools most appropriate for (and therefore most likely to have received) intervention. The control groups are comprised of pupils in matched schools from non-NSNR districts chosen because of the similarity of the characteristics to the schools in the treatment groups.

In this short background section attainment levels are presented for the year 2002. This year is chosen as it is the earliest for which attainment data can be matched to area characteristics. The year 2002 is therefore adopted as the best available measure of pre-policy attainment levels and as such is selected as the pre-policy baseline time-point used in the modelling analyses presented in this report. **Figure 2.1** thus shows the size of the 'gap' between pupils living in NSNR and non-NSNR districts – and between treatment and control groups as defined in **Section 3.4.2** at the inception date of the NSNR adopted for this research.

These summary data are drawn from the datasets used for the modelling analyses presented in this report and so necessarily exclude the minority (approximately 10 per cent)² of pupils with one or more missing variables which could not be included in the models. **Appendix E** sets out in greater detail the number of pupil records which contained missing data and which were not therefore able to be modelled. **Figure 2.1** presents data for three Key Stage 3 measures – the percentage of pupils reaching target level 5 in English, maths and science respectively – and two targets for Key Stage 4 – the percentage of pupils achieving five GCSE passes at A*–C and A*–G respectively.

Figure 2.1 shows that in terms of the Key Stage 3 indicators there are sizeable differences between the average percentages of pupils reaching these targets in NSNR and non-NSNR districts, with NSNR districts having figures around 10 percentage points lower than the equivalent non-NSNR district figures. It can be seen that non-NSNR districts have an average of around 75 per cent of their pupils reaching the target level 5 in English, maths and science in 2002. In NSNR districts, however, the figures are considerably lower at around 65 per cent of pupils reaching this Key Stage 3 target in these three subjects.

² See **Appendix E** for full details of the number of cases with missing variables which had to be omitted from the modelling.



It is unsurprising to see that the NRF treatment groups selected have the lowest levels of performance of these five groups, being around 20 percentage points below the England average figures in terms of the percentage of pupils achieving Level 5 in English, maths and science.

It is interesting to note that the control groups – despite representing the most deprived schools in non-NSNR districts – show levels of attainment similar to the NSNR district averages, some way higher than the attainment of the treatment groups. The issue of matching is discussed in more detail in **Section 3**.

Looking at the Key Stage 4 outcomes for 2002 again shows differences between NSNR and non-NSNR districts: in 2002 around 57 per cent of pupils in non-NSNR districts gained five or more A*–C grades at GCSE and this is in contrast to a figure of around 47 per cent for pupils in NSNR districts. Again, pupils in NRF treatment groups are less successful than other groups at achieving five or more A*–C passes at Key Stage 4.

Pupils in the control groups again achieve similar percentages of pupils reaching this target to the NSNR average, somewhat higher than for pupils in NRF treatment groups. The difference between the NSNR and non-NSNR figures for five or more A*–G grades is somewhat smaller at just 2 percentage points, though the percentages reaching this lower target are much greater than for the other four measures. Indeed, even in the NRF treatment groups around 90 per cent of pupils achieve five or more A*–G grades at Key Stage 4.

Figure 2.1 therefore clearly illustrates that there are sizeable differences in educational attainment between the NSNR and non-NSNR districts on these key measures of educational performance. Moreover, there are differences within the NSNR district figures: within this context of disadvantage between NSNR and non-NSNR districts, pupils in those particularly disadvantaged schools selected as part of the NRF treatment groups within this evaluation report showed considerably lower levels of educational achievement than the NSNR average results.

3. Data and methods

3.1 Overview of the methodology

The analyses presented in this report compare the performance of pupils in specified treatment schools within NSNR districts with the performance of pupils in matched control schools in non-NSNR districts. Comparing pupils in control schools with similar characteristics to the treatment schools has the effect of controlling (to a certain extent) for factors outside the NSNR intervention that affect educational attainment.

After matching treatment schools with control schools, the difference-indifference method is used to compare the change in attainment over time between the treatment and control schools from a baseline 'pre-intervention' time point to a time point after NSNR intervention is available to the treatment schools. Any remaining differences between the treatment and control groups are controlled for by a multivariate linear regression model. The baseline 'pre-intervention' time-point is taken as 2002 and the analyses presented here compare outcomes in individual years between 2003 and 2006 against the outcomes observed in 2002.

3.2 Key outcomes

Educational attainment is assessed against nine different outcome measures, consisting of four outcome measures at Key Stage 3 (age 14) and five outcome measures at Key Stage 4 (age 16).

Key Stage 2 is not selected as an outcome indicator for this work but rather is used within the models as an important predictor of attainment at Key Stages 3 and 4. This is because prior attainment is known to be the greatest predictor of future attainment so Key Stage 2 results form a crucial component of the Key Stage 3 and Key Stage 4 models. However, due to the fact that Key Stage 1 results are not independently validated in the same way as Key Stage 3 and Key Stage 4 results, it was decided not to analyse outcomes at Key Stage 2 (using Key Stage 1 as a prior attainment indicator). Restricting the analysis to Key Stages 3 and 4 only also allows the outcomes to be assessed for the same treatment and control schools. If Key Stage 2 outcomes were to be tested then this would require selection of additional treatment and control schools as Key Stage 2 assessments take place in primary rather than secondary schools.

Key Stage 3 results are important in order to assess how pupils are progressing in key basic skills in particular subject areas such as English, maths and science. Results at Key Stage 4 (GCSE) represent the end of compulsory schooling and have significant implications for access to future educational and careers opportunities. These nine outcome measures are listed in **Figure 3.9** and together provide a strong picture of educational performance.

3.3 Data

This report draws on the UK's main administrative data source on educational attainment to evaluate the impact of the NSNR on educational outcomes in NSNR districts. Individual pupil level attainment data from 1996 to 2006 are obtained from the National Pupil Database (NPD) and from 2002 to 2006 data from the Pupil Level Annual School Census (PLASC) allows linking of the NPD to a pupil's record within PLASC. As all pupils keep a unique pupil reference number throughout their compulsory education it is possible to match current pupil records with previous attainment records thereby providing an important source of contextual information important to building robust models of educational attainment.

The presence of a pupil home postcode and a school identification code also allows matching of other area level and school level information from the 2001 Census, the Local Education Authority Schools Information Services (LEASIS), Edubase (a database of school information maintained by the Department for Children, Schools and Families), and the English Indices of Deprivation 2004 (ID 2004). Variables from these datasets are used as explanatory variables in the modeling. Thus data are available for each pupil in England on latest test results, prior attainment, school attended and area of residence for each year from 2002 to 2006.

It should be noted that in some cases it is not possible to match prior attainment data to variables such as postcode or school identifier as this information is missing in PLASC, and in these cases the children must be dropped from the model (see **Appendix E** for further details of missing cases).

3.4 Methodology

3.4.1 The evaluation problem and difference-in-difference estimation

As with any impact evaluation, one of the main challenges in the evaluation of the NSNR is to distinguish whether any changes observed in NSNR districts are attributable to the NSNR or to other factors, for instance the nature of the population or to external trends. To assess the impact of the NSNR one would ideally like to know what would have happened to people living in target areas had the policy not been implemented: constructing this unobserved counterfactual is a central issue that the evaluation method seeks to address. It is impossible to observe the outcome that children in treatment schools would have experienced had the NSNR not existed. Instead, this can be estimated by comparing the outcomes of a similar cohort of pupils drawn from areas which were not the focus of the NSNR but who are considered to be close matches to the treatment pupils. In this evaluation, construction of an appropriate control group is achieved in two stages. Firstly, propensity score matching (PSM) is used to select a group of control schools which are similar to the treatment schools but are not located in NSNR districts. The logic behind this is that a child's school environment has considerable influence on their attainment and there is clearly a significant difference between a school serving a deprived local authority area and a school in a more affluent local authority area. It is not appropriate to try and compare the performance of children in very different types of schools as there are likely to be external factors affecting educational attainment that are difficult to control for. Therefore, by allowing only similar schools to be included in the control sample the likelihood that there are differences between the control and treatment groups that are either unobserved or difficult to control for is reduced.

Once the treatment schools have been matched to similar control schools using PSM, the evaluation makes use of a technique known as difference-indifference (DD) estimation in order to isolate the impact of the intervention. DD is a commonly used technique in programme evaluation (Wilkinson, 2003; Chen and Ravallion, 2003; Stewart, 2004), including the evaluation of interventions targeted at enhancing education and in tackling small area disadvantage (Angrist and Lavy, 2001; Kendall et al., 2005), and many evaluations – particularly evaluations of educational interventions – combine matching (often PSM) with DD to more accurately measure the independent impact of the intervention (Blundell et al., 2002; Machin et al., 2004, 2007; Machin and McNally, 2006). DD estimation evaluates the impact of an intervention by comparing the difference in indicators between two groups (target and control groups) at two points in time (one pre-policy and the other one at a time point during/after policy operation). DD estimation is carried out in three steps.

- 1. The difference in the outcome of interest is estimated for the target group before and after the intervention. In the specific context of this report, the year 2002 is regarded as the NSNR intervention baseline, with data for that year taken to represent the 'pre-policy' attainment levels and data for each year from 2003 to 2006 considered separately as 'post-policy' attainment levels.
- 2. The difference in the outcome of interest is estimated for the control group before and after the intervention baseline in the same way as the treatment group.
- 3. The difference between these two differences is obtained by subtracting the control group estimate from the treatment group estimate to produce the difference between the two groups. This final figure is known as the DD estimator and, after having controlled for differences in background characteristics between the treatment and control groups, this isolates the estimate for the impact of the intervention. Mathematically the DD estimator is represented as in equation (1):

$$DD = E(Y_{11} - Y_{10} | NRF=1, X) - E(Y_{01} - Y_{00} | NRF=0, X)$$
(eq. 1)

where Y_{it} denotes the outcome in treatment status *i* and period *t*. Therefore, a pupil living in a treatment area takes the value *i*=1 whereas a pupil living in a control area takes the value *i*=0; the post-policy time period of interest is denoted where t=1 and the pre-policy time period is denoted as t=0; and X is the multi-dimensional vector of variables controlled for during the DD estimation.

The main advantage of the DD method is that it controls for differences in outcomes between the treatment and control groups caused by area specific effects, school effects and individual characteristics provided that these do not vary between the pre and post evaluation periods. The DD estimator also controls for time varying impacts provided these impact equally on the treatment and control groups, for example a change in the marking of examinations across the whole of the country.

One problem in the use of the DD estimator with repeated cross-section data rather than longitudinal data is that the composition of the treatment and control groups may change over time. Thus the pre-intervention group may not share the same characteristics as the post-intervention group. Compositional differences are controlled for by use of a multivariate linear regression model, this is essentially the second stage of 'matching' the treatment and control groups.

3.4.2 Defining the treatment groups

One issue with which the evaluation has to contend is that there is no clearly defined treatment group identified within the policy to which interventions should be directed, nor in practice is there knowledge about how interventions in NSNR districts have been targeted. This makes it difficult to assess the extent to which the policy can be said to have been 'successful'. As a result, the analysis uses four alternative treatment groups to measure the effectiveness of the NSNR. Each of these four treatment groups can be considered as an appropriate target for education interventions in NSNR districts as, in differing ways, each identifies the most deprived children in the NSNR districts. With the stated policy objective of the NSNR being to reduce levels of deprivation in the most multiply deprived neighbourhoods in NSNR districts, in the absence of a pre-specified treatment group these four treatment groups each represent appropriate, albeit alternative, groups where one might expect interventions to be directed.

The four treatment groups are defined as follows:

- Group One: pupils within the 25 per cent most poorly performing schools in each NSNR district according to each school's Key Stage 3 average point score attainment in 2002. This treatment group therefore identifies pupils in the most educationally disadvantaged schools at Key Stage 3.
- Group Two: pupils within the 25 per cent most poorly performing schools in each NSNR district according to Key Stage 4 best eight results total point score attainment in 2002. This treatment group therefore identifies pupils in the most educationally disadvantaged schools at Key Stage 4.

- Group Three: pupils within the 25 per cent most deprived schools in each NSNR district according to the population weighted level of multiple deprivation in the pupils' home neighbourhoods as defined by the Index of Multiple Deprivation (IMD) 2004. This treatment group therefore identifies schools which serve pupils who live in the most multiply deprived neighbourhoods.
- Group Four: pupils within the 25 per cent most deprived schools in each NSNR district according to the population weighted level of deprivation on the Education Domain in the pupils' home neighbourhoods as defined in the IMD 2004. This treatment group therefore identifies schools which serve pupils who live in the most educationally disadvantaged neighbourhoods.

Although defined in differing ways each of these four treatment groups captures pupils within the most disadvantaged schools across NSNR districts. As such, there is a relatively high degree of overlap between the four treatment groups and schools, meaning that schools are often within more than one of the four treatment groups. Appendix B sets out the exact extent to which there is overlap of schools between the four treatment groups and illustrates that around 70 per cent of schools within any one treatment group will also be within another of the four treatment groups. Whilst any single one of these four treatment groups could have appropriately been used as a single treatment group for the evaluation, the evaluation is strengthened by taking these four alternative treatment groups together as they enable the consistency of measured impacts to be assessed across treatment groups defined in different ways. Results of the DD estimation for each of these four treatment groups are presented together in **Section 4**. Schools are used as the mechanism though which to select children for inclusion in a treatment or control group because schools are commonly used to target education interventions thereby increasing the chance that the treatment groups selected in this evaluation actually do receive NRF funding. Furthermore, assuming schools to be the targeting mechanism allows control pupils to be selected through schools which improve the match between the treatment and control group.

3.4.3 Matching control groups to the treatment groups

As outlined above, in order to attribute outcomes to interventions it is important that any effects picked up by the DD estimator are not due to differences between the treatment and control groups in terms of differing background characteristics. This is due to the fact that a source of bias in the DD estimator may be introduced if one compares the change in outcomes of pupils with very different observable characteristics – for instance ethnicity, deprivation, gender – between treatment and control groups. When very different groups of pupils are compared there is a greater chance that there will be individual time-varying characteristics that differ between the treatment and control pupils and that the groups will respond differently to country-wide trends.

As described above matching is implemented in two stages in this evaluation to correct for differences between the treatment and control groups. The first stage involves matching treatment schools with control schools using PSM. PSM was first developed by Rosenbaum and Rubin (1983) and is used regularly in programme evaluation methodologies, although more often to match individuals rather than entities like schools (Rosenbaum and Rubin, 1983, 1985; Rubin and Thomas, 1996; Heckman et al., 1998; Sianesi, 2001; Bryson et al., 2002). In order to apply PSM in this analysis each school is assigned a propensity score according to the school's key characteristics, where the propensity score is the probability of the school being in the treatment group. PSM was carried out separately for each of the four treatment groups with the matched control schools being drawn from all schools not in NSNR districts. A probit model was used with a binary flag for treatment schools as the dependent variable and the following explanatory variables: per cent of pupils on free school meals; per cent of pupils who are non-white; per cent of pupils with special educational needs; community school indicator; foundation school indicator; voluntary aided school indicator; voluntary controlled school indicator; religious denomination indicator; selective school indicator; single sex indicator; urban school indicator; subject specialism indicator; dissimilarity index;³ city technology college indicator; city academy indicator; number of pupils in the school; pupil-teacher ratio; and Excellence in Cities indicator.

Typically, once the propensity scores have been created the next step is to select the control and treatment groups as being those schools whose propensity scores fall within the same range termed the 'common support'. However, this approach was not considered suitable in this evaluation due to the nature of the NSNR intervention: the NSNR targets the most deprived local authorities in England so when matching schools to those in non-NSNR districts it is inevitable that these matched schools will not be as deprived as those in the treatment group. The implication of this in terms of the process of matching is that the propensity scores of the treatment and potential control groups are not fully overlapping, as **Figures 3.1 to 3.4** demonstrate.

The dashed lines on **Figures 3.1 to 3.4** show the propensity scores of the treatment schools for treatment groups 1–4 respectively. The dotted lines on these charts show the propensity scores of each treatment group's corresponding pool of potential control schools. These lines do not show the number of schools with respective propensity scores but rather set out the proportion of schools of the relevant group with propensity scores of that value. In these charts larger propensity scores can be understood as indicating a school whose key characteristics are relatively more deprived, i.e. a school with a higher propensity scores can be understood as representing schools whose key characteristics are relatively less deprived.

For each of these four charts it can be seen that the two sets of propensity scores only partially overlap, with all four charts showing some schools having propensity scores larger than any school within the potential control group, and with the modal propensity score for each treatment group being larger than the modal propensity score for the potential control group. This difference – schools in the treatment groups tending to show larger propensity scores indicative of relatively higher levels of deprivation and schools in the potential control groups tending to show relatively smaller propensity scores indicative of relatively lower levels of deprivation – is unsurprising given that the NSNR is designed to target the most deprived local authorities in England and that the poorest performing schools tend to be in the most disadvantaged districts. In terms of absolute numbers, however, there are many more schools within the potential control group than in the treatment group and this enables the possibility of selecting only the more closely matching schools to be within the control group yet still retain a sufficient sample size within the control group.

One possibility explored was to take all schools within the potential control group with propensity scores within the range of those of the treatment group as being the control group; this corresponds to taking all schools on the dotted line with propensity scores equal to or greater than the smallest propensity score on the dashed line representing the treatment group. However, it can be seen that defining the control group in this way skews the average propensity score of the control group downwards away from the average of the treatment group, thus encouraging greater diversity between the characteristics of the treatment and control groups. This is because whilst the low end of the range of propensity scores for the treatment group is defined by relatively few schools, there are a much larger number of schools at this propensity score which would form part of the control group if defined in this way.

The matching methodology adopted therefore is to take a control group with the same absolute number of schools as in the treatment group, and to take these schools from the high end of the distribution of propensity scores for the potential control group. In **Figure 3.1**, for example, the dashed line of the treatment group is comprised of exactly 300 schools. Therefore, starting at the largest propensity score on the dotted line of the potential control group and taking the 300 schools with the largest propensity scores sets the drop-bar at the cut-off point at which schools are selected into the control group. Therefore, all schools on the dashed line form the treatment group for group one but only the 300 schools on the dotted line with the largest propensity scores – those to the right of the drop-bar on this dotted line – are taken as part of control group one. Figures 3.2 to 3.4 show the equivalent graphs for the selection of control schools for treatment groups 2, 3 and 4 and these contain 298, 370 and 371 schools respectively. The numbers of schools in the four treatment groups differ slightly due to the spread of data values which affects how many schools fall in the boundaries of each quartile of a local authority distribution. Each control group is composed of exactly the same number of schools as the treatment group to which it is matched, therefore ensuring a like-for-like comparison.









Appendix D compares the key characteristics of the four treatment and control groups as defined using this methodology and shows that the treatment and control groups for each of the four treatment groups are very similar. Most of the indicators are extremely similar between treatment and control groups. Those indicators which one would not expect to be quite so similar given the nature of the NSNR and which therefore make matching more difficult – such as the percentage of children receiving free school meals – are indeed less similar but still acceptably so. Of the various matching methodologies explored, the matching methodology adopted was that which generated the most similar treatment and control groups when comparing their key characteristics in this way.

3.4.4 Controlling for compositional differences

The final step of the methodology was, for each of the outcome measures of interest, to run multivariate linear regression models incorporating the DD estimator on each of the four treatment and control groups in turn.

The use of multivariate linear regression improves the match between the treatment and control group as it controls for compositional changes in the treatment and control groups between the pre and post intervention time points. This therefore helps to increase the likelihood that the DD estimators of the impact of the NSNR are indeed attributable to the Strategy rather than to any non-Strategy differences between the treatment and control groups. A drawback of this approach is that if the error terms within the multivariate linear regression model are correlated with any of the background characteristics then the DD estimator will not be accurate. Tests carried out to check the model specification are described in more detail below.

Fixed effects models were used, as is common in educational analyses, where the unit of analysis is a pupil but pupils cluster within schools. The advantage of a fixed effects model in this situation is that the model intercept is allowed to vary for each individual school in order to take into account the influence of school level factors on pupils that are not otherwise controlled for within the model. An example of such a factor is teaching quality which may be expected to vary between schools but impacts upon pupils fairly consistently within schools. The model also allowed clustering of the standard errors within schools. Where the variation in attainment outcomes is lower within a school than it is between schools, allowing for clustering in the standard errors produces more accurate standard error estimates. Without taking clustering into account the size of the standard errors may be underestimated which results in the model coefficients appearing to be significant when this is not actually the case.

In order to build the most suitable model a wide range of pupil, school and area level explanatory variables were tested. These explanatory variables were identified both from a reading of the relevant research literature around the factors affecting educational performance – and particularly educational performance in disadvantaged local authority areas – as well as on the basis of testing any additional variables available to the evaluation. **Appendix A** lists the explanatory variables used in the DD models.

It is necessary however to outline potential limitations of the model used, limitations which apply generally to all econometric impact evaluations of this type. Whilst an extensive list of explanatory variables was used in the modeling it may be the case that additional explanatory variables may have further improved the model, especially further additional information about individual pupils such as family income. However, the models used in this evaluation do contain a large number of explanatory variables at pupil, school and area level and include the key explanatory variables identified from previous research; they are therefore considered to be robust models for this evaluation. An additional factor is that even with a complete set of explanatory variables in the model it is not possible to say definitively that the effects identified in the models are *caused* by the Strategy rather than being due to other factors which are not controlled for. As in evaluations of other interventions of this kind, for instance where it is not possible to assign randomised controlled trials, there is an innate difficulty in attributing observed changes in outcomes to any single given factor. Of course, attribution of impact is difficult in all types of evaluation, including randomised controlled trials.

In order to test that the model was a good fit both for treatment and control groups a simplified test model was run separately for each of the four sets of treatment and control groups. Each of the four treatment groups was further split in half according to the school's propensity score. Thus the treatment groups were split into schools most likely to be treatment schools (generally the more deprived schools within the treatment groups) and schools less likely to be treatment schools (generally the least deprived schools within the treatment groups). Each half group was modelled separately to test for the extent to which the model coefficients differed between the two halves of the treatment group and the control group. As the Key Stage 2 points score explains around 70 per cent of the variation in the Key Stage 3 points score, the different models were compared by fixing all other characteristics (listed in **Appendix A**) except the Key Stage 2 points score and looking at how the predicted Key Stage 3 score differed between the different models.

Figures 3.5 to 3.8 show the results for all four treatment groups. For treatment groups 2, 3 and 4 all of the four lines plotted share the same slope and lie extremely close to each other, particularly so for treatment groups 3 and 4. The implication is that the model coefficients do not differ greatly between both halves of these three treatment groups as well as by their respective control groups. In other words, these charts highlight that there is no additional factor that is not controlled for that influences educational attainment and varies significantly within the treatment and control schools.

Figure 3.5 for treatment group one shows some degree of difference between the lines, in particular the high propensity score treatment group lies some way from the other groups. As the group one schools are selected on the basis of poor Key Stage 3 performance these schools are the most deprived in any of the treatment groups on this measure. Therefore, it is perhaps not surprising that in these schools a lower Key Stage 3 score is predicted for any given Key Stage 2 score. Despite this, the difference is only problematic if it is inconsistent over time. If there is a particular factor within these schools that results in poor Key Stage 3 performance that is not controlled for explicitly then provided this factor has a consistent impact over time it will be controlled for within the DD estimator.

