Department for Education

Regional differences in attainment in the early years

Research Report

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1 Executive Summary

Background

Our knowledge and understanding of regional differences in attainment is primarily focussed on primary and secondary schools. Overall, differences in attainment at primary and secondary school follow a geographic gradient, with the performance of regions improving as one moves from the North to the South of England (Perera 2016) Children and young people attending schools in London are more likely to outperform their counterparts living elsewhere in England (Greaves et al. 2014). This is especially so for those individuals who are from relatively disadvantaged backgrounds (Blanden et al. 2015; Burgess 2014). The existence of these geographic disparities in attainment suggests that the education system not as efficient or equitable as it should be.

The investigation of the regional gap in the *pre*-primary age group up to age 5 is of special interest due to the long-lasting consequences of early year's development: children who start school ready to learn have better life chances. Those who fall behind by the age of five have lower average educational attainment in the future (Field 2010) with lower attainment throughout primary school predicting lower achievement at GCSE level (Goodman & Gregg 2010) . However, there is currently very little information on the ages at which geographic gaps in attainment begin to open up, and it is unclear how far these differences might be in driving the well observed and larger gaps between regions at older ages. It is important to understand why some regions fare better than others in terms of attainment, with a view towards learning from positive examples in order to improve outcomes for all.

Research aims

This study had two main aims which were focussed on the early years up to age 7 in England.

1. Are there regional differences in attainment and cognitive and socio-emotional development across the course of early life?
2. What are the drivers of regional gaps in attainment and development and do they vary by age?

Methodology

Two different datasets were used to examine the formation of regional differences: the National Pupil Database (NPD) and the Millennium Cohort Study (MCS).

The NPD is a longitudinal database for all children in maintained schools/childcare settings in England, linking pupil characteristics to school and childcare settings and attainment. The analysis focussed on regional differences in the proportions of 5 year olds who reached a "good level of development"[1] at the end of the Early Years Foundation Stage Profile (EYFSP), between the years 2006/07 and 2014/15. Further analysis investigated ethnic differences in attainment and whether regional disparities varied according to whether a pupil is defined as disadvantaged (eligible for free schools meals).

The Millennium Cohort Study (MCS) is a nationally representative longitudinal study of 19,244 families with children born in the UK between 2000 and 2002. This data was used to identify the emergence of regional differences in attainment and development between the ages of 3, 5 and 7 years. Specifically, British Ability Scales II (BAS II) vocabulary scores (for ages 3 and 5) and word reading scores (for age 7) were investigated alongside socioemotional development based on the Strengths and Difficulties Questionnaire (SDQ) total difficulties score. The MCS was also linked to individual records from the NPD which allowed the examination of EYFSP and Key Stage 1 scores at ages 5 and 7 respectively. The MCS also contained a wide range of contextual information about the environment in which the child was raised, allowing a detailed investigation into which factors were likely to explain regional differences in attainment and development. However, the linked data did not include information about school quality. Multivariable regression analysis was used to identify which individual, family, schooling and childcare and local neighbourhood characteristics predicted attainment *within* each region of England. More detailed analysis, using Oaxaca-Blinder decomposition, estimated the extent to which each of these factors accounted for differences in attainment and development *between* regions.

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[1] Pupils that achieved a score of 6 or more across all 7 scales of the personal, social and emotional (PSE) as well as the communication language and literacy (CLL) areas of learning were considered as achieving a good level of development (GLD) in 2007.

In 2011 the GLD was measured according to these same criteria in addition to scoring 78 points or more across all 13 scales of the EYFSP.

Pupils that achieved at least the expected standard (2 points) across all early learning goals (ELGs) in 2015 were considered as overall achieving the excepted level of attainment.

Region was defined in this analysis in two ways: by Government Office Region (GOR); and by regional clusters determined by the Office for National Statistics (ONS). These ONS clusters are specific groupings of local authorities which are aggregated according to how similar they are, based on a set of 60 socioeconomic and demographic characteristics. The use of clusters was intended to reduce the level of variation within the characteristics of the local population, in order to make more accurate predictions as to which are the key factors which might explain differences in attainment and development.

The analysis began with a description of data from the NPD between 2006/7 and 2015/6, the analysis then shifted exclusively to the MCS. Longitudinal data allowed us to examine at what age regional differences started to emerge and what may have been driving these differences, albeit in a slightly earlier context to that captured by more recent NPD data.

Are there regional differences in attainment and development by age 5?