The difference between the two halves of treatment group one suggests a greater degree of heterogeneity within this treatment group than within the other three groups and the DD estimator will – as with all of the models used – essentially capture an average result for the treatment group. If this difference between the two sides of the treatment group can be assumed to be time-invariant then this would have no implications for the accuracy of the DD estimator. It is not possible however to test whether this is the case given that suitable data is not available to repeat the experiment of splitting the treatment groups for an earlier time period. Performing the test after 2002 is problematic as any changes observed may be due to the impact of the NSNR. As there is a possibility of some unobserved impact on educational attainment for some of the schools in group one, the results section of this report does not rely on DD estimates from any single treatment group but rather looks for a degree of consistency between the results of the four treatment groups.



Figure 3.5: Model fit in control group and high and low propensity score schools for treatment group







Thus, as described above the DD estimator is incorporated into a multivariate linear regression model of the following form:

$$Y_{pst} = \alpha + \beta_0.NRF + \beta_1.NRF.T + P_{pst} + S_{st} + A_p + \alpha_t + \varepsilon$$
 (eq. 2)

Where:

- α is a constant
- NRF is a dummy variable indicating whether or not the pupil is resident in a treatment area
- T is a dummy variable indicating the post-policy period
- β_{1} is the DD estimator for the estimated impact of the NRF in that postpolicy year
- P_{pst} represents pupil characteristics (including prior attainment)
- S_{st} represents school characteristics
- A_p represents area characteristics (for the pupil's area of residence)
- α_t is a set of year dummy variables
- ϵ is a random error term.

For the subgroup analyses the control variables are identical and dummy variables are added to the regression to control for belonging to a particular

subgroup. For example, to examine how the attainment outcomes vary by gender the model is specified as follows:

 $\begin{aligned} Y_{pst} &= \alpha + \beta_0.\text{NRF} + \beta_1.\text{male.NRF} + \beta_2.\text{female.NRF} + \\ \beta_3.\text{male.NRF.T} + \beta_4.\text{female.NRF.T} + P_{pst} + S_{st} + A_p + \alpha_t + \epsilon \end{aligned} \tag{eq. 3}$

Where:

• male.NRF and female.NRF are dummy variables for the pupil's gender.

In this case the DD estimators of interest are β_3 and β_4 which tell us the impact of being a particular gender in a treatment group in the post-policy period. This model specification is used for all sub-group analyses.

3.4.5 Interpreting the findings

Section 4 of this report presents the findings of the evaluation. Throughout it sets out the DD estimates of the impact of the NSNR on the treatment groups described above, after controlling for other factors. The rationale for using four treatment groups and the description of these four treatment groups – as well as of their respective control groups – has been described above. In terms of the interpretation of findings, these analyses make use of the DD estimates for all four treatment groups when assessing evidence for the impact of the NSNR as *consistency* in findings across time and/or across the four treatment groups is considered an important indication of actual Strategy effects.

Figure 3.9 below sets out the nine outcome measures analysed in this evaluation as well as guidance on the interpretation of results for each of these nine measures. **Figure 3.9** shows that four of the nine outcome measures relate to performance at Key Stage 3: one of the four measures looks at the pupil's average point score while three measures assess whether the pupil has reached the Key Stage 3 target of Level 5 in the core subjects of English, maths and science. Five outcome measures relate to performance at Key Stage 4 (i.e. GCSE): one of the five measures relates to the pupil's total point score across their best eight grades, two measures focus on whether the pupil has attained five grades at A*–C and A*–G respectively, and a further two measures assess the number of passes gained at grades A*–C and A*–G respectively.

Figure 3.9 also describes whether the outcome measure is a binary or an interval level variable. Interpretation of outcomes can be described as follows:

 Coefficients and standard errors for binary outcome measures, for example whether or not a child achieved a Level 5 in English, are presented as percentage points. The coefficient reported therefore represents the percentage point increase or decrease over the relevant time period in the average probability that a child in the treatment group will achieve the attainment target relative to the control group. For example, a coefficient of 3.0 for the outcome measure achieving Level 5 in English at Key Stage 3 can be interpreted to mean that, on average, the probability that a child in the treatment group would achieve this target in the post-intervention year is 3 percentage points higher than for a child in the control group.

- Coefficients on points score outcomes (Key Stage 3 average point score and Key Stage 4 'best of eight' points score) are interval level outcome measures and coefficients therefore represent actual changes in point scores. For example, a coefficient of 2.4 for the Key Stage 3 average points score outcome would mean that, on average, the points score of children in the treatment group increased by 2.4 points between the two time points relative to the control group.
- Coefficients on outcomes relating to the number of passes at Key Stage 4 represent actual differences in the number of passes achieved, and coefficients can be interpreted as the actual average change in the number of passes gained by a child in the NRF treatment group over the relevant pre to post policy period compared with the control group. Hence, a coefficient of 1.0 for the number of Key Stage 4 passes at grades A*–C can be understood to mean that it is estimated that pupils in NRF treatment groups on average achieved one more pass at Key Stage 4 between A*–C than they would have in the absence of the NSNR.

Figure 3.9: Summary of outcome measures and their interpretation				
Outcome Measure	Outcome type	Interpretation of findings		
Key Stage 3				
Average Key Stage 3 points score	Interval	Change in point score		
Achieving Level 5 or above in English at Key Stage 3	Binary	Percentage point change		
Achieving Level 5 or above in maths at Key Stage 3	Binary	Percentage point change		
Achieving Level 5 or above in science at Key Stage 3	Binary	Percentage point change		
Key Stage 4				
'Best of 8' total point score at Key Stage 4	Interval	Change in point score		
Achieving 5 or more A*–C grades at Key Stage 4	Binary	Percentage point change		
Achieving 5 or more A*–G grades at Key Stage 4	Binary	Percentage point change		
Number of passes A*–C at KS4	Interval	Change in number of passes		
Number of passes A*–G at KS4	Interval	Change in number of passes		

3.4.6 Time points of the analysis

All the analyses presented in this section take the year 2002 as the pre-policy baseline year and compare the change in the outcome measure between 2002 and each individual post-policy year (i.e. 2003, 2004, 2005 or 2006). Having multiple post-policy time points of analysis in this way helps to isolate the time period during which change occurred and also allows checks for temporal consistency.

The following section summarises the key findings into a series of graphs which highlight the main messages from the analyses. These graphs display only those findings which are statistically significant at the 95 per cent level and present key messages and trends rather than all of the statistically significant findings. **Appendix F** presents a complete series of results in tabular format, with statistically significant findings indicated by an asterisk.

4. Improving educational attainment in NSNR districts: Impact assessment

This chapter presents the results from the analyses of the estimated impact of the NSNR on educational attainment. As discussed above, the key research questions driving these analyses are as follows:

- Is there evidence of Strategy-wide impacts on pupil attainment across NSNR district authorities? If so, how does this vary by time since intervention?
- Is there evidence of differential impacts on pupil attainment by sex?
- Is there evidence of differential impacts on pupil attainment by ethnic group?
- Is there evidence of differential impacts on pupil attainment by region?

This section presents the findings from the analyses as they relate to these research questions. First, the section focuses on whether there is any evidence of an overall NSNR effect across the four treatment groups on the various outcome measures when compared with the performance of pupils in the matched control groups. Next, a more detailed analysis looks at the performance of various sub-groups of children in the four treatment groups and presents findings broken down by gender, ethnicity and region to asses whether there is any variation *within* treatment groups.

4.1 Impact analysis: strategy-wide effects

A key question of the evaluation is the extent to which there is evidence that the NSNR appears to have made a positive impact on educational attainment at a Strategy wide level.

Key Stage 3 results

Figure 4.1 presents data on the impact of the Strategy on pupils' Average Point Score at Key Stage 3 and shows that there is evidence that the NSNR made a positive impact on this outcome variable, and with the exception of the 2003 post-policy time period this positive evidence is consistent across all four treatment groups. The size of the impact ranges from between around 0.3 points to around 1.4 points, with effect sizes increasing with time from the 2002 baseline and being larger in treatment groups one and two (those defined by low educational attainment). Whilst this represents consistent evidence of a positive policy impact the effect sizes are relatively small: a change of ten points is equivalent to an improvement of one level at Key Stage 3 and these results therefore represent average improvements in the NRF treatment groups of around one-tenth of one level in each subject.





Figure 4.2 presents the findings of impacts on the percentage of pupils gaining the Government's target Level 5 at Key Stage 3 in English, maths and science. It shows that there is again general evidence of a positive change in NRF treatment groups, though with the consistency and size of the outcomes varying across the three subjects.

Focusing firstly on the results for English, it is apparent that only treatment group one shows evidence of a statistically significant positive impact of the NSNR on percentage of children achieving Level 5 in English impact in 2003, 2004, 2005 and 2006. In the final post-policy year examined here (i.e. 2006) all four treatment groups display statistically significant positive outcomes,

with impacts ranging 2.5 to 3.5 percentage points for treatment groups two, three and four, but just under 5 percentage points for treatment group one.

The findings for maths show the most consistent positive evidence of the three subjects analysed and all but one of the total of 16 results for the four post-policy time periods for the four treatment groups are statistically significant and positive. Consequently, there is evidence in each post-policy time period to suggest that the NSNR is having a positive impact on the percentage of pupils achieving Level 5 in maths at Key Stage 3, and again these results suggest that the size of this positive impact increases year-on-year from the 2002 baseline period. Effect sizes for all four treatment groups are relatively close to one another and range between 0.9–1.6 percentage points in 2003 and increasing to between 3.5–4.5 percentage points in 2006.

Finally, the results for Level 5 in science at Key Stage 3 are statistically significant in 2003 and 2004 only for treatment group two, although they are positive for this group. The results for 2005 and 2006, however, continue the trend of being both more consistent and larger in size compared with results for earlier years in this post-policy time period. In 2005 three of the four treatment groups have statistically significant positive effect sizes ranging from 1.1–2.1 percentage points. In 2006 all four treatment groups show significant positive effect sizes with these impacts ranging between 1.7 and 2.9 percentage points for the four treatment groups.

Key Stage 4 results

Figure 4.3 focuses on the impact of the NSNR on pupils' Total Point Score for their best eight grades at Key Stage 4. Whilst positive results are seen in each year between 2004 and 2006 it is only in 2005 where these findings could be considered consistent across the treatment groups, with effect sizes in this post-policy year ranging from 3.5 to 5.5 points. With one grade equivalent to six points at Key Stage 4 these results suggest an improvement of between one half and a whole grade in a single subject.



Figure 4.4 focuses on the Key Stage 4 target of the percentage of pupils gaining five or more A*–C grades and, with the exception of 2003, shows consistent evidence of a positive policy impact in each post-policy year. As with the Key Stage 3 results, it can be seen that effect sizes tend to increase year-on-year after the 2002 baseline period, ranging from improvements in the percentage of pupils gaining five or more A*–C grades at Key Stage 4 of between 1.8–4.2 percentage points in 2004 to between 3.2–4.5 percentage points in 2006. Additionally, and as with previous findings, treatment groups one and two produce slightly larger effect sizes. These temporally consistent and relatively large findings represent an important policy message for the impact of the NSNR on this key Government target at Key Stage 4.



Finally, **Figure 4.5** presents findings for the number of passes at Key Stage 4 for grades A^*-C and shows that there is consistent evidence of a positive policy effect in both 2004 and 2005, though relatively small in magnitude. In both years all four treatment groups show significant positive effect sizes, while no significant impacts are apparent in either 2003 or 2006. In the two years where significant impacts are identified these range in size from between 0.1–0.3 additional passes at grades A^*-C in 2004 to between 0.2–0.4 additional passes in 2005.



The two outcome measures relating to grades A*–G at Key Stage 4 (percentage of pupils gaining five or more A*–G grades and the number of passes at A*–G grades) contain no impacts which were statistically significant. This is an interesting finding when placed in the context of the consistent evidence of positive impacts seen for other outcome measures for Key Stage 4.

Summary of Strategy-wide impacts

Collectively these findings highlight that the NSNR appears at a Strategy wide level to have had a statistically measurable positive impact on the majority of the nine outcome measures analysed, but to different degrees and of differing magnitudes by treatment group. However, there is consistency in the patterns of impacts seen both over time and between the four treatment groups, which adds further weight to the robustness of the trends seen in terms of key findings: positive impacts of the NSNR are apparent both at Key Stage 3 and Key Stage 4; are more likely to be significant in later years; and in many cases tend to increase in size over time from the 2002 baseline period. At Key Stage 3 there is most evidence of positive impacts on maths, with less evidence of positive impacts on both outcome measures relating to A^*-C grades – particularly gaining five or more A^*-C grades – though there was no evidence of any improvements to the equivalent two outcome measures relating to A^*-G grades.

The following analyses examine whether the evidence for positive effects outlined above are distributed evenly between different sub-groups of the four different treatment groups. The next three parts will focus in turn on evidence for differences by gender, ethnicity and region.

4.2 Impact analysis: effects by gender

Key Stage 3 results

Figure 4.6 presents results for Key Stage 3 Average Point Score and shows that there is, in general terms, evidence that both males and females have benefited relatively evenly according to this outcome measure. Overall there is not consistent evidence across all four treatment groups of positive impacts for either males or females in 2003, and consistent evidence for males only in 2004. Effect sizes for males in 2005 and 2006 are slightly higher than those for females, although both males and females appear to see statistically significant gains in both years and the differences between the two sexes in terms of effect sizes is relatively small at around 0.2 points on average for each outcome. Effect sizes range between around 0.5–1.2 points for females in 2005 and 2006, and between around 0.5–1.4 for males over the 2004–2006 period. These are again relatively small effect sizes when it is remembered that 10 points equate to an improvement of one level at Key Stage 3.


Figures 4.7 and 4.8 present findings separately for females and males for the percentage achieving Level 5 in English, maths and science respectively, and show that certain differences are apparent between the sexes.

Looking first at English, there is only mixed evidence of statistically significant impacts for females, whilst for males there is consistent evidence of positive policy effects in three of the four post-policy years. These effects tend to increase slightly over time and in 2006 range from between 3.5–5.4 percentage points.

For maths there is evidence that both males and females in NRF treatment groups have seen positive impacts, across all four years in the case of females and primarily in later years for males. There is again a pattern of increasing effect sizes over time, with impacts for females rising from between 1.2–2.3 percentage points in 2003 to between 3.3–4.4 percentage points in 2006. In the later years, where there is consistent evidence of positive impacts on males' performance in maths according to this measure, the effect sizes observed are similar to those for females, ranging in from 3.6 to 4.7 percentage points in year 2006.

Looking finally at science, **Figures 4.7 and 4.8** show that whilst there is only limited evidence of statistically significant gains for males in NRF treatment groups there is consistent evidence of positive impacts for females in 2004 and 2006, with effect sizes ranging from between 2.5–4.0 percentage points in 2006.



Figure 4.8: Impact of the NSNR on the percentage of males achieving Level 5 in English, maths and science at Key Stage 3



Key Stage 4 results

Figure 4.9 shows that there is a marked gender difference in terms of the impacts on the 'best of eight' Total Point Score at Key Stage 4. Whilst there is no consistent evidence of a positive impact on the performance of females on this outcome measure there is consistent evidence of positive impacts for males for all but the first post-policy time period. The trend of increasing effect sizes is again apparent with the results for males, particularly between 2004 and 2005 so that whilst effect sizes in 2004 range between 3.3–5.3 points, the range was between 4.8–8.8 points in 2006.

Given that an improvement of one grade in one subject at Key Stage 4 is equivalent to 6 points, with three of the four treatment groups giving results of around 5 percentage points this equates to an average improvement for males in NRF treatment groups of just under one GCSE grade.



Figure 4.10 presents the results for the percentage of pupils gaining five or more A*-C grades at Key Stage 4 by gender. It shows that whilst there is some evidence to suggest that there have been positive impacts for females as a result of the policy – particularly in 2005 – there is consistent evidence of positive impacts for males across the four post-policy years analysed. Indeed, whilst the Strategy wide analyses presented above found no evidence of positive impacts in 2003, Figure 4.10 shows that when focusing on males there is evidence of statistically significant positive impacts in three of the four treatment groups, although the effect sizes in 2003 are somewhat smaller than in later years. Between 2004 and 2006, Figure 4.10 shows that on average there is an improvement of between 4.5–5.0 percentage points in terms of the percentage of males in NRF treatment groups achieving five or more A*–C grades at Key Stage 4.



Figure 4.10: Impact of the NSNR on the percentage of pupils gaining five or more A*–C grades at Key

In terms of the number of passes between grades A*–C achieved, **Figure 4.11** shows that on average the number of GCSE passes at grades A*–C for males increased by between 0.3–0.4 between 2004–2006 relative to the control groups. There is, however, no consistent evidence of impacts for females.

As with the Strategy wide analyses discussed above, there is no evidence of statistically significant impacts on either of the Key Stage 4 indicators relating to grades A*–G for either males or females.



Summary of effects by gender

At Key Stage 3, both males and females show significant positive change on the average points score measure. In terms of the individual subject areas, both sexes achieve positive outcomes on the target of reaching Level 5 or above in maths. Females also show evidence of significant improvements in reaching Level 5 in science while males showed significant improvements in reaching Level 5 in English.

At Key Stage 4 there is considerable evidence of significant positive results for males on the 'best of eight' points score measure and on both outcomes relating to grades A^*-C at GCSE. Females on the other hand show only slight consistency on the outcome of 'percentage achieving five or more grades A^*-C' , but little if any evidence of improvements on the 'best of eight' points score measure and number of passes at grades A^*-C . The positive effects for males tend to increase with time since intervention baseline and appear to be of largest magnitude in treatment groups one and two. There were no significant results whatsoever, for either males or females, for the two outcome measures relating to five or more grades A^*-G .

4.3 Impact analysis: effects by ethnicity

Having set out the gender differences in performance, the findings move on now to ask whether there appear to be differences in outcomes for pupils of different ethnic groups.

Appendix C outlines the number of cases in each ethnic group within the treatment and control groups. As there are different numbers of pupils in each ethnic group those groups with smaller numbers generally have fewer significant results because the size of the standard errors tends to increase as the size of the group decreases.

Key Stage 3 results

Figure 4.12 shows the results for the impact on Key Stage 3 Average Point Score for each ethnic group and shows that impacts are not concentrated on any one particular ethnic group: indeed, positive effects are apparent across all eight ethnic groups analysed, albeit to differing extents. It can also be seen that there is again evidence of increasing effect sizes over time and whilst there is consistent evidence of positive impacts towards the end of this post-policy time period there is, with the exception of the White Other group, no consistent evidence of positive effects in 2003. Effect sizes for the different ethnic groups do differ, although they tend to fall within a similar range of improvements of between around 1.2–2.5 points in 2006. The effect sizes for the white British group are somewhat smaller than for most of the other ethnic groups, and there is little evidence of positive impacts for Indian pupils other than in 2006.



Figure 4.13 presents the data on the impact of the NSNR on the percentage of pupils achieving Level 5 in English at Key Stage 3 according to ethnic group and, with the exception of the final year of analysis for the white other groups, shows that positive impacts of the Strategy on this outcome measure have been concentrated on black pupils between 2004–2006, particularly black African and black Caribbean pupils. For these two ethnic groups the findings suggest relatively large positive impacts: black African pupils showed an improvement of between 9.4–11.9 percentage points in 2006 whilst black Caribbean pupils showed an improvement of between an improvement of between 9.4–13.0 percentage points in the same year.



Figure 4.14 presents the data on the impact of the NSNR on the percentage of pupils achieving Level 5 in maths at Key Stage 3 according to ethnic group. It suggests that all ethnic groups – with the exception of Indian – showed consistent evidence of positive impacts on this outcome measure. Black groups saw the largest effect sizes – between 7.7–10.1 percentage points for black African pupils in 2006 for instance – whilst the white British population showed the smallest effect sizes – between 2.9–3.7 percentage points in 2006 for instance.

Figure 4.15 presents equivalent data for the percentage of pupils achieving Level 5 in science at Key Stage 3 and these data again show differences between the eight ethnic groups analysed. In general there is little consistent evidence – with the exception of the black Caribbean population – of positive impacts in 2003, but Bangladeshi and Pakistani pupils show consistent evidence of impacts between 2004–2006, and black Caribbean, black other and white other groups show consistent evidence of impacts in the final two years analysed. Improvements tend to increase in size over time and in general effect sizes are in the order of 5.0–7.0 percentage points in 2006, although somewhat larger for the black other group at between 7.5–11.2 percentage points for the three treatment groups showing statistically significant impacts in this final year studied. It can also be seen that whilst there is consistent evidence of positive impacts for black African pupils in English and maths that there is much less evidence for this groups of positive impacts in science.





Figure 4.15: Impact of the NSNR on the percentage achieving Level 5 in science at Key Stage 3, by ethnicity



Key Stage 4 results

Figure 4.16 shows that, whilst on the 'best of eight' Total Point Score outcome measure there are statistically significant impacts across all of the ethnic groups, there are in fact relatively few instances where there could be said to be consistent evidence of positive impacts: these being for the black other group in 2005, the white British group in 2006 and the white other group in 2003. In these three instances three of the four treatment groups suggest positive impacts and in other cases the suggestion of positive impacts is supported by only one or two of the four treatment groups.



Figure 4.17, below, shows that there is more evidence of positive impacts for specific ethnic groups when looking at the percentage of pupils gaining five or more A*–C grades at Key Stage 4. It is apparent that positive impacts on this outcome measure are concentrated amongst black Caribbean, white British and white other pupils, with only limited evidence of positive impacts for Asian ethnic groups. For those groups displaying consistent evidence of positive impacts white British pupils have the smallest effect sizes – an improvement of around 4 percentage points in 2006 – whilst black Caribbean showed improvements of around 5 percentage points in each year between 2004–2006.

Figure 4.18 shows that when looking at the second outcome measure relating to A*–C grades at Key Stage 4 – the number of *passes* at grades A*–C– the same pattern across the ethnic groups is seen as is shown in **Figure 4.17**, with positive gains concentrated amongst the same three ethnic groups.





Moving on to look at the results for the percentage of pupils gaining five or more A*–G grades shows a strikingly different set of findings. **Figure 4.19** shows that when focusing on the broader target of achieving five or more A*–G grades at GCSE evidence of positive impacts is concentrated amongst Asian groups, with Bangladeshi pupils showing the most consistent evidence of gains across three of the treatment groups in 2003 and in all four treatment groups in 2004 and 2005. Although the effect sizes of between around 2.0–4.0 percentage points are relatively small, this trend is in contrast to the lack of statistically significant evidence displayed by these ethnic groups in relation to the five or more A*–C measure.

An additional finding of some concern is that there is some evidence to suggest that the black other and white British ethnic groups show some evidence that they have been negatively affected by the policy, particularly in the case of white British pupils who in 2004 and 2005 show relatively consistent evidence across three of the four treatment groups of negative impacts, albeit relatively small in magnitude. The findings for the black other ethnic group are both less consistent across the four treatment groups and are more varied in that positive as well as negative impacts are suggested.



Figure 4.20: Impact of the NSNR on the number of passes at A*–G grades at Key Stage 4, by ethnicity



Figure 4.20 focuses on the number of passes A*–G and shows that improvements according to this outcome measure are also concentrated amongst Asian pupils and that no negative impacts are found for any ethnic group on this measure.

Summary of effects by ethnicity

At Key Stage 3 there is evidence of consistency in significant positive effects for all ethnic groups except Indian. Effects of greater magnitude are most commonly observed in the later years analysed here. In terms of effect sizes by subject area, it is apparent that maths tends to register larger effects than either English or science. Black ethnic groups tend to exhibit the largest significant positive effects while the white British group tends to exhibit the smallest significant positive effects.