Based on evidence from the NPD, **there were significant regional differences in 5 year olds achieving a "good level of development" in 2015.** The proportions were highest in the South East (67.6%) and London (67.2%) but they were lowest in the East Midlands (54.9%).

Current trends mask significant historic variations. In 2007, London was the lowest performing region in England, but by 2011 it had moved into the middle of the regional distribution. Although the EYFSP used a different assessment tool in 2007 and 2011, the upward trajectory of London to its current rank in 2015 is clear. Moving in the opposite direction, the East Midlands has shown a steady decline in the proportion reaching a good level of development, as has the North West to a lesser extent.

Attainment also varies by sub-group. Disadvantaged pupils in the South and London are more likely to achieve a good level of development at age 5 than pupils in the North or Central regions. The emergence of the North/South divide in England was consolidated between 2011 and 2015, driven mainly by the improving performances of London's pupils. By 2015, pupils in London eligible for free school meals were considerably more likely to achieve a good level of development than their disadvantaged counterparts elsewhere.

Do regional differences in attainment and development vary across the early years?

For the Millennium cohort[2], regional differences in cognitive development varied as children grew older. This was most obvious in London, where children on average had the lowest vocabulary scores at age 3; this became the highest performing region by the time children were 7 years old. However, this contrasts strongly with other regions of England, such as Yorkshire and the Humber, where vocabulary performance relative to other regions remained stable during the early years.

Socioemotional development (SDQ total difficulties scores) did not vary with age – children in London were consistently less likely than those in other regions of England to have socioemotional difficulties between ages 3 and 7, whereas their counterparts in the West Midlands were consistently more likely. There was little variation with age across all other regions.

Looking more generally across all regions, differences in cognitive development were small when children are 3 and 5 years old, but it appears that this **regional gap grew slightly as children reached age 7**. This suggests that regional differences in cognitive development emerged soon after entry to primary school. From this evidence it is not possible to distinguish whether this is an age-effect and a consequence of the accumulated experiences of the previous 5 years, or whether it is directly related to the start of formal education.

How important are a region's characteristics in explaining regional differences in attainment and development?

For the Millennium Cohort[3] , there was considerable variation in the extent to which a range of factors (socioeconomic and demographic factors, childcare, the home learning environment and the local neighbourhood characteristics) **were associated with levels of attainment and development *within* each region.** For example, individual social characteristics were commonly associated with attainment in

[2] All findings from the Millennium Cohort are based on an earlier period (2004 to 2008) than findings from the NPD (2007 to 2015)

[3] *ibid*

one Government Office Region but not in one or more other regions. To add further complexity, inconsistent associations for various social characteristics were apparent across outcome measures at each age point.

However, when the variation in a region's socioeconomic characteristics was accounted for by examining trends within ONS clusters of similar neighbourhoods, a clearer story emerges. At ages 3 and 5, regional differences were most strongly associated with one or more socio-economic factors, with the home learning environment becoming a more significant predictor at age 7. This suggests that considering variation between regions is less informative than comparing regions with similar background characteristics. The implication is **that it is difficult to make recommendations for tackling regional differences in attainment if the regional unit is based upon geography** as opposed its social and economic composition.

What factors explain regional differences in attainment and development?

This analysis of the Millennium Cohort Study[4] demonstrated how **few regional differences in attainment and development exist once a range of contextual, explanatory factors have been accounted for.** The suggestion is that all things being equal, regional differences in attainment and development in the early years were generally small between 2002 and 2006. Furthermore, for the majority of regions for most outcomes at all ages, no significant differences were observed.

Where differences were seen, it was **the regional variation in ethnic composition and the socioeconomic profile which were the most consistent factors driving attainment differences** between London and other English Government Office Regions and ONS clustered neighbourhoods. Aggregated neighbourhood characteristics such as local area unemployment were important contributors to the regional gap, though with less consistency.

Further, the broad domains of explanatory factors investigated explained early years attainment gaps between regions differentially by age and attainment measures, in much the same way as variation within a region was inconsistently explained. These

[4] *ibid*

results suggest that the **nature of regional early years attainment gaps is highly context specific, with no single factor promising to close the gaps across the country.**

In summary, this study evaluated the extent of regional differences in early year's attainment in England and examined the likely causes of this geographic variation. Investing in data analysis in the early stages of child development not only provides insights into attainment in the early years, but it also lays down a foundation for the study of determinants of educational success across the life course into young adulthood.

2 Introduction

2.1 Background

There is a widespread concern about the growing disparities in educational achievement across regions. The geographical area where a child lives has become a powerful predictive factor of attainment in the last 30 years (Social Market Foundation 2016). In particular, secondary school children in London, including those from the most disadvantaged backgrounds, make significantly greater progress than their counterparts living in all other regions (Burgess 2014).

The existence of this and other regional inequalities requires investigation for two reasons. First, it suggests an inequitable education system which is not working as efficiently as it should in order to achieve fair opportunities and outcomes for all. Second, by identifying the reasons for high attainment among disadvantaged children this study may better inform future interventions aimed at improving attainment for all children.

2.1.1 Potential drivers of regional inequalities in attainment

There are a number of potential drivers of regional inequalities in attainment. Regional differences may be explained by the demographic characteristics of an area. One such characteristic is ethnicity, which might explain London's overachievement with respect to other regions in the country, given the increasing ethnic minority population in the capital and that these groups generally outperform their White British counterparts (Burgess 2014). School segregation, where disadvantaged pupils are concentrated within specific areas or schools, may also be a driver to consider when understanding attainment differences especially when pupil achievement in segregated school systems is thought to depend more on the social and cultural resources of their family (Gorard 2009). Regional differences in school quality have also been suggested, though not explicitly tested (Blanden et al. 2015) along with local initiatives aimed at improving school performance (Hutchings et al. 2012).

However, much of the evidence of regional differences in attainment is based on educational measures in later stages of childhood, specifically at the time that GCSEs are taken. There is some evidence of regional variation in early years development and school readiness at age 5 (Social Mobility & Child Poverty Commission 2015), but little information is available on the drivers of these differences at this and earlier ages. It is also unclear when regional attainment differences emerge. What is more certain is that there is no single explanation for geographic variation - the factors underpinning

variations in attainment (at all ages) are likely to be complex, interwoven and will require a rich source of data in order to unpick the pathways concerned.

This research contributes towards filling the evidence gap. It evaluates the extent of regional differences in early years attainment in England and uncovers the likely causes of this geographic variation. For this, the study makes use of a detailed source of information; the Millennium Cohort Study (MCS), covering children from age 9 months to 7 years, complemented by information obtained from the National Pupil Database (NPD) at age 5 and 7, coupled to information at local authority level.

2.2 Aims

This research project addresses the following two questions:

2.2.1 Are there regional differences in attainment and development across the course of early life?

The aim was to determine whether regional attainment differences are apparent at different stages of a child's early years, and investigate the age at which these variations might emerge. Doing so will identify the extent of inequality which exists in the early years, and will demonstrate a window of opportunity for interventions aimed at reducing inequalities in a critical period of development determining later attainment and overall life chances (Field 2010).

2.2.2 What are the drivers of regional gaps in attainment and development at different ages?

There are multiple factors operating at an individual or family level which are well-established determinants of physical, cognitive and socio-emotional development and educational attainment in the early life course. For instance, parental socio-economic or educational characteristics and the home learning environment (Melhuish et al. 2017) parenting styles (Kelly et al. 2011), health (Mensah & Kiernan 2010), aspirations, attitudes and behaviours (Goodman and Gregg, 2010) are all associated with levels of cognitive development and educational attainment. Fixed demographic factors such as ethnic background (Smith et al. 2015) and gender (Read 2016) are also found to be strong predictors of a range of attainment measures. It is also important to point out that the neighbourhood or region ought to be considered as a driver in its own right, as more than the sum of individual and family-level measures, and as a complex exposure which can determine early years development.

The study aims to show whether the aggregation of these characteristics at a regional level could be linked to patterns of attainment across geographical areas.

2.3 Objectives

The study has investigated whether there were regional/sub-regional attainment gaps by:

- Estimating the extent of differences in physical, cognitive, educational and socio-emotional development between geographical regions between the ages of 9 months and 7 years old.
- Examining whether regional differences in attainment have changed over the past decade.
- Comparing how attainment during the early years varied by region according to different scales of measurement (cognitive and non-cognitive measures).

The study has identified potential drivers of a regional gap in attainment by:

- Estimating the independent effect of *demographic factors* on regional variation in attainment
- Estimating the independent effect of *parental characteristics and the home learning environment* on regional variation in attainment
- Estimating the independent effect of *early years provision and care* on regional variation in attainment
- Estimating the independent effect of the local *neighbourhood and environment* on regional variation in attainment
- Examining whether each measure of attainment (cognitive, socio-emotional and educational) was explained by the same combination of drivers across all regions.

2.4 Research report structure

This report consists of the following chapters:

- Chapter 3: presents the data and methodology used for this research.
- Chapter 4: presents attainment inequalities across regions and over time, including an assessment of regional attainment by levels and types of disadvantage.