Less consistency in findings is apparent on the Key Stage 4 measures than at Key Stage 3. There is an interesting contrast between Asian and non-Asian ethnic groups on the Key Stage 4 indicators. On the two measures relating to grades A*–C the majority of non-Asian groups show varying levels of consistency in significant positive effects while the Asian groups show much less evidence of improvements. However, the opposite is apparent on the two indicators relating to grades A*–G, where Asian groups do show evidence of improvements whereas this is generally not the case for non-Asian ethnic groups.

4.4 Impact analysis: effects by region

This final part of the findings section of the report investigates the extent to which differences are evident between different regions of England.

Key Stage 3 results

Figure 4.21 presents data for each region on the impact of the NSNR on Average Point Score at Key Stage 3. It shows that there is some evidence of positive impacts across all of the nine regions but that only London shows consistently significant impacts across the post-policy time period under analysis, with the 2006 data for the North East and the West Midlands also consistently positive. Focusing on the results for London, **Figure 4.21** shows that the impacts seen in the capital have increased year-on-year over this post-policy period, ranging between 0.6–0.9 points in 2003 to between 1.8– 2.4 points in 2006. With one level at Key Stage 3 equivalent to 10 points, these effects represent average improvements of around a fifth to a quarter of one level in each of the three subjects for pupils in London.

Whilst consistent evidence of positive change is concentrated in London, **Appendix G** shows that there is also isolated evidence of impacts in other regions:

- In terms of the percentage achieving Level 5 in English at Key Stage 3, **Appendix G** shows that the 2005 data for the East suggests improvements of between 6.5–11.7 in three of the four treatment groups, whilst in 2005 three of the four treatment groups in the North East suggest negative impacts.
- In terms of the percentage gaining Level 5 in maths at Key Stage 3,
 Appendix G highlights several regions outside of the capital which show consistent evidence for positive impacts on this measure. While London shows consistent evidence of positive impacts in each of the four postpolicy years analysed, there are also individual years with consistent evidence of improvements in the North East, North West, Yorkshire and The Humber, the West Midlands and the South West.
- In terms of the percentage gaining Level 5 in science at Key Stage 3,
 Appendix G shows that there is only limited consistent evidence of impacts outside of London on this measure, with the 2006 data for the West Midlands suggesting improvements of between 3.3–4.1 percentage points. Additionally, however, there is also some evidence to suggest that in specific years negative impacts may have taken place on this measure in the South East and South West.



Looking across the other Key Stage 3 measures relating to the percentage of pupils achieving the target Level 5 in English, maths and science it is again in London where consistent evidence of policy impacts are concentrated. **Figure 4.22** therefore shows the results across these three outcome measures for London only. **Figure 4.22** highlights that London displays consistent evidence of improvements across all three subjects at Key Stage 3, with improvements in English somewhat larger than those for maths and science. It is only in maths where there is consistent evidence of positive impacts in 2003 and the pattern of increasing effect sizes over the lifetime of the policy is again apparent. In terms of the magnitude of these impacts each subject saw sizeable improvements in performance at Key Stage 3 according to these measures: in 2006 effect sizes for English range between 8.7–11.7 percentage points, for maths the 2006 impacts range between 4.7–7.6 percentage points, and for science effect sizes in the same year range between 5.0–6.7 percentage points.



Key Stage 4

Turning to look at the regional findings for the Key Stage 4 outcome measures, **Figure 4.23** highlights that in terms of improvements on the 'best of eight' point score measure it is the West Midlands that shows the only consistent evidence of progress. In this region both the 2004 and 2005 results are significant and positive in either three or four of the treatment groups, with effect sizes in 2005 ranging from 9.1–17.6 points.

Figure 4.24 focuses on the percentage gaining five or more A*–C grades at Key Stage 4 and highlights several regions in which consistent evidence for positive impacts can be seen. Instances of positive change on this measure are evident in the North East, Yorkshire and The Humber, East Midlands, West Midlands, the East and London, each of which shows consistent evidence from at least three of the four treatment groups with positive policy impacts, although no region shows evidence of improvements on more than two of the four post-policy years analysed. The size of impacts varies between regions, from a low of between 2.1–4.0 percentage points for London in 2004, to a high of between 6.3–7.6 percentage points in Yorkshire and The Humber in 2006. There are however instances of individual effect sizes larger than the top end of this range.





Figure 4.25 presents the findings for the measure relating to number of passes at grades A*–C in Key Stage 4 exams. Fewer instances are apparent of consistent evidence of positive impacts, meaning that in some cases where there is evidence of improvements in terms of percentage of pupils achieving five or more grades A*–C there is not also evidence of improvements in terms of the total number of passes at these grades for the same year in the same region.



Figure 4.26 sets out the findings in relation to the percentage of pupils gaining five or more A*–G passes at Key Stage 4 and can be seen to present limited but consistent evidence of negative impacts in specific years in the East, South East and, to a lesser extent, the South West regions, but no *consistent* evidence of any positive impacts on this measure in any of the nine regions. **Figure 4.27** supports this picture of limited evidence of positive change in any particular region, with only the 2005 figure for the West Midlands being consistent evidence of progress on this outcome measure.





Summary of regional effects

London is the only region to exhibit consistency in findings on the Key Stage 3 measures, with evidence of consistency over time, across treatment groups and on different indicators for this region. Treatment groups one and two tend to exhibit the largest effect sizes. There is evidence of significant positive effects on particular indicators in particular years and for particular treatment groups for other regions in England, but there is little consistency in these results outside of London.

Analyses of the Key Stage 4 outcome measures suggests that there is some evidence of significant positive effects in the West Midlands region and, to a lesser extent, in London. The effect sizes tend to be significant in the later years. There is however some evidence of significant negative results for the East, South East and South West regions which is in itself an interesting finding and perhaps warrants further investigation in future work.

5. Summary of main findings

The analyses undertaken and presented in this report are focused on evaluating whether the National Strategy for Neighbourhood Renewal is having a positive impact on educational attainment at Key Stages 3 and 4 in deprived local authority areas. This concluding section of the report presents the main headline findings at a Strategy wide level and also for the analyses by gender, ethnicity and region. Some consideration is also given to the choice of treatment groups. First, headline bullet points are presented, followed by a table summarising the key messages for each outcome indicator separately.

5.1 Strategy wide

- There is evidence of significant positive NSNR effects on Key Stage 3 outcomes. Key Stage 3 effect sizes tend to increase in magnitude with time since the Strategy implementation baseline year. The evidence of effects is greatest for the Average Points Score and the maths outcome measures, less so for English and science. Consistency is observed across treatment groups but with the greatest effects seen in treatment groups one and two.
- Less consistency is observed for Key Stage 4 results than for Key Stage 3. Evidence of significant positive effects on the 'best of eight' points score indicator and the two measures relating to GCSE grades A*–C, with effect sizes largest for treatment groups one and two. The effect sizes for the two measures relating to grades A*–C are relatively large. No significant results for the two measures relating to GCSE grades A*–G.

5.2 Gender

- There is evidence of significant positive effects on Key Stage 3 point score for both males and females, with effect sizes tending to increase over time. Males exhibit consistency in significant effects in English, whereas females do not. Conversely, females exhibit consistency in significant positive effects in science, whereas males do not. Females also show a high degree of consistency in maths over all time periods as do males from 2004 onwards, and with each gender showing increases in magnitude over time.
- There is considerable evidence of positive effects on males in terms of Key Stage 4 'best of eight' indicator and the two measures relating to GCSE grades A*–C. Treatment groups one and two exhibit higher magnitude effects and there is far less evidence of effects on females. Again, there are no significant results for measures relating to GCSE grades A*–G for either males or females.

5.3 Ethnicity

- There is evidence of significant positive effects at Key Stage 3 for all ethnic groups except Indian. The effect sizes tend to be of greater magnitude in later years and there is greater consistency of significant positive effects in maths than in English or science. White British tend to show smallest effects while black African, black Caribbean and black other ethnic groups tend to show the largest effects.
- Less consistency in results is observed on Key Stage 4 measures than Key Stage 3 measures. In particular there is a contrast between results on measures relating to GCSE grades A*–C and GCSE grades A*–G. Non-Asian ethnic groups tend to show more evidence of significant positive effects on the measures relating to grades A*–C whereas Asian groups exhibit little if any evidence of effects on these measures. The reverse is true in terms of measures relating to grades A*–G, where Asian ethnic groups show evidence of significant positive effects whereas the non-Asian groups exhibit little if any evidence of effects of effects whereas the non-Asian groups exhibit little if any evidence of evidence of positive effects. Where results are significant, the white British group tends to register effects of the smallest magnitude and indeed shows evidence of consistent negative effects for the measure of percentage achieving five grades A*–G. Across the board, effect sizes tend to be largest for treatment groups one and two.

5.4 Region

- London is the only region to exhibit consistency in significant positive results for Key Stage 3 measures, with the magnitude of effects tending to increase with time. There is consistency in effects observed in London for the Average Points Score measure and the three subject areas of English, maths and science, with English exhibiting the largest effects of the three subjects. Treatment groups one and two tend to show the largest significant positive effects across the Key Stage 3 indicators.
- The West Midlands region shows consistent evidence across treatment groups of significant positive effects for the 'best of eight' measure and the two outcome measures relating to GCSEs grades A*–C. A further five regions exhibit evidence of positive effects for the 'best of eight' measure. Treatment groups one and two tend to be more frequently significant and of higher magnitude. The two outcome measures relating to GCSE grades A*–G show very different results. There is evidence of significant negative effects in a number of regions with some limited consistency in negative effects in the East, South East and South West regions. There is some evidence of positive effects in the East Midlands but these results are not consistent over time.

5.5 Treatment group

• There is a great deal of variability across the nine indicators and multitude of sub-groups analysed for this report. There is evidence that treatment

groups one and two exhibit greater consistency in significant positive effects and that effects tend to be of greater magnitude in these two treatment groups. However, this is on the whole consistency across all four treatment groups in many cases where significant impacts are observed.

5.6 Summary of key findings across all outcome measures

Outcome measure	Overall	Gender	Ethnicity	Region
KS3: Points Score	Positive effects across all 4 TGs with effects small but increasing with time from baseline. Biggest for TGs 1&2. First post- policy year (2003) shows less consistent evidence.	Similar picture for males and females: consistency across TGs in significant positive effects increasing over time. TGs1&2 show biggest effects and most consistency.	Evidence in each of the 8 ethnic groups of significant positive effects in 2004–06, but Indian group not significant positive other than in 2006. White British shows smallest effects. General trend of year- on-year increases.	Strong consistent evidence of positive effects in London, with year-on-year increases in effect sizes. Less consistency for other regions, but NE, NW and WM show some evidence of positive effects.
KS3: % Level 5 English	TG1 shows increasing effect size year-on- year for 2003–06. Other TGs significant only in 2006, but smaller than TG1.	Consistent evidence across the TGs of significant positive effects for males from 2003–06, with slight increases over time. No consistency of effects in females, TG3&4 show significant negative effects in 2004.	Consistency of effects across TGs for black African, black Caribbean and black other.	Evidence of consistent positive effects for London in 2004–06, increasing year-on- year from 2004–06. Larger effects than maths or science. TGs1&2 tend to have largest effects.
KS3: % Level 5 Maths	All but one of the post policy time points are significant and positive. Effect sizes increase year- on-year for all TGs.	High degree of consistency in significant positive effects for females with increasing year-on-year. Not significant for males in 2003, but significant positive effects increasing year-on-year 2004–06 and consistency between TGs.	Evidence of consistency across TGs for all groups except Indian. Indications of increases year- on-year, with less evidence of consistent positive impacts in 2003 than 2004–06. Black African, Caribbean and other show largest effects while white British show smallest effects. More consistency for maths than English or science.	Evidence of consistent positive effects for London increasing year-on-year from 2003–06. TGs1&2 tend to have largest effects.

(note: 'TG' refers to Treatment Group)

Outcome measure	Overall	Gender	Ethnicity	Region
KS3: % Level 5 Science	TG2 effect positive and significant and increase year-on-year. TGs1&3 significant in 2005 & 2006 and increasing, but TG4 only significant in 2006 but negligible.	Evidence of some consistency for females 2004–06 with increasing effect size year-on-year. Less consistency for males, but by 2006 effects are relatively consistent across TGs. Significant negative for TG4 in 2004.	Consistent significant positive effects for most groups, but not Indian, black African or white British. Some evidence of year-on- year increases. TG2 tends to show largest effects.	Evidence of consistency on effects for London in each year, increasing year-on-year from 2004–06. Slightly less consistency and smaller effects than maths and much lower than English. TGs1&2 tend to have largest effects.
KS3: summary of results	Evidence of significant positive and increasing effects over time from baseline. Effects biggest and most consistent in TGs1&2. Most evidence of effects in maths, with more limited evidence (primarily driven by TG1&2) of effects in English and science.	Both males and females show significant positive effects, though in different subjects. Females show consistent evidence of positive effects in each year for maths, with effect sizes increasing year on year. Evidence of impacts in science for females in 2004 & 2006. Males show consistent evidence of positive effects in English in most years, and in maths in 2005 & 2006.	Evidence of consistency in significant positive effects for all groups except Indian. Trend for larger effects in later years, with less evidence of consistent positive impacts in 2003 than 2004–06. Larger effects on maths than English or science. White British tend to show smallest significant effects and black groups tend to show largest effect sizes.	London is only region with clear consistency in results, showing significant positive effects across TGs, across time and for all indicators, particularly high for English. TGs1&2 tend to have largest effects. Some evidence of significant positive effects for particular indicators in particular years for other regions.
KS4: 'best of eight' points	Only 2005 where consistency across TGs, positive effects for all TGs in 2005. TG2 significant positive 2004–06, with relatively large effect sizes which increase year on year.	Stark gender difference: consistency in evidence of relatively large significant positive effects for males 2004–06, increasing year- on-year, with TG2 showing largest sizes. No consistent evidence of significant positive effects for females.	Less evidence of consistent effects than for KS3 Total Point Score. Some evidence of consistency for white other ethnic group. TGs1&2 results are more often significant than TGs 3&4. No indication of year-on- year increases.	Evidence of consistency in WM region for 2004 and 2005 for all or three TGs. TG2 significant positive in all four time points. London shows consistency within TG2 in three time points. Some significant negative in SE and SW but no consistency.

continued

Outcome measure	Overall	Gender	Ethnicity	Region
KS4: % 5 A*–C	Consistent evidence of significant positive effects for all TGs 2004–06. Sizes slightly higher for TGs1&2 than for TGs3&4. No evidence of significant positive impacts in 2003.	Some degree of consistency in significant positive effects for females 2004–06, but much more consistency and relatively large effects for males 2003–06. TGs 1&2 show largest effects and general trend of year-on-year increases.	More consistency than 'best of eight' measure. Black Caribbean, white British and white other all show consistency across TGs and over time. Smaller effect sizes for white British. Again, TG1&2 tend to have larger effects.	Much more evidence of effects and consistency than in 'best of eight' measure. No consistency in NW, SE or SW, and consistent evidence in single year only for East Midlands. Other regions show significant positive effects for some or multiple years on more than one TG. TGs1&2 appear to show the largest effects and be more frequently significant.
KS4: passes A*–C	All TGs small significant positive in 2004 & 2005 but none in 2003 & 2006. Relatively small effect sizes.	No consistent evidence of effects on females but consistent significant positive effects for males 2004–06, with slightly lower effect size in 2006.	Much less consistency than measure above. Indication of consistency for black Caribbean and white British, with white British showing smaller effects.	Less consistency than above % 5 A*–C measure. WM, Y&H and NE show consistent evidence of positive effects in two or three years.
KS4: % 5 A*–G	No significant results	No significant results	Stark contrast to the A*–C indicators: most consistency in the Asian groups and little consistency in black groups. Significant positive effects particularly for Bangladeshi, and to lesser extent Indian. Evidence of consistent significant negative effects for white British and TG4 for black other.	Only one case of significant positive effect: 2005 in WM region. Consistent evidence of significant negative effects in 2005 and 2006 in East region and 2003 in SE. Also isolated, inconsistent significant negative effects in NW, YH, SE and SW.
KS4: passes A*–G	No significant results	No significant results	Some consistency in significant positive for Bangladeshi only. Less so for Indian and Pakistani. No effects significant negative.	Little if any consistency. Some cases of significant negative in SW, but TGs not consistent. Consistency of significant positive in 2004 in WM with all 4 TGs significant.

continued

Outcome measure	Overall	Gender	Ethnicity	Region
KS4: summary of results	More varied results than with KS3 measures. Most consistent for % 5 A*–C. More evidence of consistency for TG2 than others. No evidence of significant effects on A*–G measures.	Notable gender differences across all three indicators where significant results are generated: males tend to benefit more from NRF than females at KS4. General trend of year- on-year increases. TGs1&2 possibly larger effect sizes. Again no significant findings at all for A*–G indicators.	Less consistency than for KS3 measures. Contrast between A*–C and A*–G measures, with Asian groups showing little consistency on former but more on latter, while other groups show the reverse. Where sig, white British groups tend to have smaller effect sizes and indeed show consistent significant negative for % 5 A*–G.	Evidence of some consistency in significant positive for WM region and a little for London but mainly lack of consistency. Suggestions that SE and SW are doing worse than other regions. Few significant positive effects but notable significant negative effects.

References

Cowen, G., Wilton, M., Russell, G. and Stowe, P. (2008) *Impacts and Outcomes of the Neighbourhood Renewal Fund*. London: CLG.

Angrist, J. and Lavy, V. (2001) Does teacher training affect pupil learning? Evidence from matched comparisons in Jerusalem public schools, *Journal of Labour Economics*, 19(2), pp.343–369.

Blundell, R., Dias, M., Meghir, C. and van Reenen, J. (2002) *Evaluating the employment impact of a mandatory job search assistance program*. London: Institute for Fiscal Studies, Working Paper No.01/20.

Bryson, A., Dorsett, R. and Purdon, S. (2002) *The use of propensity score matching in the evaluation of active labour market policies*. London: DWP.

Chen, S. and Ravallion, M. (2003) *Hidden Impact? Ex-post evaluation of an antipoverty program*. Washington: World Bank Development Research Group.

Heckman, J., Ichimura, H. and Todd, P. (1998) Matching as an econometric evaluation estimator, *The review of economic studies*, 65(2), pp.261–294.

Kendall, L. et al. (2005) *Excellence in Cities: The National Evaluation of a policy to raise standards in urban schools 2000–2003*. London: DfES.

Machin, S. and McNally, S. (2006) *The Literacy Hour*. London: Centre for the Economics of Education.

Machin, S., McNally, S. and Meghir, C. (2004) Improving pupil performance in English secondary schools, *Journal of the European Economic Association*, 2(2–3), pp.396–405.

Machin, S., McNally, S. and Meghir, C. (2007) *Resources and standards in urban schools*. London: Centre for the Economics of Education.

Rosenbaum, P. and Rubin, D. (1983) The central role of the propensity score in observational studies for causal effects, *Biometrika*, 70(1), pp.41–55.

Rosenbaum, P. and Rubin, D. (1985) Constructing a control group using multivariate matched sampling methods that incorporate the propensity score, *The American Statistician*, 39(1), pp.33–38.

Rubin, D. and Thomas, N. (1996) Matching using estimated propensity scores: relating theory to practice, *Biometrics*, 52(1), pp.249–264.

Sianesi, B. (2001) An evaluation of the active labour market programmes in Sweden. Uppsala: Institure for Labour Market Policy Evaluation, Working Paper 2001:5 Stewart, M. (2004) The employment effects of the national minimum wage, *The Economic Journal*, 114, March, C110–C116.

Wilkinson, D. (2003) *New Deal for Young People: Evaluation of unemployment flows*. London: Policy Studies Institute.

Appendix A: Control variables used in the education analyses

Number of pupils in each treatment group

Pupil characteristics	School characteristics	Area characteristics		
– Age ¹	– Average Key Stage 2 score for	- % children in income deprived		
– Gender ¹	pupil's primary school	nousenoias		
– Ethnicity ¹	 % pupils eligible for free school meals¹ 	 % adults with no or low qualifications⁴ 		
 Prior attainment¹ 	 % non-white pupils¹ 	 % people living in rented 		
 Special educational 	 % pupils with special educational 	accommodation ⁴		
needs status ¹	needs ¹	 % adults in managerial occupations⁴ 		
 Free school meals entitlement¹ 	- Pupil to teacher ratio ²	- % adults in routine or semi-routine		
chuicment	– School size ²	occupations ⁴		
	- Type of school ³	 % single parents⁴ 		
	- Involvement in Excellence in Cities ²	 % overcrowded housing⁴ 		
		– region		
	- Dissimilarity index	- Index of Deprivation Affecting		
	– rural/urban ³	Children squared		
Interaction terms:				
– White British*Index of De	eprivation Affecting Children*Free School I	Meals		

- Key Stage 2 score*Free School Meals

Source: ¹ PLASC/NPD; ² LEASIS; ³ Edubase; ⁴ 2001 Census; ⁵ English Indices of Deprivation 2004.

* The dissimilarity index is a measure of segregation at the Local Education Authority (LEA) level used to show how pupils eligible for free school meals are distributed between the schools in an LEA. It takes the values from 0 (each school has the same share of pupils eligible for free school meals) to 1 (all pupils eligible for free school meals are concentrated in particular schools).

Appendix B: Overlap between the four treatment groups, 2002

	Group One	Group Two	Group Three	Group Four
Group One	40,178			
Group Two	28,118	40,869		
Group Three	28,236	27,172	53,276	
Group Four	28,193	28,001	40,889	52,754

Appendix C: Sample sizes of treatment and control groups

Sample size of treatment and control groups for Key Stage 3, Strategy wide analyses

	Year	Group 1	Group 2	Group 3	Group 4
Treatment	2002	40362	41742	54741	54580
Treatment	2003	38656	39649	52622	52817
Treatment	2004	39135	39703	53241	53335
Treatment	2005	39296	40012	53787	53380
Treatment	2006	38241	39184	53084	52848
Control	2002	48366	48793	64360	61697
Control	2003	47397	47940	63437	60789
Control	2004	47787	48368	64282	61586
Control	2005	48244	48672	64643	61622
Control	2006	46991	47579	62983	59830

Sample size of treatment and control groups for Key Stage 4, Strategy wide analysis

	Year	Group 1	Group 2	Group 3	Group 4
Treatment	2002	32669	33491	44275	44321
Treatment	2003	35335	36518	48004	47937
Treatment	2004	36395	37610	49905	49967
Treatment	2005	35005	35853	48363	48407
Treatment	2006	35658	36632	49573	49561
Control	2002	39414	39949	53721	51165
Control	2003	42652	43347	57895	55392
Control	2004	44861	45461	61211	58344
Control	2005	43932	44512	60046	57288
Control	2006	44070	44638	60640	57902

	KS3	Year	Group 1	Group 2	Group 3	Group 4
Treatment	Female	2002	18652	18645	26376	26416
Treatment	Male	2002	21710	23097	28365	28164
Treatment	Female	2003	18161	17983	25300	25729
Treatment	Male	2003	20495	21666	27322	27088
Treatment	Female	2004	18182	17820	25608	25962
Treatment	Male	2004	20953	21883	27633	27373
Treatment	Female	2005	18410	18142	26007	26049
Treatment	Male	2005	20886	21870	27780	27331
Treatment	Female	2006	17647	17490	25495	25611
Treatment	Male	2006	20594	21694	27589	27237
Control	Female	2002	23623	24103	31743	30201
Control	Male	2002	24743	24690	32617	31496
Control	Female	2003	23020	23573	31055	29565
Control	Male	2003	24377	24367	32382	31224
Control	Female	2004	23221	23755	31485	29901
Control	Male	2004	24566	24613	32797	31685
Control	Female	2005	23570	24054	31907	30195
Control	Male	2005	24674	24618	32736	31427
Control	Female	2006	22887	23474	30874	29193
Control	Male	2006	24104	24105	32109	30637

Sample size of treatment and control groups for Key Stage 3, analyses by gender

Sample size of treatment and control groups for Key Stage 4, analyses by gender

		Year	Group 1	Group 2	Group 3	Group 4
Treatment	Female	2002	15582	15265	21728	21869
Treatment	Male	2002	17087	18226	22547	22452
Treatment	Female	2003	16660	16571	23348	23505
Treatment	Male	2003	18675	19947	24656	24432
Treatment	Female	2004	17021	16990	24313	24415
Treatment	Male	2004	19374	20620	25592	25552
Treatment	Female	2005	16553	16436	23519	23788
Treatment	Male	2005	18452	19417	24844	24619
Treatment	Female	2006	16771	16647	24153	24423
Treatment	Male	2006	18887	19985	25420	25138
Control	Female	2002	19435	19932	26704	25281
Control	Male	2002	19979	20017	27017	25884
Control	Female	2003	20636	21171	28260	26899
Control	Male	2003	22016	22176	29635	28493
Control	Female	2004	21949	22521	30248	28605
Control	Male	2004	22912	22940	30963	29739
Control	Female	2005	21480	22047	29591	28048
Control	Male	2005	22452	22465	30455	29240
Control	Female	2006	21508	22016	29781	28197
Control	Male	2006	22562	22622	30859	29705

Ethnic Group	Year	Treatment Group			Control Group				
		Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4
Bangladeshi	2002	1042	873	1831	1291	277	280	299	292
Black African		902	890	1425	1251	406	409	462	457
Black Caribbean		1354	1435	1657	1541	580	593	675	669
Black Other		726	765	1002	842	423	440	466	470
Indian		991	940	2038	1485	1691	1679	1936	1950
Pakistani		2696	2171	4143	3435	1407	1376	1513	1521
White British		29377	31167	38555	40513	39959	40299	53954	51614
White Other		1157	1359	1403	1581	1516	1558	1995	1784
Bangladeshi	2003	1080	861	1796	1251	284	290	314	304
Black African		910	1004	1485	1341	432	440	486	494
Black Caribbean		1234	1267	1761	1590	606	625	696	697
Black Other		378	396	470	419	217	224	259	263
Indian		890	809	1752	1283	1511	1452	1678	1713
Pakistani		2430	2017	3887	3289	1387	1369	1501	1497
White British		28303	29352	36270	38958	37975	38531	52233	49926
White Other		868	988	985	1012	759	785	970	911
Bangladeshi	2004	1182	917	1905	1375	313	309	335	330
Black African		1056	1085	1706	1496	446	452	520	513
Black Caribbean		1351	1314	1839	1617	566	569	640	655
Black Other		387	437	443	351	217	222	242	249
Indian		831	840	1823	1318	1485	1411	1682	1719
Pakistani		2452	2095	4086	3396	1401	1381	1531	1514
White British		28228	28997	36282	39069	39376	39987	53966	51708
White Other		924	1007	1106	1094	607	622	855	794
Bangladeshi	2005	1153	913	1847	1315	323	326	361	356
Black African		833	813	1219	1056	417	421	486	490
Black Caribbean		1255	1226	1715	1463	601	609	694	706
Black Other		663	771	929	923	347	349	387	386
Indian		798	720	1730	1217	1455	1382	1659	1697
Pakistani		1345	1052	2130	1594	913	899	1036	1028
White British		27741	28880	36168	38563	38859	39109	52331	49817
White Other		1347	1418	1806	1688	1056	1289	2491	2189
Bangladeshi	2006	1106	988	1840	1344	323	321	363	355
Black African		1210	1269	1878	1615	660	660	744	751
Black Caribbean		1291	1343	1723	1452	495	500	572	578
Black Other		331	383	469	384	196	201	218	218
Indian		765	717	1680	1155	1342	1296	1567	1568
Pakistani		2614	2182	4429	3585	1476	1450	1595	1584
White British		27048	28480	35901	38446	38615	39207	52931	50085
White Other		980	1026	1341	1345	761	772	1054	945

Sample size of treatment and control groups for Key Stage 3, analyses by ethnicity

Ethnic Group	Year	Treatment Group Control Group							
		Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4
Bangladeshi	2002	846	729	1519	1055	209	208	252	243
Black African		552	542	896	800	274	281	313	309
Black Caribbean		1063	1147	1456	1260	492	507	598	578
Black Other		518	545	728	610	263	268	322	315
Indian		1085	892	1968	1380	1578	1556	1832	1834
Pakistani		2282	1855	3395	2921	1255	1227	1358	1353
White British		24053	25315	31410	33231	32227	32724	44969	42756
White Other		882	1141	1061	1212	1234	1263	1629	1457
Bangladeshi	2003	1050	832	1740	1226	243	244	287	284
Black African		713	752	1141	1015	290	301	350	344
Black Caribbean		1169	1253	1602	1419	488	505	594	581
Black Other		316	307	354	324	195	201	239	239
Indian		940	884	1965	1408	1641	1615	1918	1905
Pakistani		2315	1940	3534	3031	1249	1224	1362	1360
White British		25916	27140	33082	35415	34076	34758	47326	45159
White Other		693	828	848	900	624	640	815	752
Bangladeshi	2004	1021	822	1723	1220	245	248	285	278
Black African		847	829	1331	1163	373	379	428	421
Black Caribbean		1221	1304	1499	1387	503	516	597	592
Black Other		600	637	889	747	381	399	426	427
Indian		947	899	1970	1439	1618	1609	1894	1909
Pakistani		2504	2017	3914	3228	1351	1323	1446	1451
White British		26382	28006	34910	36931	37061	37569	51383	48822
White Other		1002	1217	1261	1441	1376	1412	1855	1660
Bangladeshi	2005	1032	822	1684	1188	242	248	297	285
Black African		565	552	877	812	281	295	328	337
Black Caribbean		1164	1209	1681	1499	562	580	651	652
Black Other		603	681	877	790	311	323	374	369
Indian		862	758	1718	1241	1483	1416	1689	1725
Pakistani		1139	843	1820	1369	866	867	977	965
White British		25215	26373	32929	35302	35282	35626	48430	46236
White Other		1110	1184	1523	1435	987	1220	2385	2085
Bangladeshi	2006	1130	900	1847	1340	266	261	313	309
Black African		1021	1015	1598	1372	431	435	508	503
Black Caribbean		1268	1247	1708	1502	532	535	600	610
Black Other		315	371	400	319	187	192	210	218
Indian		809	808	1784	1277	1451	1369	1676	1717
Pakistani		2333	2000	3897	3243	1349	1336	1475	1457
White British		25525	26852	33672	36293	36333	36923	51006	48630
White Other		914	926	1223	1160	677	699	1010	905

Sample size of treatment and control groups for Key Stage 4, analyses by ethnicity

Region	Year	Treatment Group		Control Group					
		Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4
North East	2002	4234	4232	6259	5780	979	979	1701	1461
North West		8643	9375	12200	12096	6032	5931	8151	7276
Yorks & Humber		7693	7927	9231	9844	2725	2601	3288	3095
East Midlands		2198	2209	3322	3297	3429	4092	4675	4446
West Midlands		5969	6330	6985	7201	4165	3930	5206	5774
East		788	890	1149	1084	6470	6458	8012	8202
London		7817	7934	11265	11221	9648	9604	11169	11007
South East		1277	1156	2053	1930	8431	8489	10319	9544
South West		1743	1689	2277	2127	6487	6709	11839	10892
North East	2003	4083	4302	6128	5687	874	873	1585	1348
North West		8078	8742	11760	11527	5509	5563	7854	6916
Yorks & Humber		7601	7565	8701	9495	2551	2450	3135	2948
East Midlands		2145	2038	3205	3277	3517	4065	4625	4480
West Midlands		5802	6165	6758	7205	4203	3966	5195	5800
East		761	813	1081	1030	6385	6427	8014	8201
London		7519	7533	10932	10897	9435	9379	10905	10760
South East		1126	1054	1926	1805	8507	8560	10275	9502
South West		1541	1437	2131	1894	6416	6657	11849	10834
North East	2004	3995	4247	6048	5614	967	967	1696	1450
North West		8143	8642	12008	11746	5875	5884	8120	7243
Yorks & Humber		7818	7681	8984	9654	2606	2506	3220	3033
East Midlands		2069	2066	3199	3325	3512	4050	4657	4510
West Midlands		5907	6337	6955	7336	4285	4064	5311	5944
East		780	814	1131	1003	6332	6454	8156	8217
London		7777	7484	10924	10994	9163	9046	10625	10531
South East		1090	1044	1884	1782	8507	8578	10356	9549
South West		1556	1388	2108	1881	6540	6819	12141	11109
North East	2005	4108	4284	6202	5741	1078	1078	1816	1579
North West		8235	9034	12358	11911	5754	5719	8032	7131
Yorks & Humber		7935	7969	9183	9833	2790	2679	3409	3214
East Midlands		2095	2034	3293	3389	3629	4144	4752	4667
West Midlands		6028	6334	7068	7334	4329	4116	5355	5821
East		805	826	1186	1057	6236	6371	8045	8089
London		7496	7230	10537	10576	9464	9329	10927	10813
South East		1106	957	1849	1689	8544	8598	10400	9355
South West		1488	1344	2111	1850	6420	6638	11907	10953
North East	2006	3821	4043	5978	5578	1033	1034	1774	1536
North West		7776	8423	11658	11382	5828	5833	8119	7213
Yorks & Humber		7592	7877	9343	10008	2571	2502	3239	3072
East Midlands		1978	1909	3115	3172	3523	4006	4657	4414
West Midlands		6055	6428	7107	7368	4151	3956	5154	5625
East		779	799	1214	1042	6170	6294	8041	8110
London		7702	7405	10698	10772	9106	8997	10529	10427
South East		1076	974	1887	1742	8292	8376	10332	9255
South West		1462	1326	2084	1784	6317	6581	11138	10178

Sample size of treatment and control groups for Key Stage 3, analyses by region

Region	Year	Treatment Group			Control Group				
		Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4
North East	2002	3621	3667	5348	5053	756	756	1427	1205
North West		7425	8023	10314	10209	5109	5026	6989	6209
Yorks & Humber		6292	6241	7321	7921	2042	1967	2599	2375
East Midlands		1898	1732	2715	2647	2566	3048	3983	3729
West Midlands		4767	5046	5740	5963	3492	3295	4384	4930
East		608	669	913	813	5213	5242	6531	6677
London		5637	5779	8589	8459	7847	7932	9232	8957
South East		1003	887	1509	1465	7083	7131	8631	7978
South West		1418	1447	1826	1791	5306	5552	9945	9105
North East	2003	3931	4253	5805	5465	864	864	1585	1352
North West		7433	8103	10752	10571	5315	5326	7292	6507
Yorks & Humber		7219	7019	8118	8810	2409	2317	2983	2797
East Midlands		1860	1783	2850	2814	2759	3303	4264	4075
West Midlands		5175	5519	6086	6384	3597	3353	4495	5079
East		683	786	997	967	5768	5804	7188	7353
London		6381	6541	9548	9366	8255	8379	9771	9486
South East		1116	1040	1788	1673	7867	7940	9511	8795
South West		1537	1474	2060	1887	5818	6061	10806	9948
North East	2004	3906	4140	5967	5607	951	951	1644	1416
North West		7793	8426	11287	11121	5622	5641	7794	6943
Yorks & Humber		7205	7274	8326	9119	2608	2493	3175	2978
East Midlands		1903	1890	2937	2981	3115	3672	4820	4509
West Midlands		5295	5617	6282	6485	3906	3689	4924	5477
East		748	828	1076	1011	5855	5966	7477	7527
London		6806	6956	10017	9889	8750	8722	10197	10024
South East		1171	1039	1923	1807	7792	7857	9612	8837
South West		1568	1440	2090	1947	6262	6470	11568	10633
North East	2005	3721	3877	5634	5248	855	855	1524	1301
North West		7568	8181	11219	10809	5095	5151	7380	6450
Yorks & Humber		6926	6970	7933	8758	2407	2319	2999	2814
East Midlands		1930	1836	2927	2999	3057	3519	4601	4387
West Midlands		5138	5508	6247	6621	3944	3724	4907	5501
East		735	774	1034	968	5814	5972	7511	7569
London		6587	6460	9662	9612	8691	8631	10093	9945
South East		1040	972	1802	1681	7889	7936	9586	8851
South West		1360	1275	1905	1711	6180	6405	11445	10470
North East	2006	3801	4016	5723	5364	916	916	1622	1386
North West		7495	8158	11404	11125	5315	5324	7497	6637
Yorks & Humber		7046	7257	8379	9125	2487	2395	3106	2928
East Midlands		1902	1856	2941	3087	2909	3406	4523	4269
West Midlands		5424	5827	6514	6806	3948	3739	4927	5539
East		744	780	1076	958	5958	6077	7716	7765
London		6885	6584	9780	9788	8447	8348	9844	9756
South East		966	927	1751	1615	7916	8003	9798	9001
South West		1395	1227	2005	1693	6174	6430	11607	10621

Sample size of treatment and control groups for Key Stage 4, analyses by region

Appendix D: Characteristics of treatment and control groups, 2002

2002: Key Stage 3	Group One		Group	Two	Group Three		Group Four	
	Control	Treat.	Control	Treat.	Control	Treat.	Control	Treat.
Pupil level								
Male	50.8%	53.8%	50.1%	55.3%	50.3%	51.8%	50.3%	51.6%
KS3 age	13.45	13.45	13.45	13.46	13.45	13.45	13.45	13.45
SEN	26.2%	32.6%	25.9%	30.9%	24.4%	29.8%	24.6%	29.6%
FSM	20.8%	39.3%	20.4%	37.8%	18.5%	37.4%	19.1%	36.3%
White British	82.0%	72.8%	82.6%	74.7%	83.5%	70.4%	83.6%	74.2%
White Other	3.4%	2.9%	3.2%	3.3%	3.1%	2.6%	2.8%	2.9%
Black African	0.8%	2.2%	0.8%	2.1%	0.7%	2.6%	0.7%	2.3%
Black Caribbean	1.3%	3.4%	1.2%	3.4%	1.1%	3.0%	1.1%	2.8%
Black Other	0.9%	1.8%	0.9%	1.8%	0.7%	1.8%	0.7%	1.5%
Indian	3.8%	2.5%	3.4%	2.3%	3.1%	3.7%	3.2%	2.7%
Pakistani	2.9%	6.7%	2.8%	5.2%	2.4%	7.6%	2.4%	6.3%
Bangladeshi	0.6%	2.6%	0.6%	2.1%	0.5%	3.3%	0.5%	2.4%
Chinese	0.2%	0.3%	0.2%	0.3%	0.2%	0.3%	0.2%	0.3%
KS2 Av Point Score	41.76	39.56	41.87	39.94	42.34	40.22	42.21	40.25
KS3 Av point score	52.06	46.80	52.30	47.61	53.08	48.83	52.91	48.68
% Level 5 in English	61.5%	44.9%	62.4%	48.2%	64.9%	53.1%	64.2%	52.2%
% Level 5 in Maths	62.6%	47.3%	63.2%	49.3%	65.4%	52.5%	64.8%	52.3%
% Level 5 in Science	61.9%	45.5%	62.5%	47.6%	64.8%	50.7%	64.3%	50.6%
School level								
School KS2 Average Point Score	42.52	40.81	42.59	40.98	42.90	40.97	42.79	40.97
School FSM	22.7%	38.4%	22.3%	37.3%	20.1%	36.8%	20.9%	35.8%
School non-white	17.3%	27.5%	16.5%	25.9%	15.0%	29.9%	14.9%	25.7%
School SEN	25.3%	29.5%	24.8%	28.7%	23.4%	28.2%	23.6%	27.8%
Pupil-teacher ratio	16.90	16.12	16.95	16.12	16.90	16.19	16.88	16.22
Number pupils	981.64	906.52	1008.79	922.29	1080.22	955.60	1033.36	947.56
Excellence in Cities	53.2%	89.6%	54.5%	88.6%	43.3%	84.5%	47.4%	85.7%
Selective	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Urban	95.1%	98.6%	95.1%	98.1%	92.6%	97.5%	91.8%	97.1%
Dissimilarity Index	0.28	0.29	0.28	0.29	0.27	0.28	0.28	0.28
							C	ontinued

2002: Key Stage 3	Group	One	Group	Two	Group	Three	Group	Four
	Control	Treat.	Control	Treat.	Control	Treat.	Control	Treat.
Area level								
Low or no qualifications	52.5%	59.2%	52.4%	58.9%	51.5%	58.9%	52.0%	59.7%
Manual occupations	29.6%	19.7%	29.8%	20.2%	30.8%	19.6%	30.3%	19.6%
Routine occupations	27.2%	32.1%	27.1%	31.9%	26.3%	32.0%	26.6%	32.3%
Social renters	32.5%	47.3%	32.2%	46.6%	30.4%	47.0%	31.1%	46.5%
Lone parents	13.5%	18.0%	13.4%	17.9%	12.7%	17.6%	12.9%	17.7%
Overcrowding	7.8%	11.4%	7.7%	11.0%	7.2%	12.0%	7.3%	11.4%
North East	2.2%	10.5%	2.1%	10.1%	2.4%	11.4%	2.5%	10.6%
North West	12.8%	21.4%	12.7%	22.5%	13.3%	22.3%	12.7%	22.2%
Yorks & Hum	5.4%	19.1%	5.7%	19.0%	4.7%	16.9%	5.0%	18.0%
West Midlands	6.3%	5.4%	7.1%	5.3%	5.9%	6.1%	6.2%	6.0%
East Midlands	9.6%	14.8%	9.0%	15.2%	9.2%	12.8%	9.5%	13.2%
East	13.5%	2.0%	13.4%	2.1%	13.4%	2.1%	14.1%	2.0%
London	20.6%	19.4%	19.0%	19.0%	16.8%	20.6%	17.7%	20.6%
South East	17.6%	3.2%	18.2%	2.8%	16.6%	3.8%	16.0%	3.5%
South West	12.0%	4.3%	12.7%	4.0%	17.7%	4.2%	16.4%	3.9%
IDSC-sq	0.09	0.20	0.09	0.20	0.08	0.21	0.08	0.20
Interaction terms								
IDAC*FSM	7.2%	18.6%	7.1%	17.9%	6.2%	18.1%	6.5%	17.3%
White British*FSM	16.2%	26.2%	15.9%	25.9%	14.6%	23.9%	15.2%	24.7%

2002: Key Stage 4	Group One		Group Two		Group Three		Group Four	
	Control	Treat.	Control	Treat.	Control	Treat.	Control	Treat.
Pupil level								
Male	50.3%	52.3%	49.5%	54.4%	50.1%	50.9%	50.0%	50.7%
KS4 Age	15.45	15.45	15.45	15.45	15.45	15.45	15.45	15.45
SEN	21.1%	24.1%	20.6%	24.0%	19.6%	23.0%	19.6%	22.6%
FSM	16.4%	32.2%	16.0%	31.8%	14.3%	31.8%	15.0%	30.3%
White British	80.7%	73.6%	81.5%	75.6%	83.2%	70.9%	83.3%	75.0%
White Other	3.6%	2.7%	3.2%	3.4%	3.1%	2.4%	2.9%	2.7%
Black African	0.7%	1.7%	0.7%	1.6%	0.6%	2.0%	0.6%	1.8%
Black Caribbean	1.3%	3.3%	1.3%	3.4%	1.1%	3.3%	1.1%	2.8%
Black Other	0.7%	1.6%	0.7%	1.6%	0.6%	1.6%	0.6%	1.4%
Indian	4.4%	3.3%	4.0%	2.7%	3.5%	4.4%	3.7%	3.1%
Pakistani	3.2%	7.0%	3.1%	5.5%	2.6%	7.7%	2.6%	6.6%
Bangladeshi	0.5%	2.6%	0.5%	2.2%	0.5%	3.4%	0.5%	2.4%
Chinese	0.3%	0.3%	0.3%	0.4%	0.3%	0.4%	0.3%	0.3%
KS2 Av Point Score	41.20	39.74	41.29	39.75	41.70	39.99	41.59	40.09
KS3 Av Point Score	52.21	48.76	52.36	48.66	53.10	49.53	52.95	49.50
KS4 Total Point Score	267.38	236.53	269.00	229.93	274.82	247.78	273.48	245.22
KS4 5 or more A*–C	41.5%	29.0%	42.1%	27.4%	44.7%	33.9%	44.4%	32.7%
KS4 5 or more A*–G	92.5%	87.9%	92.7%	86.4%	93.1%	89.5%	93.0%	89.2%
KS4 Number passes A*–C	405.4%	299.6%	411.2%	282.5%	436.1%	340.9%	438.5%	329.7%
KS4 Number passes A*–G	855.4%	799.1%	858.9%	779.2%	870.3%	824.7%	873.2%	819.3%
								continuea

2002: Key Stage 4	Group	One	Group	Two	Group	Three	Group	Four
	Control	Treat.	Control	Treat.	Control	Treat.	Control	Treat.
School level								
School KS2 Average Point Score	41.88	40.49	41.94	40.55	42.22	40.57	42.12	40.60
School FSM	22.6%	37.8%	22.1%	36.7%	19.8%	36.2%	20.6%	35.3%
School non-white	17.7%	26.4%	17.0%	24.9%	15.3%	29.0%	15.3%	24.8%
School SEN	25.2%	29.2%	24.7%	28.5%	23.1%	27.9%	23.3%	27.6%
Pupil-teacher ratio	16.87	16.09	16.93	16.09	16.87	16.16	16.85	16.19
Average number pupils	991.07	907.58	1018.71	923.07	1089.06	956.51	1044.03	946.91
Excellence in Cities	53.2%	88.8%	54.5%	87.8%	42.5%	84.1%	46.8%	84.8%
Selective	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Urban	95.0%	98.3%	95.1%	97.7%	92.5%	97.3%	91.6%	96.8%
Dissimilarity Index	0.28	0.29	0.28	0.29	0.27	0.28	0.28	0.28
Area level								
Low or no qualifications	51.8%	59.0%	51.7%	58.8%	50.7%	58.6%	51.1%	59.4%
Manual occupations	30.5%	20.1%	30.8%	20.4%	31.9%	20.0%	31.4%	20.0%
Routine occupations	26.6%	32.1%	26.4%	31.9%	25.6%	31.9%	25.9%	32.2%
Social renters	30.8%	44.8%	30.5%	44.8%	28.6%	45.1%	29.3%	44.4%
Lone parents	12.9%	17.2%	12.8%	17.3%	12.2%	17.0%	12.3%	17.1%
Overcrowded	7.6%	10.9%	7.5%	10.6%	7.0%	11.6%	7.1%	11.0%
North East	2.0%	11.1%	2.0%	10.9%	2.3%	12.1%	2.4%	11.4%
North West	13.3%	22.7%	13.2%	24.0%	13.7%	23.3%	13.1%	23.0%
Yorks & Hum	5.0%	19.3%	5.2%	18.6%	4.3%	16.5%	4.6%	17.9%
West Midlands	5.6%	5.8%	6.3%	5.2%	6.1%	6.1%	6.2%	6.0%
East Midlands	9.8%	14.6%	9.2%	15.1%	9.3%	13.0%	9.6%	13.5%
East	13.5%	1.9%	13.3%	2.0%	13.2%	2.1%	13.9%	1.8%
London	20.6%	17.3%	19.3%	17.3%	16.7%	19.4%	17.4%	19.1%
South East	18.2%	3.1%	18.8%	2.6%	16.5%	3.4%	16.2%	3.3%
South West	11.9%	4.3%	12.7%	4.3%	17.8%	4.1%	16.5%	4.0%
IDAC-sq	0.09	0.19	0.08	0.19	0.07	0.20	0.08	0.19
Interaction terms								
IDAC*FSM	5.6%	15.0%	5.4%	15.0%	4.7%	15.3%	4.9%	14.4%
White British*FSM	12.3%	20.7%	12.0%	21.3%	10.9%	19.4%	11.5%	20.0%