- Chapter 5: explores the ages at which regional differences appear and develop.
- Chapter 6: introduces the potential drivers of regional attainment inequalities, with the detailed results of this analysis shown in full in appendix E
- Chapter 7: assesses the extent to which attainment *within* regions is associated by the factors identified previously.
- Chapter 8: estimates how far the social, economic, demographic and neighbourhood characteristics explain differences in attainment *between* regions.
- Chapter 9: draws conclusions based on the findings of this analysis.

3 Methodology

This section details the data that is used in this report, including a brief summary of the variables that come from each source. Additionally, this section also explores the methodological techniques employed in the analysis.

In order to better understand the regional difference at early years in England, the study made use of two different datasets: the National Pupil Database and the Millennium Cohort Study.

3.1.1 The National Pupil Database (NPD)

The National Pupil Database (NPD) is a longitudinal database for all children in maintained schools/childcare settings in England (around 1.3 million children per year), linking pupil characteristics to school and childcare settings and attainment. The NPD holds pupil and school characteristics: age, gender, ethnicity, SEN (Special Educational Needs), FSM (Free School Meals), EAL (English as a Foreign Language), IMD (Index of Multiple Deprivation), IDACI (from the School Census), matched to pupil level attainment data -Early Years Foundation Stage Profile (EYFSP) and Key Stage 1 (KS1) results. More detailed and contextual information on individual's household circumstances known to predict attainment is not available in the NPD.

The outcomes considered for this research project included the analysis of teacher assessments at age 5 (EYFSP results) and at age 7 (KS1 results) for the academic years 2006/07, 2010/11 and 2015/16. These years were selected as they start at the time point where the Millennium Cohort data finish. Also, previous research has shown the widening of regional attainment gaps at KS4 during this time period (Greaves et al. 2014). This analysis aims to show whether the attainment gap is present by age 5.

Early Years Foundation Stage Profile (EYFSP) results

EYSFP is a holistic measure summarising pupil attainment (teacher assessments) at the end of reception (age 5). This includes, for 2006/07 and 2010/11, achievements of children aged 5 against 13 assessment scales, with 9 points within each scale. The 13 assessment scales are grouped into 6 areas of learning.

- Personal, social and emotional development
- Communication, language and literacy
- Problem solving, reasoning and numeracy
- Knowledge and understanding of the world

- Physical development
- Creative development

Since 2012/13 the outcome measure for early years development has changed, giving a stronger emphasis on the 3 prime areas which are most essential for a child's healthy development.

These 3 areas were: communication and language, physical and personal, social and emotional development. The new EYFSP made changes to the way in which children were assessed at the end of the EYFSP and requires practitioners to make a best fit assessment of whether children are emerging, expected or exceeding against each of the new 17 assessment scales. This new EYFSP framework contains 7 areas of learning covering children's physical, intellectual, emotional and social development:

- Communication and language
- Physical development
- Personal, social and emotional development
- Literacy
- Mathematics
- Understanding the world
- Expressive arts and design

Pupils working securely within the early years goal (6 to 9 average overall points) in 2007 and 2011 were considered as achieving at the expected level of attainment. Pupils that achieved a score of 6 or more across all 7 scales of the personal, social and emotional (PSE) as well as the communication language and literacy (CLL) areas of learning were considered as achieving a good level of development (GLD) in 2007, while in 2011 the GLD was measured according to these same criteria in addition to scoring 78 points or more across all 13 scales of the EYFSP. Similarly, pupils that achieved at least the expected standard (2 points) across all early learning goals (ELGs) in 2015 were considered as overall achieving the expected level of attainment. Pupils that achieved at least the expected standard (2 points) across the 3 prime areas as well as the Literacy and Mathematics areas of learning were considered as achieving a good level of development.

Key Stage 1 (KS1) results

Key stage 1 results provide a summary of a child's cognitive ability at the end Year 2 (age 7). Five main subjects are assessed at the end of Key Stage 1:

- Speaking and listening

- Reading
- Writing
- Mathematics
- Science

In this analysis point scores for maths and reading and writing were combined to form the measure of attainment, with a maximum value of 51.

Although the NPD is a large dataset including all children in England at each stage of their schooling, it does not provide a high level of contextual information on factors which may influence attainment. The NPD is limited to a range of demographic indicators or markers of special educational needs, coupled to a limited array of administrative data such as indices of deprivation at area level as opposed to individual circumstances. Additional information at an individual level which is known to predict attainment, such as the home learning environment, child caring arrangements, or parental characteristics and parenting styles are absent from the data, so the effects of these at regional level could not be observed.