Appendix E: Cases with missing variables

Cases with missing variables in Key Stage 3 model, 2002

Group One	Control	Treatment	Total
Non-missing	48,366	40,362	88,728
Missing	3,052	4,465	7,517
Total	51,418	44,827	96,245

Group Two	Control	Treatment	Total
Non-missing	48,793	41,742	90,535
Missing	3,057	4,290	7,347
Total	51,850	46,032	97,882

Group Three	Control	Treatment	Total
Non-missing	64,360	54,741	119,101
Missing	3,846	4,926	8,772
Total	68,206	59,667	127,873

Group Four	Control	Treatment	Total
Non-missing	61,697	54,580	116,277
Missing	3,777	4,497	8,274
Total	65,474	59,077	124,551
Cases with missing variables in Key Stage 4 model, 2002

Group One	Control	Treatment	Total
Non-missing	39,414	32,669	72,083
Missing	5,302	7,509	12,811
Total	44,716	40,178	84,894

Group Two	Control	Treatment	Total
Non-missing	39,949	33,491	73,440
Missing	5,338	7,378	12,716
Total	45,287	40,869	86,156

Group Three	Control	Treatment	Total
Non-missing	53,721	44,275	97,996
Missing	6,703	9,001	15,704
Total	60,424	53,276	113,700

Group Four	Control	Treatment	Total
Non-missing	51,165	44,321	95,486
Missing	6,585	8,433	15,018
Total	57,750	52,754	110,504

Appendix F: Complete listing of DD estimates

KS3 Average Point Score

	Grou	ıp One	Grou	ip Two	Grou	o Three	Group Four		
	DD estimate	SE	DD estimate	SE	DD estimate	SE	DD estimate	SE	
2003	0.47	(0.1518)**	0.31	(0.1502)*	0.11	(0.1279)	0.10	(0.1303)	
2004	0.95	(0.1551)**	0.59	(0.1543)**	0.36	(0.1345)**	0.36	(0.1355)**	
2005	1.09	(0.1604)**	0.83	(0.1628)**	0.59	(0.1402)**	0.59	(0.1451)**	
2006	1.31	(0.1743)**	1.05	(0.1746)**	0.80	(0.1431)**	0.81	(0.1486)**	

KS3 level 5 English

	Group One		Group Two		Grou	p Three	Group Four		
	DD estimate	SE	DD estimate	SE	DD estimate	SE	DD estimate	SE	
2003	2.47	(1.12)*	1.08	(1.11)	1.01	(0.94)	0.43	(0.94)	
2004	3.22	(1.13)**	0.59	(1.09)	0.10	(0.96)	-0.08	(1.00)	
2005	3.63	(1.12)**	1.79	(1.14)	1.00	(0.96)	1.08	(0.98)	
2006	4.83	(1.13)**	3.48	(1.15)**	2.49	(0.93)**	2.59	(0.97)**	

KS3 level 5 Maths

	Group One		Group Two		Grou	p Three	Group Four		
	DD estimate	SE	DD estimate	SE	DD estimate	SE	DD estimate	SE	
2003	1.57	(0.47)**	1.41	(0.45)**	0.46	(0.4)	0.88	(0.40)*	
2004	2.44	(0.47)**	2.09	(0.49)**	1.39	(0.41)**	1.35	(0.41)**	
2005	3.14	(0.53)**	3.21	(0.53)**	2.49	(0.45)**	2.26	(0.46)**	
2006	4.53	(0.59)**	4.45	(0.57)**	3.91	(0.50)**	3.50	(0.50)**	

KS3 level 5 Science

	Group One		Group Two		Grou	p Three	Group Four		
	DD estimate	SE	DD estimate	SE	DD estimate	SE	DD estimate	SE	
2003	0.94	(0.62)	1.18	(0.60)*	-0.42	(0.5)	-0.27	(0.51)	
2004	1.18	(0.62)	1.62	(0.61)**	0.00	(0.53)	0.01	(0.54)	
2005	1.94	(0.67)**	2.13	(0.67)**	1.12	(0.56)*	0.87	(0.59)	
2006	2.90	(0.67)**	2.79	(0.67)**	2.16	(0.57)**	1.70	(0.59)**	

KS4 Average Point Score

	Grou	ıp One	Grou	ір Тwo	Grou	o Three	Group Four		
	DD estimate	SE	DD estimate	SE	DD estimate	SE	DD estimate	SE	
2003	0.45	(1.3887)	2.61	(1.3937)	-0.14	(1.1167)	-0.13	(1.2203)	
2004	3.68	(1.5761)*	4.20	(1.5675)**	1.13	(1.3341)	1.67	(1.3743)	
2005	4.28	(1.8117)*	5.54	(1.7827)**	3.55	(1.4540)*	3.60	(1.5208)*	
2006	2.78	(1.8493)	6.73	(1.8700)**	2.82	(1.5751)	2.72	(1.6738)	

KS4 five A*–C

	Group One		Grou	p Two	Group Three		Group Four		
	DD estimate	SE	DD estimate	SE	DD estimate	SE	DD estimate	SE	
2003	1.20	(0.67)	1.19	(0.67)	0.20	(0.59)	0.88	(0.61)	
2004	4.24	(0.78)**	3.42	(0.77)**	1.82	(0.70)**	2.44	(0.72)**	
2005	4.77	(0.95)**	4.01	(0.94)**	2.72	(0.80)**	3.49	(0.83)**	
2006	4.24	(1.05)**	4.48	(1.05)**	3.19	(0.91)**	3.38	(0.94)**	

KS4 five A*–G

	Group One			Group Two		Group Three		Group Four				
	DD estimate		SE	DD estimate		SE	DD estimate		SE	DD estimate		SE
2003	-0.66	(0.52)		-0.28	(0.52)		-0.46	(0.36)		-0.75	(0.42)	
2004	-0.87	(0.51)		-0.32	(0.51)		-0.52	(0.4)		-0.65	(0.42)	
2005	-1.02	(0.55)		-0.29	(0.54)		-0.16	(0.42)		-0.63	(0.44)	
2006	-1.01	(0.55)		0.05	(0.57)		-0.36	(0.43)		-0.49	(0.46)	

KS4 Number of passes A*–C

	Group One		Group Two		Grou	o Three	Group Four		
	DD estimate	SE	DD estimate	SE	DD estimate	SE	DD estimate	SE	
2003	0.02	(0.0569)	0.04	(0.0577)	-0.01	(0.0507)	0.06	(0.0536)	
2004	0.29	(0.0698)**	0.23	(0.0701)**	0.14	(0.0650)*	0.21	(0.0682)**	
2005	0.35	(0.0878)**	0.29	(0.0869)**	0.22	(0.0749)**	0.28	(0.0789)**	
2006	0.16	(0.0951)	0.16	(0.0953)	0.11	(0.0826)	0.11	(0.0839)	

KS4 Number of passes A*–G

	Grou	ıp One	Grou	p Two	Grou	o Three	Grou	p Four
	DD estimate	SE	DD estimate	SE	DD estimate	SE	DD estimate	SE
2003	-0.07	(0.0548)	-0.02	(0.0559)	-0.05	(0.0441)	-0.03	(0.0484)
2004	0.03	(0.0703)	0.03	(0.069)	0.01	(0.0613)	0.04	(0.0636)
2005	0.10	(0.0838)	0.13	(0.0835)	0.12	(0.0694)	0.12	(0.0723)
2006	0.05	(0.0904)	0.08	(0.097)	0.05	(0.081)	0.01	(0.0823)

KS3 Average Point Score

		Groul	p One	Grou	p Two	Group	Three	Group) Four
	Ľ	EMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.32 0.69 0.83 1.17	(0.1570)* (0.1638)** (0.1640)** (0.1759)**	0.60 (0.1645)** 1.18 (0.1666)** 1.31 (0.1762)** 1.43 (0.1905)**	0.14 (0.16) 0.41 (0.1635)* 0.59 (0.1650)** 0.92 (0.1775)**	0.45 (0.1587)** 0.73 (0.1660)** 1.03 (0.1789)** 1.16 (0.1884)**	0.02 (0.1353) 0.16 (0.1418) 0.47 (0.1438)** 0.70 (0.1496)**	0.20 (0.1358) 0.54 (0.1456)** 0.71 (0.1542)** 0.89 (0.1554)**	-0.04 (0.137) 0.16 (0.1461) 0.45 (0.1500)** 0.70 (0.1551)**	0.22 (0.1401) 0.55 (0.1459)** 0.72 (0.1590)** 0.91 (0.1617)**

KS3 English level 5

	Gro	up One	Group	Two	Group	Three	Group	Four
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
	DD Sł	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.86 (1.18) 1.37 (1.14) 2.18 (1.16) 4.16 (1.15)**	3.87 (1.15)** 4.82 (1.19)** 4.89 (1.20)** 5.41 (1.19)**	-0.82 (1.21) -1.17 (1.13) 0.06 (1.16) 2.91 (1.19)*	2.64 (1.12)* 2.04 (1.15) 3.21 (1.21)** 3.97 (1.20)**	-0.62 (1.01) -2.05 (1.00)* -0.62 (0.98) 1.48 (0.97)	2.55 (0.97)** 2.15 (1.02)* 2.54 (1.04)* 3.48 (1.00)**	-1.58 (1) -2.1 (1.05)* -0.32 (1.01) 1.59 (1.01)	2.33 (0.98)* 1.84 (1.05) 2.41 (1.06)* 3.56 (1.05)**

KS3 Maths level 5

		Grou	p One			Group	Two			Group	Three			Group	Four		
	Ē	EMALE		MALE	ш	EMALE	-	MALE	Ē	EMALE	2	AALE	ш	EMALE		AALE	
	DD	SE	DD	SE	DD	SE	DD	SE	DD	SE	DD	SE	DD	SE	DD	SE	
2003	2.32	(0.53)**	0.91	(0.54)	2.22	(0.54)**	0.74	(0.51)	1.24	(0.46)**	-0.27	(0.45)	1.58	(0.46)**	0.22	(0.44)	
2004	3.14	(0.54)**	1.84	(0.57)**	2.87	(0.56)**	1.46	(0.56)**	2.19	(0.46)**	0.64	(0.48)	2.06	(0.47)* *	0.68	(0.48)	
2005	3.15	(0.58)**	3.14	**(09.0)	3.11	(0.58)**	3.3	(0.60)* *	2.45	(0.51)**	2.53	(0.51)**	2.26	(0.52)**	2.27	(0.51)**	
2006	4.37	(0.66)* *	4.68	(0.66)**	4.17	(0.64)**	4.68	(0.64)* *	ю. С	(0.56)**	4.01	(0.55)**	3.33	(0.55)* *	3.66	(0.55)**	

S
/el
<u>e</u>
e
e D
Ū.
S
S
<u> </u>

		Grot	up One			Group	Two			Group	Three			Gro	ıp Four		
	Ē	EMALE		MALE	Ē	EMALE	E	MALE	Ē	EMALE	E	AALE		FEMALE		MALE	
	DD	SE	DD	SE	DD	SE	DD	SE	DD	SE	DD	S	EDD	SE	DD	SE	
2003	0.87	(0.7)	1.03	(69.0)	0.77	(0.69)	1.54	(0.64)*	-0.43	(0.55)	-0.42	(0.56)	-0.15	(0.57)	-0.38	(0.58)	
2004	2.76	(0.70)**	-0.19	(0.68)	3.13	(0.72)**	0.38	(0.65)	1.22	(0.58)*	-1.15	(0.59)	1.47	(0.60)*	-1.39	(0.59)*	
2005	1.98	(0.72)**	1.92	(0.73)**	2.08	(0.72)**	2.19	(0.73)**	1.19	(0.62)	1.05	(0.62)	1.18	(0.65)	0.58	(0.64)	
2006	3.98	(0.73)**	1.97	(0.74)**	3.81	(0.74)**	1.96	(0.74)* *	2.8	(0.62)**	1.56	(0.64)*	2.5	(0.66)**	0.93	(0.64)	
																	7

KS4 Average Point Score

	U	iroup One		Group	Two	Group	Three	Grou	o Four
	FEMALE	Σ	ALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
	DD	SE DD	SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003	0.26 (1.5372)	0.66 (1	.4956)	1.85 (1.5925)	3.26 (1.4675)*	-0.04 (1.171)	-0.20 (1.2907)	-0.06 (1.3049)	-0.17 (1.3602)
2004	1.94 (1.6984)	5.28 (1	.6752)**	3.07 (1.7121)	5.15 (1.6695)**	-1.12 (1.4033)	3.31 (1.4789)*	-0.54 (1.4646)	3.84 (1.4832)**
2005	2.48 (1.9367)	5.93 (1	.8994)**	3.73 (1.9458)	7.07 (1.8535)**	1.86 (1.5486)	5.20 (1.5820)**	2.16 (1.5981)	5.02 (1.6497)**
2006	0.58 (1.942)	4.80 (1	.9614)*	4.26 (1.9689)*	8.81 (1.9942)**	0.63 (1.6181)	4.95 (1.7472)**	0.46 (1.7347)	4.95 (1.8147)**

KS4 five A*–C

		Gro	up One		Gro	up Two	G	oup T	hree	Group	Four	
	Ë	MALE		MALE	FEMALE	MALE	FEMALE		MALE	FEMALE		MALE
	DD	SE	DD	SE	DD SI	E DD SE	DD	SE	DD SE	DD SE	DD	SE
2003	0.61	(0.78)	1.74	(0.70)*	0.16 (0.78)	2.03 (0.70)**	-0.22 (0.64)		0.61 (0.66)	0.45 (0.66)	1.3	(0.65)*
2004	2.25	(0.89)*	6.03	(0.78)**	1.88 (0.89)*	4.7 (0.77)**	0 (0.76)		3.57 (0.73)**	0.56 (0.79)	4.26	(0.75)**
2005	3.59	(1.07)**	5.85	(0.95)**	2.72 (1.06)*	5.1 (0.95)**	1.36 (0.88)		4.04 (0.84)**	2.14 (0.91)*	4.82	(0.88)**
2006	3.14	(1.13)**	5.25	(1.09)**	3.57 (1.13)**	5.24 (1.10)**	1.75 (0.95)		4.6 (0.97)**	1.76 (0.99)	4.97	**(0.09)

U.
Ť
*
∢
Ð
2
Ψ
4
Ň
$\mathbf{\mathbf{v}}$

_

		9	iroup	One			Grou	p Two			G	oup Tl	Iree		Gro	up Four	
	E	EMALE		Z	IALE	ш	EMALE		MALE		EMALE		MALE		FEMALE	MALI	
	DD		SE	DD	SE	DD	SE	DD	SE	DD		SE	DD	SE	DD SE	DD	SE
2003	-0.39	(0.6)	1	-0.89	(0.57)	0.01	(0.61)	-0.51	(0.56)	-0.01	(0.38)	Ĭ	0.88 (0.45)	1	-0.42 (0.47)	-1.06 (0.49	*(6
2004	-0.05	(0.57)	I	-1.58 ((0.58)**	0.19	(0.58)	-0.74	(0.59)	-0.28	(0.43)	Ĭ	0.74 (0.49)	I	-0.42 (0.45)	-0.86 (0.5)	
2005	-0.78	(0.58)	I	-1.23 ((0.65)	-0.1	(0.59)	-0.45	(0.62)	0.04	(0.44)	Ť	0.34 (0.52)		-0.35 (0.45)	-0.89 (0.5	(1
2006	-0.89	(0.58)	I	-1.11 ((0.65)	0.11	(0.61)	0.01	(0.66)	-0.12	(0.45)	Ĭ	0.58 (0.53)	I	-0.26 (0.47)	-0.7 (0.5	Â

KS4 number of A*-C passes

	J	Group	One	Group	o Two	Group	Three	Group	Four
	FEMALE		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003	-0.01 (0.0639		0.05 (0.0591)	-0.02 (0.0645)	0.09 (0.0594)	-0.02 (0.0528)	0.01 (0.0558)	0.04 (0.0565)	0.07 (0.057)
2004	0.11 (0.0765		0.45 (0.0703)**	0.09 (0.0771)	0.35 (0.0710)**	-0.02 (0.0683)	0.29 (0.0681)**	0.05 (0.0724)	0.37 (0.0702)**
2005	0.24 (0.0960	*(1	0.46 (0.0869)**	0.17 (0.0965)	0.40 (0.0867)**	0.11 (0.0807)	0.33 (0.0766)**	0.16 (0.0841)	0.39 (0.0810)**
2006	0.06 (0.1015		0.24 (0.0961)*	0.06 (0.0998)	0.25 (0.0981)*	0.00 (0.0856)	0.20 (0.0869)*	-0.02 (0.0877)	0.23 (0.0868)**

KS4 number of A*-G passes

		Grou	an0 du			Group	Two			Group	Three			Group	Four		
	Ē	EMALE		MALE	Ē	EMALE	-	MALE	Ξ	EMALE		MALE	Ξ	EMALE	-	AALE	
	DD	SE	DD	SE	DD	SE	DD	SE	DD	SE	DD	SE	DD	SE	B	SE	
2003	-0.02	(0.0608)	-0.11	(0.0585)*	0.00	(0.0623)	-0.04	(0.0587)	0.00	(0.0457)	-0.09	(0.0503)	0.03	(0.0522)	-0.08	(0.0522)	
2004	0.09	(0.0737)	-0.01	(0.0746)	0.07	(0.073)	-0.01	(0.0734)	0.02	(0.0633)	0.01	(0.0673)	0.05	(0.0664)	0.03	(0.0684)	
2005	0.14	(0.0887)	0.07	(0.0867)	0.13	(9060.0)	0.12	(0.0846)	0.14	(0.074)	0.11	(0.0727)	0.14	(0.077)	0.09	(0.0757)	
2006	0.09	(0.0935)	0.02	(0.0934)	0.09	(0.1012)	0.06	(2000)	0.09	(0.0829)	0.02	(0.0853)	0.04	(0.0847)	-0.01	(0.0864)	

d
<u>w</u>
-
0
ŭ
10
V 1
7
0
0
_
(۵)
<u> </u>
o.
Ω.
Ľ
a
W
_
ž
Ž
Av
Ā
3 Av

KS3 Av	erage Point S	core							
	Bangladeshi	Indian	Pakistani	Black African	Black Caribbean	Black Other	Chinese	White British	White Other
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.34 (0.3306) 1.25 (0.3183)** 2.01 (0.4094)** 2.11 (0.4741)**	-0.29 (0.3746) 0.71 (0.3447)* 0.28 (0.3515) 1.34 (0.3764)**	-0.26 (0.3166) 0.86 (0.3270)** 1.24 (0.3885)** 1.73 (0.3976)**	0.64 (0.3912) 1.87 (0.4508)** 1.94 (0.4706)** 2.95 (0.4045)**	0.48 (0.4088) 1.32 (0.4011)** 2.04 (0.3927)** 2.34 (0.4262)**	0.43 (0.4926) 0.93 (0.4718)* 2.59 (0.5129)** 2.33 (0.5148)**	1.70 (0.8240)* 1.16 (0.879) 1.80 (0.7844)* 1.69 (1.0646)	0.53 (0.1615)** 0.89 (0.1644)** 0.93 (0.1649)** 1.04 (0.1806)**	1.94 (0.3767)** 2.22 (0.4104)** 2.14 (0.4767)** 2.89 (0.4525)**
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.12 (0.3421) 1.51 (0.3851)** 2.21 (0.4628)** 2.46 (0.4625)**	0.02 (0.3023) 0.27 (0.4695) 0.16 (0.4416) 0.97 (0.4297)*	-0.22 (0.3243) 0.81 (0.3705)* 1.32 (0.4490)** 1.90 (0.4131)**	0.41 (0.3885) 1.61 (0.4001)** 1.79 (0.4431)** 2.29 (0.4266)**	0.48 (0.3555) 1.41 (0.3161)** 1.98 (0.3377)** 2.05 (0.4015)**	0.49 (0.4156) 0.92 (0.4757) 2.55 (0.4971)** 2.57 (0.4333)**	0.55 (0.7449) 1.22 (0.8081) 1.05 (0.742) 0.77 (1.006)	0.34 (0.1586)* 0.44 (0.1604)** 0.66 (0.1631)** 0.76 (0.1789)**	1.21 (0.4638)** 1.55 (0.4797)** 1.28 (0.5685)* 2.19 (0.5930)**
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.26 (0.2744) 0.58 (0.337) 1.12 (0.3774)** 1.19 (0.3833)**	0.03 (0.3473) 0.00 (0.3875) -0.08 (0.395) 0.78 (0.3385)*	-0.36 (0.265) 0.13 (0.2969) 0.86 (0.3383)* 1.19 (0.3025)**	0.24 (0.2891) 1.04 (0.3140)** 1.55 (0.3383)** 2.46 (0.3358)**	0.37 (0.3119) 0.88 (0.2792)** 1.34 (0.2852)** 1.71 (0.3370)**	0.22 (0.3507) 0.39 (0.4247) 1.97 (0.3664)** 1.99 (0.3876)**	1.13 (0.644) 1.17 (0.6905) 0.86 (0.7018) 0.47 (0.7683)	0.16 (0.1367) 0.31 (0.1452)* 0.47 (0.1462)** 0.50 (0.1473)**	0.95 (0.3337)** 1.25 (0.3338)** 1.16 (0.3316)** 1.95 (0.3103)**
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.42 (0.3168) 0.68 (0.4033) 1.18 (0.5092)* 1.68 (0.4379)**	0.25 (0.2966) 0.23 (0.4092) 0.26 (0.4277) 1.12 (0.3779)**	-0.28 (0.2878) 0.28 (0.3284) 0.84 (0.3597)* 1.23 (0.3497)**	0.05 (0.3196) 1.04 (0.3570)** 1.28 (0.3754)** 2.15 (0.3417)**	-0.09 (0.3773) 0.44 (0.345) 1.06 (0.3528)** 1.39 (0.3806)**	-0.25 (0.376) 0.63 (0.4059) 1.95 (0.3822)** 1.52 (0.3963)**	0.43 (0.6738) -0.16 (0.7463) 0.41 (0.7496) -0.86 (0.8712)	0.15 (0.136) 0.30 (0.1419)* 0.50 (0.1494)** 0.58 (0.1532)**	0.99 (0.3281)** 1.52 (0.3768)** 1.20 (0.3226)** 2.08 (0.2996)**

KS3 level 5 English

	Bangladeshi	Indian		Pakistani	Black African	Black Caribbean	Black Other	Chinese	White British	White Other
GROUP 1	DD SE	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	2.28 (2.06) 2.83 (2.68) 8.62 (2.52)** 5.58 (3.14)	-2.91 (2.51) 1.91 (2.16) 0.41 (2.02) 3.28 (2.6)		-0.59 (2.12) 2.18 (2.52) 5.01 (2.29)* 5.65 (2.66)*	2.17 (3.1) 6.71 (2.74)* 7.51 (2.79)** 11.89 (2.60)**	2.53 (2.61) 6.04 (2.65)* 10.23 (2.19)** 13.04 (2.41)**	2.98 (4.02) 4.16 (3.54) 10.11 (3.20)** 9.21 (3.08)**	3.12 (5.26) 5.9 (5) 0.72 (5.44) 3.54 (5.68)	2.97 (1.15)** 2.95 (1.19)* 2.86 (1.19)* 3.57 (1.16)**	3.43 (2.63) 6.38 (2.76)* 6.1 (2.45)* 12.66 (2.65)**
GROUP 2	DD SE	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.97 (2.23) 4.42 (2.62) 7.71 (2.56)** 6.98 (3.32)*	-0.72 (1.89) -1.1 (3.02) -1.12 (3.02) 3.99 (3.47)		-2.38 (1.84) 0.41 (2.95) 2.28 (2.57) 4.92 (2.72)	1.44 (3.03) 6.5 (2.67)* 8.07 (2.85)** 9.68 (3.11)**	2.89 (2.59) 5.95 (2.43)* 10.23 (2.29)** 12.69 (2.41)**	3.1 (3.59) 3.57 (3.32) 11.9 (3.14)** 9.66 (2.90)**	4.85 (5.23) 10.24 (4.79)* 0.62 (5.06) 1.24 (5.71)	1.22 (1.16) -0.44 (1.12) 0.48 (1.16) 1.80 (1.19)	-0.37 (2.79) 4.77 (2.71) 4.01 (2.6) 8.86 (3.22)**
GROUP 3	DD SE	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	2.89 (2.62) 1.12 (3.07) 2.98 (2.81) 0.78 (2.73)	0.23 (2.84) -0.5 (2.67) -0.95 (2.81) 2.25 (2.07)		2.41 (1.78) 3.66 (2.06) 1.24 (2.14) 1.72 (1.98)	0.33 (2.13) 4.26 (2.05)* 4.37 (1.94)* 9.44 (2.05)**	2.68 (2.34) 5.24 (2.06)* 6.77 (2.18)** 9.22 (2.18)**	0.06 (3.18) -0.2 (2.87) 6.39 (2.42)** 8.09 (2.60)**	2.97 (4) 6.06 (4.01) -3.99 (4.37) -2.54 (3.98)	1.63 (0.98) 0.03 (1.02) 0.46 (1.03) 1.59 (0.99)	2.49 (2.29) 4.26 (2.45) 2.61 (2.07) 7.14 (2.05)**
GROUP 4	DD SE	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-2.12 (2.65) 1.06 (2.71) 2.37 (3.42) 3.2 (2.86)	-0.10 (2.19) 0.70 (2.7) -1.60 (2.78) 3.21 (2.15)		-2.21 (1.86) -3.66 (2.33) 0.72 (2.38) 0.8 (2.3)	-1.08 (2.33) 4.51 (2.20)* 4.21 (2.03)* 9.56 (2.36)**	0.92 (2.47) 4.81 (2.20)* 8.56 (2.36)** 9.69 (2.23)**	-2.80 (2.25) 1.05 (3.29) 4.42 (2.52) 5.22 (2.79)	4.54 (4.24) 5.01 (4.33) -5.21 (5.01) -1.30 (4.71)	0.87 (0.97) -0.38 (1.04) 0.86 (1.03) 1.71 (1.01)	1.95 (2.28) 4.04 (2.69) 2.19 (2.14) 8.53 (2.17)**

S
-
Ŧ
σ
5
2
S
_
Ð
5
5
Ψ
m
S
$\mathbf{\tilde{\mathbf{v}}}$
×

	Bangladeshi	Indian	Pakistani	Black African	Black Caribbean	Black Other	Chinese	White British	White Other
GROUP 1	DD SE	DD SI	EDD	SE DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.42 (1.56) 3.89 (1.43)** 4.38 (1.34)** 7.84 (1.39)**	0.58 (1.7) 4.74 (1.67)** 4.45 (1.72)** 5.62 (2.09)**	-0.56 (1.14) 3.52 (1.07)** 3.90 (1.49)** 6.40 (1.33)**	3.40 (2.03) 4.97 (2.01)* 7.92 (1.95)** 9.67 (2.00)**	2.56 (1.67) 5.72 (2.16)** 8.65 (1.75)** 9.13 (1.97)**	1.66 (2.66) 4.03 (2.98) 8.38 (2.49)** 8.97 (2.68)**	0.08 (3.81) 0.03 (3.83) 3.96 (4.11) 3.77 (3.54)	1.71 (0.52)** 2 (0.50)** 2.5 (0.57)** 3.61 (0.61)**	7.23 (1.96)** 4.23 (1.77)* 4.28 (1.77)* 8.18 (2.01)**
GROUP 2	DD SE	DD SI	EDD	SE DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.73 (1.94) 2.45 (1.7) 5.72 (1.28)** 7.38 (1.38)**	0.39 (1.61) 2.32 (1.66) 3.55 (1.91) 3.13 (1.74)	-1.93 (1.25) 2.91 (1.32)* 3.86 (1.80)* 6.57 (1.46)**	4.11 (2.1) 5.09 (1.98)* 8.03 (1.91)** 7.72 (1.99)**	2.75 (1.54) 7.24 (1.80)** 8.98 (1.70)** 9.01 (1.87)**	1.99 (2.38) 6.27 (2.63)* 8.78 (2.59)** 9.75 (2.50)**	-4.87 (3.5) -2.34 (3.75) -2.68 (3.75) -5.41 (3.46)	1.51 (0.49)** 1.53 (0.51)** 2.60 (0.56)** 3.69 (0.59)**	3.99 (2.06) 4.8 (1.53)** 3.61 (1.71)* 8.24 (1.79)**
GROUP 3	DD SE	DD SI	EDD	SE DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-1.03 (1.27) 2.82 (1.14)* 4.1 (1.21)** 5.52 (1.51)**	0.19 (1.24) 0.55 (1.13) 1.29 (1.13) 1.82 (1.28)	-0.77 (0.97) 2.27 (0.92)* 2.4 (1.24) 6.18 (1.09)**	2.33 (1.86) 3.58 (1.69)* 7.38 (1.60)** 10.1 (1.95)**	2.99 (1.39)* 4.25 (1.58)** 6.57 (1.40)** 8.52 (1.53)**	-1.17 (2.23) 1.59 (2.31) 8.12 (1.89)** 6.46 (1.88)**	-2.39 (2.67) -0.70 (3.14) 1.85 (3.31) -0.23 (2.78)	0.47 (0.44) 0.94 (0.44)* 1.8 (0.49)** 2.96 (0.53)**	4.28 (2.27) 3.84 (2.45) 3.7 (2.34) 7.47 (2.27)**
GROUP 4	DD SE	DD SI	EDD	SE DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-1.2 (1.64) 1.7 (1.39) 3.22 (1.50)* 4.85 (1.64)**	1.37 (1.34) 1.45 (1.3) 1.67 (1.34) 2.20 (1.45)	-0.47 (1.07) 2.39 (1.06)* 3.16 (1.41)* 6.72 (1.17)**	3.55 (1.63)* 4.66 (1.72)** 7.16 (1.76)** 9.47 (1.86)*	1.37 (1.75) 1.09 (1.87) 4.40 (1.70)** 6.18 (1.68)**	-1.54 (2.49) 1.00 (2.61) 8.30 (1.88)** 6.63 (1.84)*	-1.65 (3.19) -4.68 (3.46) -0.03 (4.07) -3.28 (3.5)	0.99 (0.44)* 1.12 (0.43)** 1.84 (0.48)** 2.87 (0.52)**	3.39 (2.16) 3.87 (2.31) 2.86 (2.23) 6 (2.19)**

KS3 level 5 Science

	Bangladeshi	Indian	Pakistani	Black African	Black Caribbean	Black Other	Chinese	White British	White Other
GROUP 1	DD SE	DD St	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	2.59 (1.77) 4.71 (1.75)** 6.24 (2.95)* 5.89 (2.15)**	0.38 (1.77) 6.03 (1.79)** -0.46 (1.89) 4.68 (1.95)*	-0.28 (1.52) 2.97 (1.33)* 4.33 (1.70)* 5.49 (1.47)**	1.09 (2.1) 0.75 (1.9) -0.47 (2.16) 4.02 (2.00)*	4.11 (2.05)* 0.51 (1.67) 5.04 (1.56)** 5.89 (1.69)**	2.71 (2.21) 1.71 (2.56) 7.96 (2.63)** 7.52 (3.27)*	6.24 (3.88) 3.35 (4.3) -3.7 (4.9) 6.52 (4.86)	0.8 (0.69) 0.78 (0.67) 1.75 (0.71)* 1.95 (0.72)**	4.61 (2.08)* 1.72 (2.02) 3.39 (1.78) 5.06 (1.81)**
GROUP 2	DD SE	DD Sł	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	3.90 (1.75)* 6.65 (1.88)** 8.58 (2.09)** 7.74 (1.71)**	0.19 (2.56) -0.22 (2.76) -2.08 (2.41) 0.9 (2.11)	2.06 (1.35) 5.19 (1.20)** 3.92 (1.77)* 6.97 (1.53)**	1.02 (1.93) -0.58 (1.88) 0.75 (2.37) 2.21 (1.74)	4.51 (1.81)* 2.42 (1.6) 4.6 (1.74)** 6.69 (1.77)**	3.77 (2.16) 5.24 (2.47)* 8.88 (2.43)** 11.22 (3.04)**	-1.39 (3.65) 3.82 (3.87) -6.74 (3.99) -2.29 (4.72)	0.82 (0.65) 0.96 (0.65) 1.92 (0.70)** 1.71 (0.71)*	2.67 (2.01) 4.55 (1.94)* 3.74 (1.63)* 6.05 (1.57)**
GROUP 3	DD SE	DD Sł	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.06 (1.34) 5.48 (1.47)** 6.1 (1.74)** 4.83 (1.47)**	0.48 (1.5) 0.06 (2.1) -0.72 (1.49) 2.21 (1.57)	-1.15 (1.21) 2.56 (1.20)* 2.81 (1.58) 4.63 (1.40)**	0.83 (1.6) 0.31 (1.53) 0.61 (1.84) 6.2 (1.56)**	3.34 (1.39)* 0.45 (1.47) 3.74 (1.55)* 6.75 (1.51)**	-0.44 (2.15) -1.14 (2.48) 6.11 (2.06)** 8.47 (2.48)**	3.85 (3.24) 4.36 (3.79) 4.19 (3.82) 4.14 (3.8)	-0.76 (0.55) -0.8 (0.56) 0.58 (0.59) 0.84 (0.59)	1.51 (1.71) 2.11 (1.62) 5.66 (1.50)** 4.88 (1.33)**
GROUP 4	DD SE	DD SE	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	1.59 (1.82) 5.44 (1.58)** 7.5 (1.65)** 5.76 (1.59)**	0.45 (1.86) 0.56 (2.23) -0.30 (1.74) 2.72 (1.7)	-0.52 (1.32) 3.38 (1.32)* 3.94 (1.81)* 4.78 (1.62)**	0.06 (1.77) -0.18 (1.64) 0.02 (2.01) 3.87 (1.60)*	1.28 (1.74) -0.83 (1.55) 3.25 (1.8) 5.29 (1.49)**	0.70 (2.35) 1.02 (2.89) 4.39 (1.86)* 4.70 (2.49)	2.56 (3.44) 1.24 (3.82) -1.58 (3.78) -1.24 (3.86)	-0.55 (0.56) -0.67 (0.56) 0.55 (0.61) 0.75 (0.62)	2.33 (1.69) 2.15 (1.72) 3.56 (1.59)* 5.18 (1.46)**

4
<u> </u>
<u> </u>
0
<u> </u>
U
S
•••
<u> </u>
0
~
<u> </u>
_
۵ ا
e
ge
age
age
rage
erage l
rerage l
verage l
Average
Average
Average
4 Average
64 Average

KS4 Av	erage Poin	t Score							
	Bangladeshi	Indian	Pakistani	Black African	Black Caribbean	Black Other	Chinese	White British	White Other
GROUP 1	DD	SE DD SI	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	4.85 (4.1506) 10.82 (5.873) 6.42 (9.4658) 1.53 (6.4997)	2.25 (3.2043) 7.85 (3.8461)* 4.76 (5.025) 2.13 (4.7817)	4.10 (2.6502) 10.12 (3.6103)** 11.40 (3.7541)** 2.96 (3.0432)	3.55 (4.2568) 3.71 (3.9389) 11.85 (5.0355)* 4.25 (4.5983)	3.02 (3.2716) 6.74 (3.809) 6.45 (4.0604) 11.04 (4.0556)**	-2.66 (5.6309) 0.32 (4.4858) 21.11 (5.508)** 11.47 (5.7468)*	0.28 (8.4807) 16.43 (7.5987)* 15.70 (7.0668)* 5.86 (8.1865)	-0.63 (1.504) 2.23 (1.6605) 1.41 (1.9127) 2.23 (2.0142)	20.57 (8.0339)* 10.01 (4.3264)* 18.25 (6.6601)** 14.58 (5.7561)*
GROUP 2	DD	SE DD SI	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	7.18 (4.5348) 13.65 (6.6284)* 14.21 (8.7037) 6.61 (7.2404)	-2.12 (4.4852) 3.53 (5.5995) -3.24 (4.5912) -0.52 (4.4011)	3.45 (2.4583) 7.95 (3.3605)* 11.10 (4.0710)** 2.80 (3.7185)	2.56 (4.2338) 2.69 (3.899) 8.15 (5.4375) 6.09 (4.475)	4.48 (2.9767) 8.31 (3.2786)* 7.77 (4.0309) 10.30 (3.8942)**	2.64 (5.8604) 3.60 (4.3247) 26.93 (5.164)** 16.59 (5.268)**	3.22 (8.2445) 15.45 (7.2890)* 17.09 (6.9751)* 15.94 (7.3828)*	2.04 (1.4943) 2.99 (1.6084) 3.57 (1.8217) 6.59 (1.9991)**	19.28 (6.7676)** 9.21 (4.7771) 18.34 (6.6407)** 15.67 (5.4156)**
GROUP 3	DD	SE DD S	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.47 (3.3814) 3.35 (4.6395) 5.16 (5.5762) -3.16 (5.0672)	-0.89 (2.5774) 2.23 (3.3217) -0.66 (3.6772) -2.80 (4.0687)	0.74 (2.0998) 2.63 (2.6789) 5.07 (2.8577) -1.74 (2.9758)	3.12 (3.137) 2.80 (2.9839) 6.78 (4.013) -2.16 (3.7541)	0.22 (2.6759) 5.02 (3.1373) 7.04 (3.2810)* 5.13 (3.6144)	-2.41 (4.8544) 1.73 (3.5772) 21.86 (4.213)** 7.15 (5.407)	-0.51 (6.8659) 7.40 (5.562) 1.30 (5.5968) 2.21 (6.3542)	-0.40 (1.2493) 0.19 (1.4439) 1.58 (1.5869) 3.86 (1.7126)*	16.94 (4.7463)** 6.98 (3.2827)* 9.14 (5.1452) 7.52 (4.6788)
GROUP 4	DD	SE DD S	E DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.44 (4.0047) 7.38 (5.1255) 8.36 (6.754) -1.03 (5.8643)	-1.89 (3.2944) 1.89 (4.0547) -4.10 (3.7949) -6.17 (4.215)	1.55 (2.3669) 3.24 (2.9467) 5.35 (3.4424) -1.00 (3.4567)	2.46 (3.5201) 3.02 (3.2135) 7.24 (4.4103) -1.52 (3.9832)	-0.76 (3.2456) 7.11 (3.4902)* 5.91 (3.658) 5.74 (3.9676)	-5.92 (5.4417) -2.15 (3.9209) 20.62 (4.497)** 2.05 (5.7707)	-4.19 (6.9188) 2.34 (5.9951) 1.54 (6.0722) 0.35 (6.4292)	-0.16 (1.3049) 0.95 (1.4458) 2.12 (1.6078) 3.69 (1.7649)*	10.81 (6.2833) 4.29 (3.6577) 9.94 (5.2669) 3.88 (4.5525)

KS4 5 or more A*–C

	Bangladeshi		Indian		Pakistani	Black African	Black Caribbean	Black Other	Chinese		White British	White Other
GROUP 1	DD	SE	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SI	щ	DD SE	DD SE
2003 2004 2005 2006	0.86 (2.12) 4.08 (3.12) 4.26 (5.66) 3.46 (4.54)		3.57 (1.88) 3.14 (2.44) 4.73 (2.84) 3.66 (2.69)		1.64 (1.52) 5.73 (1.87)** 9.16 (2.13)** 4.29 (2.09)*	-0.67 (2.33) 0.18 (2.26) 5.09 (2.99) 0.58 (2.77)	2.89 (1.65) 6.11 (1.76)** 7.37 (1.94)** 8.58 (2.00)**	0.27 (2.93) 3.06 (2.32) 8.72 (2.40)** 5.83 (3.08)	-2.35 (4.43) 1.09 (5.81) 1.31 (4.36) -2.63 (5.7)	04 0 4	.94 (0.72) .07 (0.81)** .85 (0.98)** .26 (1.12)**	6.98 (2.68)** 7.42 (1.94)** 9.77 (2.89)** 6.14 (2.71)*
GROUP 2	DD	SE	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SI	щ	DD SE	DD SE
2003 2004 2005 2006	3.64 (2.03) 6.97 (2.86)* 9.31 (5.47) 5.15 (4.25)		-0.29 (2.95) 3.3 (2.71) 0.87 (2.78) 3.5 (2.45)		1.07 (1.6) 4.58 (2.25)* 7.52 (2.92)* 2.68 (2.69)	-0.68 (2.34) 0.02 (2.32) 3.09 (3.04) 0.98 (2.74)	1.37 (1.47) 5.42 (1.56)** 7.02 (2.02)** 5.52 (1.87)**	1.69 (2.64) 4.92 (2.05)* 10.2 (2.20)** 6.09 (2.64)*	-3.31 (3.93) -0.78 (5.22) 0.22 (3.9) 0.87 (4.72)	- 0 w 4	.02 (0.72) .98 (0.79)** .20 (0.95)** .66 (1.11)**	4.83 (2.37)* 6.57 (2.31)** 8.76 (2.92)** 5.31 (2.71)
GROUP 3	DD	SE	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SI	ų	DD SE	DD SE
2003 2004 2005 2006	-2.55 (2.67) 1.12 (2.22) 2.63 (3.6) 0.09 (2.96)		-1.24 (1.66) 0.26 (1.89) -1.13 (2.13) -1.86 (2.21)		-0.43 (1.27) 1.91 (1.56) 2.52 (2.04) 1.12 (2.02)	0.62 (1.85) 0.28 (1.88) 4.97 (2.29)* -1.9 (2.17)	0.46 (1.35) 4.23 (1.40)** 4.33 (1.60)** 5.18 (2.00)**	0.93 (2.35) 2.3 (1.68) 9.32 (1.87)** 5.86 (2.76)*	-3.56 (4.02) -1.60 (3.67) -3.46 (3.51) -1.98 (4.07)	m 7 → 0	.37 (0.65) .87 (0.75)* .38 (0.84)** .94 (0.96)**	4.91 (1.83)** 3.73 (1.62)* 2.68 (2.37) 4.54 (2.65)
GROUP 4	DD	SE	DD	SE	DD SE	DD SE	DD SE	DD SE	DD SI	щ	DD SE	DD SE
2003 2004 2005 2006	1.68 (1.61) 3.08 (2.55) 5.73 (4.52) 0.47 (3.44)		-1.49 (2.07) 0.41 (2.19) 2.39 (2.19) 3.55 (2.12)		-0.29 (1.34) 1.98 (1.8) 2.72 (2.37) 0.32 (2.26)	1.87 (1.81) 0.65 (1.96) 5.54 (2.30)* 0.06 (2.41)	1.29 (1.5) 5.11 (1.69)** 4.76 (1.80)** 5.96 (1.95)**	-0.21 (2.33) 1.71 (2.06) 9.60 (2.28)** 6.39 (3.35)	-1.66 (4.2) 0.61 (3.77) -0.40 (3.89) 0.50 (4.05)	0 7 m m	.87 (0.65) .35 (0.75)** .27 (0.87)** .91 (0.97)**	4.48 (2.15)* 4.31 (1.68)* 4.49 (2.39) 3.93 (2.57)

₽*-G
more
5 or
S4

KS4 5 o	r more A*–G								
	Bangladeshi	Indian	Pakistani	Black African	Black Caribbean	Black Other	Chinese	White British	White Other
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	3.37 (1.16)** 4.30 (1.22)** 3.73 (1.30)** 1.08 (1.3)	1.24 (1.12) 2.80 (1.01)** 1.14 (1.14) 1.09 (1.25)	1.49 (0.94) 2.14 (0.98)* 0.46 (1.26) 0.89 (0.94)	1.68 (1.53) -0.91 (1.62) 1.87 (1.43) -0.55 (1.43)	-1.55 (1.58) -0.42 (1.46) 0.30 (1.72) -0.46 (1.61)	-5.23 (2.68) -3.73 (2.12) 2.6 (2.27) -1.3 (2.66)	0.71 (2.43) 0.71 (3.17) 0.72 (2.4) 1.07 (2.48)	-1.03 (0.54) -1.6 (0.57)** -2.14 (0.62)** -1.31 (0.61)*	2.13 (3.51) 0.02 (1.73) 1.89 (2) 3.46 (1.87)
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	3.53 (1.33)** 4.02 (1.40)** 3.89 (1.45)** 1.47 (1.53)	0.93 (1.12) 0.96 (1.11) -0.13 (1.05) -0.88 (1.06)	1.16 (1.11) 1.52 (1.1) 1.36 (1.19) -1.21 (0.96)	0.94 (1.41) -1.36 (1.6) 1.88 (1.31) -0.66 (1.32)	-1.15 (1.5) 0.42 (1.38) 0.65 (1.8) 0.33 (1.61)	-2.78 (2.66) -2.44 (2.09) 4.62 (2.21)* 1.55 (2.55)	-0.20 (2.79) 1.34 (2.77) 3.00 (2.11) 3.67 (2.23)	-0.48 (0.54) -0.80 (0.55) -1.09 (0.59) -0.08 (0.63)	2.15 (3) 0.59 (1.55) 2.71 (1.83) 3.51 (1.63)*
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	2.16 (0.80)** 2.63 (1.05)* 2.47 (0.98)* 0.28 (1.03)	2.05 (0.64)** 2.17 (0.66)** 1.41 (0.66)* 0.81 (0.82)	1.64 (0.76)* 1.3 (0.73) 1.61 (0.96) -0.82 (0.79)	1.25 (1.08) 0.71 (1.06) 0.52 (1.19) -0.6 (0.98)	-1.95 (1.27) -0.73 (1.27) 0.23 (1.27) -1.66 (1.2)	-4.59 (2.30)* -1.99 (1.68) 2.09 (1.76) -3.41 (2.52)	1.53 (1.89) -0.54 (1.92) -0.89 (1.74) 0.08 (2.03)	-0.78 (0.43) -1.19 (0.46)* -1.03 (0.50)* -0.28 (0.51)	1.78 (1.32) 0.9 (1.29) 0.06 (1.22) 0.06 (1.29)
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	1.87 (1.03) 2.74 (0.93)** 3.34 (1.13)** 0.23 (1.22)	2.03 (0.79)* 1.81 (0.84)* 0.73 (0.87) -0.12 (0.83)	1.94 (0.86)* 1.84 (0.78)* 1.56 (1.22) -1.02 (0.9)	1.52 (1.15) 1.13 (1.11) -0.07 (1.32) -0.67 (0.99)	-1.90 (1.45) 0.84 (1.29) -0.45 (1.31) -1.43 (1.3)	-7.36 (2.62)** -4.88 (1.71)** 2.01 (1.63) -4.56 (2.26)*	-1.48 (1.94) -2.59 (1.94) -1.30 (1.81) -1.28 (1.9)	-0.93 (0.45)* -1.16 (0.46)* -1.35 (0.48)** -0.24 (0.51)	-0.46 (2.63) -0.64 (1.47) 0.07 (1.37) -1 (1.3)

A*_C
passes
of
ber
Jum
S4 N

KS4 Nu	mber of pas	ses A*–C							
	Bangladeshi	Indian	Pakistani	Black African	Black Caribbean	Black Other	Chinese	White British	White Other
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.10 (0.1462) 0.26 (0.2402) 0.31 (0.4372) 0.42 (0.4319)	0.16 (0.1425) 0.30 (0.1809) 0.31 (0.2351) 0.22 (0.2363)	0.06 (0.1242) 0.35 (0.1535)* 0.64 (0.2017)** 0.22 (0.1879)	-0.01 (0.1767) 0.18 (0.1692) 0.45 (0.251) 0.14 (0.2354)	0.12 (0.1235) 0.39 (0.1391)** 0.41 (0.1653)* 0.42 (0.1581)**	-0.08 (0.1943) 0.23 (0.1458) 0.68 (0.1865)** 0.42 (0.2088)*	0.15 (0.3555) 0.51 (0.3912) 1.09 (0.3026)** 0.39 (0.4599)	0.00 (0.0606) 0.29 (0.0723)** 0.29 (0.0902)** 0.13 (0.0983)	0.48 (0.2167)* 0.38 (0.1479)** 0.68 (0.2236)** 0.32 (0.2109)
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.26 (0.1533) 0.51 (0.2147)* 0.65 (0.434) 0.49 (0.4068)	-0.06 (0.2171) 0.28 (0.2492) 0.07 (0.2331) 0.12 (0.2471)	0.04 (0.1262) 0.27 (0.1905) 0.51 (0.2651) 0.02 (0.2436)	0.00 (0.1759) 0.16 (0.1729) 0.34 (0.2548) 0.13 (0.2269)	0.07 (0.1121) 0.44 (0.1202)** 0.44 (0.1632)** 0.28 (0.1536)	-0.08 (0.1781) 0.22 (0.1371) 0.71 (0.1736)** 0.29 (0.1927)	0.03 (0.3227) 0.48 (0.3547) 0.73 (0.2944)* 0.59 (0.3901)	0.03 (0.0615) 0.21 (0.0718)** 0.24 (0.0886)** 0.16 (0.1)	0.41 (0.2068)* 0.28 (0.2004) 0.56 (0.2245)* 0.29 (0.2169)
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.08 (0.183) 0.16 (0.174) 0.21 (0.2819) 0.17 (0.2642)	-0.10 (0.1231) -0.03 (0.1577) -0.01 (0.1911) -0.18 (0.2231)	-0.09 (0.1147) 0.06 (0.1367) 0.18 (0.1653) -0.06 (0.1758)	-0.02 (0.1249) 0.06 (0.1209) 0.30 (0.175) -0.23 (0.1742)	-0.05 (0.098) 0.24 (0.1108)* 0.25 (0.1334) 0.19 (0.1519)	-0.11 (0.1465) 0.19 (0.1183) 0.76 (0.1382)** 0.28 (0.1921)	-0.17 (0.3351) 0.35 (0.2915) 0.46 (0.25) 0.39 (0.3088)	0.01 (0.0545) 0.15 (0.0696)* 0.21 (0.0801)* 0.15 (0.0877)	0.46 (0.1606)** 0.22 (0.1464) 0.22 (0.187) 0.18 (0.178)
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.18 (0.1319) 0.38 (0.1948)* 0.37 (0.354) 0.03 (0.3327)	-0.03 (0.1562) 0.12 (0.1916) -0.10 (0.2045) -0.28 (0.207)	-0.08 (0.1127) 0.06 (0.157) 0.17 (0.1947) -0.13 (0.183)	0.04 (0.1283) 0.07 (0.1294) 0.34 (0.188) -0.10 (0.1894)	0.05 (0.1113) 0.36 (0.1355)** 0.25 (0.1533) 0.22 (0.1552)	-0.13 (0.1481) 0.10 (0.1507) 0.72 (0.1693)** 0.17 (0.2334)	0.10 (0.2805) 0.40 (0.2938) 0.59 (0.2494)* 0.42 (0.3141)	0.07 (0.0573) 0.22 (0.0719)** 0.27 (0.0837)** 0.15 (0.089)	0.35 (0.1956) 0.17 (0.1464) 0.30 (0.1959) 0.16 (0.1744)

	Bangladeshi	Indian	Pakistani	Black African	Black Caribbean	Black Other	Chinese	White British	White Other
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.45 (0.2003)* 0.57 (0.1919)** 0.39 (0.2774) 0.34 (0.3052)	0.14 (0.1032) 0.58 (0.1271)** 0.39 (0.1807)* 0.47 (0.2337)*	0.15 (0.113) 0.51 (0.1382)** 0.31 (0.2004) 0.17 (0.1496)	-0.07 (0.1579) 0.06 (0.1784) 0.29 (0.203) 0.09 (0.2254)	-0.05 (0.1291) 0.08 (0.1543) 0.03 (0.1545) 0.19 (0.165)	-0.38 (0.1979) -0.19 (0.1742) 0.41 (0.1949)* 0.31 (0.2056)	0.17 (0.287) 0.43 (0.3485) 0.77 (0.2857)** 1.04 (0.3661)**	-0.12 (0.0565)* -0.05 (0.0724) 0.02 (0.0893) 0.01 (0.0961)	0.45 (0.2973) -0.01 (0.2113) 0.25 (0.2716) 0.25 (0.2322)
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.58 (0.2042)** 0.56 (0.2175)* 0.61 (0.2738)* 0.39 (0.2749)	0.06 (0.1348) 0.25 (0.1798) 0.18 (0.1824) 0.18 (0.2433)	0.18 (0.1083) 0.39 (0.1501)* 0.43 (0.2113)* -0.07 (0.1869)	-0.04 (0.1603) 0.06 (0.1765) 0.24 (0.201) 0.07 (0.2098)	-0.05 (0.1234) 0.13 (0.1377) 0.05 (0.1561) -0.02 (0.1552)	-0.17 (0.2084) -0.12 (0.1657) 0.60 (0.1939)** 0.30 (0.1909)	0.28 (0.3281) 0.60 (0.3161) 0.75 (0.2703)** 1.22 (0.3575)**	-0.06 (0.0574) -0.04 (0.0694) 0.05 (0.0872) 0.07 (0.1045)	0.40 (0.2526) 0.02 (0.1879) 0.30 (0.2573) 0.23 (0.2107)
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.22 (0.1616) 0.16 (0.1826) 0.26 (0.1908) 0.02 (0.2152)	0.10 (0.0946) 0.19 (0.1192) 0.14 (0.1536) 0.03 (0.2667)	0.15 (0.0869) 0.21 (0.1139) 0.22 (0.1482) -0.11 (0.1564)	0.06 (0.1228) 0.04 (0.1263) 0.21 (0.1607) -0.14 (0.1712)	-0.12 (0.1128) 0.01 (0.1325) 0.04 (0.1267) -0.09 (0.1318)	-0.26 (0.1781) -0.09 (0.1478) 0.50 (0.1509)** 0.14 (0.1971)	0.16 (0.2679) 0.32 (0.2833) 0.39 (0.227) 0.77 (0.3001)*	-0.08 (0.0472) -0.04 (0.0649) 0.07 (0.0755) 0.09 (0.0861)	0.48 (0.1989)* 0.18 (0.1576) 0.23 (0.2488) 0.09 (0.2237)
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.51 (0.1636)** 0.56 (0.1668)** 0.57 (0.2634)* 0.03 (0.2238)	0.15 (0.0986) 0.29 (0.1349)* 0.06 (0.1478) -0.07 (0.2182)	0.17 (0.0926) 0.31 (0.1232)* 0.16 (0.1726) -0.14 (0.1555)	0.10 (0.1366) 0.12 (0.1327) 0.11 (0.1633) -0.22 (0.1707)	-0.09 (0.1304) 0.19 (0.1443) -0.03 (0.1312) -0.17 (0.1449)	-0.35 (0.1943) -0.20 (0.1573) 0.43 (0.1647)** -0.09 (0.2126)	0.15 (0.2315) 0.08 (0.2857) 0.40 (0.2565) 0.67 (0.3299)*	-0.06 (0.051) -0.01 (0.0665) 0.07 (0.0768) 0.07 (0.0879)	0.34 (0.2477) 0.04 (0.1674) 0.28 (0.2553) -0.05 (0.2133)

KS4 Number of passes A*–G

(۵)
۳.
-
0
ū
V 1
-
<u> </u>
0
ñ
4
Φ
ge
age
age
rage
erage
verage
verage
Average
Average
3 Average
3 Average
S3 Average

	North East	North West	Yorkshire & The Humber	East Midlands	West Midlands	East	London	South East	South West
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.34 (0.4124) 0.85 (0.3564)* 0.71 (0.3273)* 1.11 (0.3477)**	0.72 (0.2359)** 0.89 (0.2342)** 0.86 (0.2714)** 0.60 (0.3058)	0.08 (0.2594) 0.56 (0.2826)* 1.03 (0.2939)** 0.99 (0.3077)**	0.21 (0.4876) 0.60 (0.5807) 0.82 (0.6394) 1.17 (0.6609)	0.30 (0.2872) 1.11 (0.2961)** 0.98 (0.3095)** 1.80 (0.3770)**	0.75 (0.5515) 0.52 (0.4673) 0.32 (0.6067) 1.11 (0.5725)	0.91 (0.2630)** 1.59 (0.2987)** 2.02 (0.3352)** 2.40 (0.3266)**	0.16 (0.5109) 1.46 (0.6585)* 1.09 (0.3126)** 0.76 (0.5768)	0.29 (0.3732) -0.05 (0.3534) -0.27 (0.3961) -0.02 (0.4158)
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.07 (0.4113) 0.33 (0.349) 0.30 (0.3353) 0.87 (0.3304)**	0.50 (0.2233)* 0.48 (0.2123)* 0.71 (0.2502)** 0.63 (0.2668)*	-0.04 (0.2412) -0.10 (0.3038) 0.60 (0.3132) 0.43 (0.3344)	0.25 (0.3064) 0.52 (0.4052) 0.28 (0.5897) 0.88 (0.5427)	0.19 (0.2741) 0.85 (0.2989)** 0.99 (0.3149)** 1.67 (0.3877)**	-0.48 (0.7523) -0.26 (0.6647) -0.20 (0.6246) 0.25 (0.484)	0.77 (0.2433)** 1.70 (0.2524)** 2.04 (0.3207)** 2.34 (0.3236)**	0.28 (1.1573) -0.33 (0.7741) 0.01 (0.6737) -0.89 (0.6106)	0.78 (0.2777)** 0.04 (0.3204) -0.67 (0.419) -0.14 (0.4671)
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.11 (0.3182) 0.34 (0.2799) 0.51 (0.2764) 0.72 (0.2479)**	0.24 (0.1948) 0.10 (0.2259) 0.28 (0.2394) 0.21 (0.2345)	-0.39 (0.2464) -0.01 (0.2967) 0.41 (0.3038) 0.51 (0.2826)	-0.08 (0.2385) 0.47 (0.3633) 0.94 (0.4245)* 0.84 (0.4432)	0.05 (0.268) 0.11 (0.2954) 0.18 (0.2966) 0.86 (0.3442)*	-0.28 (0.6827) 0.18 (0.6304) 1.11 (0.5055)* 1.20 (0.3949)**	0.59 (0.2059)** 1.15 (0.2305)** 1.50 (0.2628)** 2.04 (0.2643)**	0.10 (0.6745) 0.55 (0.5597) 0.13 (0.5047) -0.86 (0.3818)*	0.35 (0.3213) -0.23 (0.2956) -0.43 (0.3566) 0.00 (0.4091)
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.03 (0.3441) 0.24 (0.3011) 0.49 (0.3088) 0.87 (0.2668)**	0.19 (0.1908) 0.04 (0.2168) 0.24 (0.2467) 0.18 (0.2435)	-0.28 (0.2264) -0.08 (0.2801) 0.50 (0.3044) 0.67 (0.2866)*	0.03 (0.2726) 0.35 (0.3431) 0.43 (0.4061) 0.61 (0.4635)	0.15 (0.2341) 0.41 (0.2858) 0.48 (0.2833) 1.05 (0.3448)**	-0.86 (0.7407) -0.11 (0.6278) 0.72 (0.5519) 0.99 (0.5665)	0.33 (0.2336) 1.11 (0.2566)** 1.34 (0.3030)** 1.82 (0.2831)**	0.42 (0.7445) 0.61 (0.6001) 0.22 (0.5519) -0.48 (0.5275)	0.50 (0.3274) 0.18 (0.2357) 0.01 (0.3749) -0.56 (0.4356)

2
S
Q
ш
S
ē
>
Ð
m
S
Y

	North East		North West		Yorkshire & The Humber	East	Midlands	West Midlan	st	East		London	South E	ast	South West	
GROUP 1	DD	SE	DD	SE	DD SE	DD	SE	DD	SE	DD	SE	DD SE	DD	SE	DD	SE
2003 2004 2005 2006	0.08 (2.12) 0.79 (2.53) -3.96 (2.26) 0.04 (2.46)		4.43 (2.06)* 2.69 (1.89) 2.49 (1.87) 2.45 (1.94)		2 (1.64) 1.05 (1.99) 2.68 (2.16) 2.78 (2.01)	2.77 5.18 3.97 4.34	(3.81) (3.11) (4.44) (4.15)	-0.63 (2.22) 1.82 (2.42) 1.35 (2.12) 4.93 (2.35)*		6.76 (3.86) 0.76 (1.98) 8.91 (1.68)** 6.94 (3.34)*		3.97 (2.16) 7.36 (2.14)** 10.32 (2.04)** 11.71 (2.00)**	3.04 (3.8) 10.19 (4.6) 9.04 (3.2) 4.26 (4.7)	5))) * 4) * *	1.11 (3.47) 0.43 (2.54) 1.07 (2.35) 1.92 (2.91)	
GROUP 2	DD	SE	DD	SE	DD SE	DD	SE	DD	SE	DD	SE	DD SE	DD	SE	DD	SE
2003 2004 2005 2006	-3.48 (2.27) -3.93 (2.38) -5.79 (1.92)** -1.71 (2.37)	لا	3.59 (1.94) 0.42 (1.47) 1.61 (1.53) 3.22 (1.54)*		-0.26 (1.87) -4.37 (2.05)* -1.59 (2.41) -2.2 (2.36)	1.18 4.58 -0.52 4.6	(2.68) (2.55) (3.98) (3.46)	-0.75 (2.01) 0.59 (2.41) 2.49 (2.21) 5.63 (2.46)*		-4.5 (4.75) -9.3 (4.04)* -0.75 (4.5) -1.7 (2.8)		3.54 (1.95) 8.53 (1.80)** 11 (2.00)** 11.7 (2.03)**	-2.63 (8.0) -1.56 (5.0) -3.08 (6.8) -7.45 (5.4)	(7) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	5.76 (2.81)* 1.28 (1.54) -0.87 (2.43) 5.3 (3.39)	
GROUP 3	DD	SE	DD	SE	DD SE	DD	SE	DD	SE	DD	SE	DD SE	DD	SE	DD	SE
2003 2004 2005 2006	-2.66 (1.91) -1.73 (2.02) -3.48 (1.73)* -0.95 (1.85)		2.6 (1.64) -1.37 (1.61) 0.36 (1.55) 1.21 (1.51)		0.82 (1.64) -1.98 (1.85) -1.59 (2.19) 0.2 (1.95)	0.91 3.62 3.24 3.73	(1.95) (2.01) (3.04) (3.04)	-1.1 (2.03) -4.25 (2.38) -2.44 (2.04) 0.85 (2.06)		-4.26 (5.27) -2.65 (3.08) 11.69 (1.95)** 5.9 (3.99)		2.85 (1.7) 5.6 (1.75)** 6.69 (1.82)** 8.72 (1.78)**	0.81 (4.8) 3.79 (4.5, 1.15 (4.6) -3.96 (3.5	(6) (1) (6) (1)	3.19 (3.06) 0.11 (2.13) 0.13 (2.17) 3.26 (2.97)	
GROUP 4	DD	SE	DD	SE	DD SE	DD	SE	DD	SE	DD	SE	DD SE	DD	SE	DD	SE
2003 2004 2005 2006	-1.82 (1.92) -2.01 (2.28) -3.86 (1.92)* 0.32 (1.77)		1.17 (1.53) -2.26 (1.62) -0.17 (1.59) 0.35 (1.58)		0.42 (1.49) -2.95 (2) -0.27 (2.09) 0.08 (2.05)	0.29 2.41 -0.53 1.64	(1.82) (2.48) (3.29) (2.93)	-1.27 (1.79) -2.37 (2.18) -0.31 (1.85) 2.8 (2.11)		-6.87 (5.3) -4.47 (2.71) 6.54 (2.43)** 5.34 (3.7)		1.44 (1.77) 5.63 (1.85)** 6.33 (1.93)** 8.94 (1.82)**	2.71 (5.8- 4.18 (4.6 2.09 (5.2) -3.9 (4.2)	(† () - ()	4.15 (2.32) 1.49 (2.02) 1.72 (2.41) 1.89 (2.23)	

S
_
Ŧ
σ
~
S
_
Ð
~
-
Ð
_
m
S
1.1
~

	North East	North West	Yorkshire & The Humber	East Midlands	West Midlands	East	London	South East	South West
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	2.91 (1.61) 3.26 (1.29)* 5.26 (1.24)** 6.48 (1.18)*	2.65 (0.88)** 2.41 (0.84)** 2.02 (0.94)* 3.12 (1.10)**	-0.07 (0.73) 2.22 (0.76)** 2.98 (0.99)** 3.65 (1.09)**	1.39 (1.64) 1.4 (1.84) 2.45 (2.02) 2.95 (1.93)	0.88 (1.01) 1.33 (0.92) 3.25 (0.97)** 4.49 (1.31)**	1.66 (2.31) 0.79 (1.52) 2.23 (0.95)* 4.87 (1.19)**	2.44 (0.81)** 3.94 (0.93)** 4.65 (1.13)** 7.58 (1.18)**	-1.01 (2.06) 1.06 (1.94) -1.29 (1.79) -0.71 (1.04)	1.05 (1.46) 1.8 (1.92) 0.45 (2.58) 1.22 (2.09)
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	3.4 (1.23)** 2.59 (1.27)* 4.93 (1.18)** 6.33 (1.33)**	1.39 (0.84) 1.29 (0.92) 1.79 (0.92) 2.61 (1.00)**	0.44 (0.78) 2.02 (0.91)* 2.88 (1.03)** 3.82 (0.96)**	0.47 (1.37) 1.24 (1.34) 2.99 (2.21) 3.7 (1.99)	0.41 (0.95) 1.46 (0.85) 3 (0.93)** 4.42 (1.19)**	-2.23 (2.94) -1.83 (1.22) 1.87 (0.94)* 3.56 (1.64)*	2.86 (0.81)** 4.5 (0.90)** 5.45 (1.10)** 7.5 (1.09)**	0.74 (1.21) -0.72 (1.38) 1.03 (1.84) -0.93 (1.61)	1.6 (1.43) 2.29 (1.96) 0.9 (2.52) 3.31 (2.17)
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.6 (1.12) 1.67 (0.99) 3.75 (1.11)** 5.35 (1.04)**	1.85 (0.72)* 1.69 (0.76)* 1.75 (0.83)* 3.29 (0.86)**	-1.75 (0.81)* 0.74 (0.9) 1.97 (0.91)* 2.77 (1.07)**	1.26 (1.09) 0.66 (1.25) 1.93 (1.62) 3.24 (1.51)*	-0.21 (0.82) 0.03 (0.68) 2.34 (0.92)* 3.23 (1.20)**	-0.12 (1.83) 0.09 (0.84) 2.21 (0.71)** 4.46 (1.15)**	1.61 (0.66)* 3.37 (0.72)** 4.6 (0.82)** 7.03 (0.90)**	-2.01 (1.03) 0.1 (1.33) -1.06 (1.04) -2.25 (1.17)	-1.01 (1.2) -1.18 (1.17) -0.94 (1.93) 0.38 (1.66)
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	1.59 (1.22) 2.57 (1.13)* 3.99 (1.16)** 5.73 (1.09)**	1.79 (0.72)* 1.27 (0.73) 1.25 (0.82) 2.79 (0.89)**	-0.87 (0.76) 1.16 (0.75) 2.47 (0.90)** 3.43 (0.97)**	-0.38 (1.24) -0.33 (1.09) 1.08 (1.37) 2.28 (1.57)	0.92 (0.74) 1.07 (0.73) 2.77 (0.85)** 4.01 (1.07)**	0.77 (2.24) -0.93 (1.04) 2.41 (0.88)** 2.52 (1.62)	1.38 (0.62)* 2.12 (0.78)** 3.08 (0.92)** 4.72 (0.93)**	0.17 (1.44) 0.14 (1.44) -0.38 (1.23) -1.37 (1.37)	2.11 (1.51) 1.47 (1.13) 0.25 (1.91) -0.52 (1.54)

Φ
Ũ
Ē
U
Ξ.
01
10
ш)
_
Ð
5
-
Ð
\mathbf{n}
12
S

	North East		North West		Yorkshire & The Humber	East Mi	dlands	West Midl	ands	East		London	South East		South West	
GROUP 1	DD	SE	DD	SE	DD SE	DD	SE	DD	SE	DD	SE	DD SE	DD	SE	DD SI	ш
2003 2004 2005 2006	0.47 (1.59) 0.05 (1.26) 1.29 (1.35) 2.61 (1.19)*		2.21 (1.08)* 0.97 (0.95) 1.65 (1.18) 1.92 (1.23)		-1.74 (1.09) 0.73 (1.08) 2.17 (0.98)* 1.77 (1.11)	4.63 (2. 1.59 (2. 3.18 (2. 3.6 (3.	7) 81) 22) 31)	1.95 (1.16 2.13 (1.31 1.07 (1.38 4.08 (1.20	**	4.17 (2.99) 4.73 (4.13) 1.93 (4.8) 5.97 (2.02)**		1.42 (1.16) 2.26 (1.22) 3.19 (1.35)* 5.17 (1.32)**	-1.16 (2.13) 0.13 (2.97) 3.16 (1.51)* -0.54 (2.17)		-2.62 (1.78) -3.47 (1.49)* -2 (2.2) -2.67 (2.06)	
GROUP 2	DD	SE	DD	SE	DD SE	DD	SE	DD	SE	DD	SE	DD SE	DD	SE	DD SI	ш
2003 2004 2005 2006	1.91 (1.4) 1.53 (1.18) 3.1 (1.22)* 3.5 (1.19)**		0.54 (1) 0.54 (0.97) 0.96 (1.16) 0.8 (1.19)		0.03 (1.1) 0.39 (1.16) 2.8 (1.07)** 2.07 (1.22)	0.46 (2. -0.4 (2. -0.23 (2. 0.16 (2.	.05) 3) 31) 54)	1.74 (1.23 3 (1.26 1.44 (1.37 4.17 (1.20	· * · * ·	5.96 (2.39)* 10.07 (2.47)** 4.45 (4.96) 7.93 (2.18)**		2.52 (1.17)* 3.78 (1.17)** 3.95 (1.25)** 6.44 (1.29)**	0.81 (2.72) 0.78 (2.45) 0.19 (2.07) -4.67 (2.05)*		-1.89 (0.87)* -3.33 (1.52)* -0.54 (2.2) -3.45 (1.60)*	
GROUP 3	DD	SE	DD	SE	DD SE	DD	SE	DD	SE	DD	SE	DD SE	DD	SE	DD SI	ш
2003 2004 2005 2006	-0.49 (1.08) -0.49 (0.94) 1.23 (1) 1.96 (1.08)		-0.89 (0.84) -2.09 (0.82)* -0.86 (0.97) -0.23 (0.93)		-3.39 (0.93)** -1.58 (1.08) 0.25 (1) 0.93 (0.98)	2.39 (1. 0.99 (1. 3.03 (1. 3.09 (1.	.6) 73) 59) 92)	0.28 (1.12 1.57 (1.19 1.24 (1.4) 3.58 (1.35	((**(1.48 (2.3) 2.66 (3.7) 1.89 (3.88) 2.44 (2.51)		1.2 (0.79) 2.84 (0.97)** 3.66 (1.00)** 6.65 (0.94)**	-0.89 (1.8) 0.16 (1.82) -0.21 (1.33) -4.56 (1.49)**		-0.88 (1.63) -3.15 (1.40)* -0.25 (1.59) -2.21 (1.61)	
GROUP 4	DD	SE	DD	SE	DD SE	DD	SE	DD	SE	DD	SE	DD SE	DD	SE	DD SI	ш
2003 2004 2005 2006	0.17 (1.22) -0.69 (0.97) 1.47 (1.12) 2.02 (1.14)		-0.16 (0.81) -1.21 (0.79) -0.77 (1.01) -0.18 (0.99)		-2.9 (0.85)** -1.47 (0.99) 0.19 (1.01) 0.79 (0.99)	1.18 (1. -0.35 (1. 1.6 (1. 1.35 (2.	.71) 5) 67) 03)	1.21 (1.2) 2.31 (1.24 1.44 (1.32 3.3 (1.32	~ ~ *-	2.34 (2.69) 3.25 (4.21) 2.45 (3.67) 5.2 (2.56)*		0.5 (0.83) 2.02 (0.98)* 2.77 (1.13)* 5.05 (1.08)**	-1.55 (1.98) -0.45 (2.22) -1.34 (1.47) -4 (1.47)**		-1.97 (1.74) -4.21 (1.42)** -0.94 (1.78) -5.35 (1.63)**	

	North East	North West	Yorkshire & The Humber	East Midlands	West Midlands	East	London	South East	South West
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-3.44 (2.8801) 1.17 (3.0471) -1.52 (4.0531) -0.23 (4.9937)	-1.83 (2.5305) -0.89 (2.873) 2.14 (3.3333) 1.22 (3.4487)	0.01 (2.3062) 3.72 (2.7486) 5.01 (2.7379) 5.11 (3.0818)	7.23 (4.6866) 14.42 (5.1671)** 9.50 (7.2313) 5.59 (5.4811)	2.21 (4.1481) 9.52 (3.6918)* 15.71 (4.3303)** 8.65 (4.2328)*	-7.50 (6.1334) -1.63 (5.3011) -9.02 (5.2813) -11.05 (6.9592)	5.11 (2.2916)* 5.81 (3.266) 4.47 (3.2875) 3.22 (3.1822)	-7.22 (3.4118)* -0.77 (2.9179) -1.15 (9.1093) -6.05 (4.9118)	-1.71 (5.7141) -5.32 (5.9496) -12.99 (8.7564) -7.99 (5.8457)
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.56 (3.152) -0.58 (3.552) 1.60 (3.6573) 3.62 (4.0979)	0.94 (2.5882) -0.33 (2.7812) 1.61 (3.0405) 6.06 (3.2979)	-0.40 (2.2866) 3.29 (2.4806) 4.63 (2.692) 7.67 (3.4806)*	6.04 (5.362) 7.92 (4.9643) 4.16 (5.9584) 3.96 (5.3018)	8.51 (3.7266)* 13.42 (3.6386)** 17.57 (4.0874)** 13.67 (3.9142)**	-1.44 (5.9241) 1.20 (3.2415) 4.68 (10.7478) 0.12 (10.8751)	7.03 (2.3688)** 7.68 (3.3636)* 7.31 (3.5951)* 5.71 (3.3667)	-7.76 (4.9714) -6.35 (2.1978)** 2.92 (10.2123) 5.05 (11.1521)	-1.06 (5.6299) 2.23 (4.0445) -6.50 (7.1405) 2.30 (5.8344)
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.46 (2.7428) 1.56 (3.2292) 3.31 (3.2053) 6.02 (3.9902)	-1.15 (1.9763) -1.94 (2.5078) 1.12 (2.6451) 3.81 (2.6354)	0.15 (1.8558) 2.15 (2.3455) 3.87 (2.4391) 6.75 (3.0657)*	2.50 (4.688) 9.69 (4.1740)* 11.84 (5.1239)* 5.80 (4.5292)	1.68 (2.8187) 3.98 (3.3596) 9.12 (3.4556)** 2.57 (3.6395)	-4.13 (5.0389) -2.00 (4.767) -3.31 (4.7946) -3.33 (6.1513)	1.15 (1.9376) 2.58 (2.5604) 5.08 (2.8047) -0.52 (3.0771)	-5.04 (3.5372) -8.69 (2.7512)** -4.08 (6.574) -6.42 (6.5128)	-4.69 (4.4559) -5.34 (4.5509) -9.85 (6.5267) -3.67 (5.5089)
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-1.93 (2.834) 0.20 (3.4086) 3.25 (3.3029) 4.94 (4.2338)	-0.04 (2.073) -1.52 (2.5047) 2.04 (2.79) 4.68 (2.7782)	-0.89 (2.0395) 1.60 (2.4752) 2.56 (2.4009) 5.58 (3.0135)	3.64 (4.9222) 7.14 (4.452) 8.51 (5.3235) 2.74 (4.9803)	3.78 (3.58) 7.47 (3.5102)* 11.73 (3.9442)** 7.09 (4.2012)	-6.03 (5.8978) -4.57 (4.1725) 0.19 (7.6234) -1.96 (7.7531)	0.57 (2.1247) 3.91 (2.6497) 4.70 (2.8269) -1.86 (3.0422)	6.79 (4.5112) 5.80 (2.993) 5.36 (7.2486) 7.63 (8.5545)	-6.36 (5.1344) -5.02 (3.5742) -13.84 (5.2797)** -8.88 (4.3269)*

A*_C	
nore	
5 or r	
KS4 5	

	North East	North West		Yorkshire & The Humber	East Midlands	West Midlands	East		London	South East		South West	
GROUP 1	DD SE	DD	SE	DD SE	DD SE	DD SE	DD SI		D SE	DD	SE	DD SI	ш
2003 2004 2005 2006	0.72 (1.68) 4.62 (1.81)* 5.15 (2.10)* 5.5 (2.91)	-0.1 (1.24) 2.74 (1.34)* 2.74 (1.74) 2.9 (1.94)		0.39 (1) 3.16 (1.18)** 5.39 (1.48)** 6.68 (1.64)**	4.1 (1.86)* 10.62 (2.13)** 6.37 (3.06)* 6.1 (2.71)*	3.72 (1.57)* 7.94 (1.88)** 11.01 (2.51)** 7.39 (2.56)**	2.46 (3.04) 1.87 (2.83) 3.13 (2.69) 0.62 (3.82)	3.0 3.0 2.2	6 (1.12) 5 (1.27)** 16 (1.55)* 25 (1.75)	0.13 (1.58) 2.77 (1.95) 4.08 (5.44) -1.49 (3.74)		1.16 (2.41) 2.22 (3.41) 86 (4.34) 3.96 (3.1)	
GROUP 2	DD SE	DD	SE	DD SE	DD SE	DD SE	DD SI		D SE	DD	SE	DD SI	ш
2003 2004 2005 2006	0.02 (1.55) 1.89 (1.97) 3.68 (1.82)* 4.44 (2.4)	-0.62 (1.25) 0.84 (1.26) 0.51 (1.65) 2.91 (1.96)		0.01 (1.06) 2.92 (1.09)** 4.43 (1.38)** 7.64 (1.63)**	3.05 (1.91) 7.86 (2.20)** 2.98 (2.8) 1.7 (2.23)	4.63 (1.43)** 7.85 (2.00)** 10.33 (2.47)** 8.33 (2.65)*	5.66 (2.30)* 5.37 (1.77)** 10.22 (4.84)* 9.11 (5.17)	3.6 3.7 1.2	19 (1.05) 58 (1.20)** 17 (1.65)* 16 (1.59)	4.04 (3.43) 2.39 (2.72) 6.53 (6.77) -0.08 (7.47)			
GROUP 3	DD SE	DD	SE	DD SE	DD SE	DD SE	DD SI		D SE	DD	SE	DD SI	ш
2003 2004 2005 2006	1.15 (1.4) 3.73 (1.71)* 5.61 (1.66)** 7.77 (2.22)**	-1.05 (1.06) 0.84 (1.28) 1.16 (1.51) 2.59 (1.56)		-0.16 (0.92) 1.25 (1.14) 3.64 (1.40)** 6.53 (1.69)**	0.1 (2.04) 5.85 (2.12)** 3.52 (2.58) 1.37 (2.69)	1.9 (1.21) 2.36 (1.83) 4.56 (2.17)* 3.04 (2.17)	6.14 (2.72)* 2.45 (2.31) 5.46 (2.48)* 6.82 (3.12)*	-0.3 2.1 0.5	32 (0.99) .1 (1.00)* 2 (1.31) 57 (1.66)	2.23 (2.22) -1.2 (2.4) 2.02 (4.37) -3.57 (4.37)		-1.7 (2.4) .47 (2.74) .13 (3.45) .51 (2.77)	
GROUP 4	DD SE	DD	SE	DD SE	DD SE	DD SE	DD SI		D SE	DD	SE	DD SI	ш
2003 2004 2005 2006	0.91 (1.53) 3.56 (1.74)* 6.03 (1.89)** 6.29 (2.30)**	-0.32 (1.04) 1.18 (1.24) 2.11 (1.55) 3.3 (1.63)*		0.4 (1.07) 1.75 (1.3) 3.59 (1.36)** 6.3 (1.60)**	0.87 (2.18) 5.37 (2.20)* 3.06 (2.69) 1.37 (2.78)	3.02 (1.42)* 4.14 (2.01)* 5.78 (2.34)* 4.31 (2.52)	4.87 (2.24)* 2.78 (2.19) 8.24 (4.05)* 7.07 (3.93)	1.0 2.0 2.0	23 (0.94) 2 (1.21)** 48 (1.41)* (1.69)	1.63 (2.8) -0.02 (1.98) 3.15 (5.15) -2.46 (5.13)		.58 (2.13) .54 (1.77) .16 (2.02)* .6 (2.24)	

KS4 5 or more A*–G

	North East		North West		Yorkshire & The Humber	ш	East Midlands	West Mid	lands	East		London		South East	South West	
GROUP 1	DD	SE	DD	SE	DD SE	ш	DD SE	DD	SE	DD	SE	DD S	E	DD SE	DD SE	
2003 2004 2005 2006	-0.21 (1.04) -0.31 (1.42) -2.49 (1.74) -0.48 (1.58)		-0.41 (0.86) -1.9 (0.89)* -1.04 (0.93) -1.8 (1.01)		-0.63 (0.82) -0.72 (0.99) -2.03 (0.93)* -1.56 (0.89)		0.16 (1.47) 0.17 (1.77) 1.21 (1.83) 1.26 (1.75)	-2.01 (1.7 -0.14 (1.1 0.91 (1.0 0.09 (1.0	7) 5) 2)	-3.73 (2.71) -1.46 (2.07) -6.72 (2.99)* -7.03 (3.53)*		0.68 (0.81) -0.03 (0.99) 0.84 (0.97) 0.48 (1.05)		5.72 (2.31)* -3.4 (1.94) -2.11 (1.54) -3.24 (1.18)**	0.02 (2.13) -2.33 (1.51) -3.78 (2.13) -1.6 (1.26)	
GROUP 2	DD	SE	DD	SE	DD SE	ω	DD SE	DD	SE	DD	SE	DD S	E	DD SE	DD SE	
2003 2004 2005 2006	-0.41 (1.1) -0.75 (1.24) -1.24 (1.56) -0.07 (1.45)		0.26 (0.84) -0.57 (0.87) -0.26 (0.81) 0.32 (0.96)		-0.84 (0.86) -0.23 (0.92) -1.56 (0.92) -0.9 (1.15)).14 (1.71)).33 (1.81)).51 (2.08)).73 (2.32)	-0.84 (1.7 0.02 (1.1 1.05 (1.0 0.12 (0.9	4) 9) 6) 1)	-3.01 (2.84) -2.67 (1.54) -6.12 (3.09)* -7.85 (3.40)*		1.35 (0.81) 0.74 (1.06) 1.75 (1.05) 1.8 (1.04)		7.07 (2.19)** 4.35 (2.45) 0.62 (1.3) 0.87 (2.56)	0.59 (1.68) -0.46 (1.41) -2.05 (1.76) -1.16 (1.45)	
GROUP 3	DD	SE	DD	SE	DD SE	ω	DD SE	DD	SE	DD	SE	DD S	E	DD SE	DD SE	
2003 2004 2005 2006	-0.07 (0.86) -0.56 (1.12) -0.98 (1.31) -0.08 (1.15)		0 (0.61) -0.93 (0.74) -0.24 (0.65) 0.08 (0.73)		-0.83 (0.73) -0.3 (0.85) -1.55 (0.85) -0.28 (0.92)	00		-0.3 (0.8 0.29 (0.8 2.3 (0.8 -0.25 (0.8	8) 7) 3)**	-3.63 (2.05) -2.48 (1.27) -4.11 (2.52) -5.75 (2.76)*		-0.13 (0.6) 0.16 (0.79) 0.71 (0.8) -0.42 (0.8)		4.42 (1.99)* -4.3 (1.50)** -2.58 (1.43) -1.96 (1.51)	-0.96 (1.5) -2.09 (1.16) -2.62 (1.48) -2.41 (1.22)*	
GROUP 4	DD	SE	DD	SE	DD SE	ш	DD SE	DD	SE	DD	SE	DD S	E	DD SE	DD SE	
2003 2004 2005 2006	-0.32 (0.8) -0.84 (1.14) -1.26 (1.28) 0.15 (1.24)		-0.08 (0.64) -0.85 (0.76) -0.22 (0.62) 0.45 (0.72)		-0.92 (0.79) -0.47 (0.82) -1.49 (0.81) -0.46 (0.95)).09 (1.27)).15 (1.38)).14 (1.63)).25 (1.72)	-0.95 (1.5 0.07 (0.9 1.5 (0.9 -0.11 (0.8	1) 6) 7)	-3.7 (2.39) -3.16 (1.39)* -5.61 (2.43)* -6.27 (2.81)*		-0.44 (0.64) 0.16 (0.76) -0.06 (0.76) -0.72 (0.74)		-5.92 (1.72)** 4.44 (1.60)** -3.84 (1.65)* -2.42 (2.04)	-1.41 (1.78) -2.3 (1.25) -3.37 (1.61)* -3.59 (1.29)**	

∪ -* /
asses A
her p
4 Num
ΧŠ

	North East	North West	Yorkshire & The Humber	East Midlands	West Midlands	East	London	South East	South West
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.03 (0.1271) 0.32 (0.1474)* 0.43 (0.1766)* 0.20 (0.2291)	-0.08 (0.096) 0.18 (0.1197) 0.22 (0.1539) 0.07 (0.1614)	-0.04 (0.0851) 0.26 (0.0918)** 0.37 (0.1277)** 0.19 (0.1543)	0.20 (0.1295) 0.84 (0.1840)** 0.54 (0.2967) 0.24 (0.3004)	0.21 (0.1465) 0.49 (0.1529)** 0.85 (0.2323)** 0.50 (0.2442)*	-0.04 (0.2248) -0.08 (0.247) -0.07 (0.2536) -0.10 (0.2907)	0.05 (0.0938) 0.29 (0.1106)** 0.17 (0.142) 0.06 (0.1501)	-0.10 (0.1093) 0.16 (0.1937) 0.43 (0.6458) 0.09 (0.3741)	-0.10 (0.1923) -0.26 (0.3471) -0.40 (0.4338) -0.54 (0.309)
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.03 (0.1157) 0.12 (0.1712) 0.34 (0.1842) 0.17 (0.1982)	-0.10 (0.0974) -0.02 (0.1136) 0.02 (0.1404) 0.07 (0.1648)	-0.09 (0.0837) 0.20 (0.0944)* 0.29 (0.1303)* 0.30 (0.1534)	0.17 (0.1526) 0.61 (0.2089)** 0.22 (0.2448) -0.06 (0.2156)	0.34 (0.1282)** 0.56 (0.1592)** 0.79 (0.2167)** 0.40 (0.207)	0.22 (0.1412) 0.29 (0.1484)* 0.63 (0.4588) 0.63 (0.4088)	0.08 (0.0892) 0.31 (0.1069)** 0.23 (0.1518) 0.04 (0.1467)	0.32 (0.3642) 0.30 (0.2979) 0.74 (0.7556) 0.32 (0.6961)	-0.14 (0.2154) 0.08 (0.1553) -0.27 (0.2423) -0.50 (0.3351)
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.16 (0.1251) 0.36 (0.1647)* 0.63 (0.1565)** 0.65 (0.1851)**	-0.10 (0.0864) 0.06 (0.1167) 0.10 (0.1309) 0.10 (0.1255)	-0.06 (0.0683) 0.12 (0.0936) 0.25 (0.1246)* 0.16 (0.1514)	-0.03 (0.1522) 0.49 (0.1806)** 0.31 (0.2403) -0.03 (0.2447)	0.14 (0.1091) 0.11 (0.1466) 0.34 (0.1939) 0.14 (0.2224)	0.43 (0.287) 0.08 (0.2268) 0.31 (0.2539) 0.44 (0.2833)	-0.08 (0.0783) 0.15 (0.092) 0.15 (0.1171) -0.09 (0.1359)	0.12 (0.239) -0.06 (0.2394) 0.17 (0.4649) -0.25 (0.4135)	-0.21 (0.1794) -0.28 (0.2694) -0.47 (0.3282) -0.50 (0.2973)
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.14 (0.1347) 0.39 (0.1698)* 0.64 (0.1688)** 0.53 (0.2063)*	-0.02 (0.0893) 0.11 (0.1177) 0.18 (0.1375) 0.16 (0.133)	0.03 (0.0925) 0.18 (0.1269) 0.26 (0.1366) 0.16 (0.1466)	0.04 (0.1657) 0.45 (0.1878)* 0.30 (0.2626) 0.01 (0.2476)	0.25 (0.1284)* 0.29 (0.1668) 0.43 (0.2027)* 0.16 (0.203)	0.16 (0.2196) 0.08 (0.227) 0.48 (0.381) 0.45 (0.3578)	0.04 (0.0814) 0.25 (0.1061)* 0.21 (0.1294) -0.10 (0.1308)	0.08 (0.2737) 0.08 (0.2162) 0.23 (0.5204) -0.10 (0.4937)	-0.17 (0.191) -0.03 (0.1608) -0.35 (0.2084) -0.54 (0.2745)*

₽*-G
passes
umber
(S4 N

	North East	North West	Yorkshire & The Humber	East Midlands	West Midlands	East	London	South East	South West
GROUP 1	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.08 (0.1091) 0.09 (0.168) 0.20 (0.2372) 0.18 (0.2748)	-0.05 (0.0765) -0.04 (0.1076) 0.04 (0.1479) 0.07 (0.1271)	-0.18 (0.0953) -0.03 (0.1139) -0.05 (0.1318) -0.22 (0.1607)	0.00 (0.1712) 0.34 (0.2825) 0.17 (0.2931) 0.11 (0.3435)	0.06 (0.163) 0.20 (0.138) 0.60 (0.1718)** 0.41 (0.1973)*	-0.09 (0.3544) 0.01 (0.3685) -0.37 (0.3072) -0.39 (0.282)	0.00 (0.0925) 0.10 (0.1427) 0.06 (0.1401) 0.06 (0.1644)	-0.39 (0.1423)** -0.17 (0.1478) 0.11 (0.4568) 0.08 (0.3107)	-0.21 (0.1495) -0.52 (0.2376)* -0.57 (0.3129) -0.30 (0.1828)
GROUP 2	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	-0.06 (0.1137) -0.06 (0.1596) 0.25 (0.2347) 0.17 (0.2788)	-0.01 (0.0808) -0.06 (0.1043) 0.05 (0.1315) 0.20 (0.1456)	-0.27 (0.0934)** -0.09 (0.1076) -0.15 (0.1371) -0.16 (0.1886)	-0.02 (0.1757) 0.10 (0.2346) -0.06 (0.2579) -0.07 (0.2832)	0.27 (0.1533) 0.24 (0.1538) 0.63 (0.1521)** 0.31 (0.2088)	-0.14 (0.2171) 0.05 (0.2247) 0.01 (0.2812) -0.07 (0.3342)	0.11 (0.104) 0.20 (0.1468) 0.18 (0.1588) 0.10 (0.1639)	-0.26 (0.2602) -0.09 (0.1699) 0.61 (0.4598) 0.47 (0.4803)	-0.17 (0.1248) -0.18 (0.1096) -0.58 (0.2165)** -0.60 (0.3426)
GROUP 3	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.03 (0.1051) 0.17 (0.1526) 0.39 (0.1833)* 0.52 (0.2092)*	-0.04 (0.0675) -0.03 (0.0957) 0.07 (0.1141) 0.18 (0.1149)	-0.18 (0.0827)* -0.04 (0.1014) -0.07 (0.1296) -0.16 (0.1801)	-0.08 (0.1372) 0.18 (0.1998) 0.13 (0.2056) 0.12 (0.2409)	0.14 (0.0961) 0.17 (0.115) 0.49 (0.1318)** 0.19 (0.1809)	0.06 (0.2835) -0.21 (0.299) -0.10 (0.2555) -0.22 (0.2109)	-0.06 (0.0812) -0.01 (0.1211) 0.08 (0.1205) -0.12 (0.1526)	-0.13 (0.1801) -0.19 (0.1359) 0.05 (0.3342) -0.10 (0.2856)	-0.23 (0.1130)* -0.34 (0.1973) -0.30 (0.2687) -0.47 (0.2608)
GROUP 4	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE	DD SE
2003 2004 2005 2006	0.08 (0.1092) 0.20 (0.1622) 0.43 (0.1874)* 0.47 (0.2273)*	-0.03 (0.075) -0.02 (0.1032) 0.06 (0.1239) 0.18 (0.1251)	-0.13 (0.0928) -0.03 (0.1092) -0.06 (0.1289) -0.12 (0.1606)	-0.03 (0.1411) 0.13 (0.1939) 0.15 (0.2268) 0.06 (0.2411)	0.16 (0.1387) 0.14 (0.1312) 0.44 (0.1309)** 0.14 (0.1813)	-0.17 (0.2493) -0.13 (0.2706) -0.11 (0.2972) -0.25 (0.2759)	0.00 (0.0837) 0.11 (0.1201) 0.07 (0.1259) -0.23 (0.1364)	-0.28 (0.1842) -0.23 (0.1425) -0.01 (0.3717) -0.16 (0.3964)	-0.35 (0.1473)* -0.25 (0.1147)* -0.27 (0.2853) -0.43 (0.3104)

Appendix G: Key Stage 3 results, by region