3.1.2 The Millennium Cohort Study (MCS)

This is a national longitudinal birth cohort data set following the lives of around 19,000 children and their families born in the UK in 2000/01. The MCS's field of enquiry covers such diverse topics as parenting, childcare, child characteristics, siblings, child behaviour and cognitive development, child and parental health (birth weight, breastfeeding, etc.), parents' employment and education, home learning environment, family interactions, income and poverty, housing, neighbourhood and residential mobility, social capital and ethnicity.

The MCS's outcomes included in this research were the Denver Development Scale at 9 months of age, the British Ability Scales II (BAS) (vocabulary assessment at age 3 and 5 and word reading at age 7) and the Strengths and Difficulties Questionnaire (SDQ) at ages 3, 5 and 7.

The Denver Development Scale (Frankenburg et al., 1992) incorporates 3 domains of early year's cognitive and behavioural development; gross motor function, fine motor function and communicative gestures. A total of 13 questions regarding these domains were asked in the MCS (4 each for gross and fine motor function, and 5 for communicative gestures). As is discussed later, the descriptive results indicated that there were few significant differences between children at 9 months of age on this scale

and those differences that did exist were too small for regional analysis to be conducted using this measure.

The BAS II (Elliott et al. 1997) vocabulary assessments (for ages 3 and 5) and word reading assessments (for age 7) are measures of cognitive ability. All scores are standardised with regards to age. The vocabulary assessments have a mean T score of 50 and a standard deviation of 10, whilst the word reading assessments have a mean score of 100 and a standard deviation of 15.

The Strengths and Difficulties questionnaire (SDQ) (Goodman 1997) is a non-cognitive, behavioural measure, incorporating emotional symptoms, conduct problems, hyperactivity and inattention, peer problems, prosocial behaviour. Scores from each sub-scale are summed to create a total difficulties score. The questionnaire was self-completed by the parent or main carer of each cohort member at ages 3, 5 and 7.

Additionally, the MCS sample was linked to NPD results at the EYFSP and at the end of KS1. As the analysis of MCS data ranges between the years 2001 and 2006, this avoided the change in outcome measure for EYFSP in 2012/13. At this point our analysis picks up attainment trends in the NPD, during the years, 2006/7, 2010/11 and 2015/6.

The MCS provided a much richer source of contextual information regarding known predictors of educational attainment and development which were not available in the NPD. Nevertheless, there are a number of limitations of the data which ought to be considered. Of particular interest when considering early year's outcomes is that the quality of early childhood education and care (ECEC) for the individual cannot be quantified by this data. Instead the data is limited to the quantity of ECEC, with crude measures of the number of hours of provision per week, with limited information on who was the provider. The data is therefore not able to engage with the effects of ECEC structure and process on outcomes. Further, the relatively limited size of the MCS compared to the NPD means that differences in outcomes, or predictors, must vary to a considerable extent between regions in order to detect significant differences which overcome the variation within the smaller sample.

3.2 Data linkage (regional/local area characteristics)

The MCS sample was linked to administrative data using local authority identifiers. The following information was linked to individual records within the MCS at aggregate level.

- Ofsted school inspection data (regional level[5])
- Local authority budget for early years education per pupil.
- ONS area classification for local authorities (cluster membership).
- Unemployment & highest level of education information.
- Deprivation measures.

As with any data linkage, there is an increased risk of data being able to identify an individual participant. The study was therefore not authorised by the UK Data Service to link to school-level information available in the NPD for each MCS cohort member as this represented a risk of disclosure of individual identities. This inability to link represents a significant limitation to the study as the study was unable to assess the impact at an individual level of the wider school environment or school quality.

3.3 Analysis

The analysis began with a description of data from the NPD between 2006/7 and 2015/6, to provide a historical overview of regional differences in early years attainment as well as deliver a more up to date assessment of current trends. A sub-analysis investigated whether regional disparities vary according to whether a pupil is defined as disadvantage. Importantly, the study examined the consistency of these trends if different indicators of disadvantage and attainment are used.

After this point the focus of the analysis shifted exclusively to the MCS. Longitudinal data allowed us to examine at what age regional differences started to emerge and what may have been driving these differences, albeit in a slightly different context to that captured by more recent NPD data.

Multivariable regression analysis was used to estimate whether individual, family, school/childcare or local neighbourhood characteristics significantly predicted attainment within each region. Finally, this study used decomposition analysis to identify the main drivers of attainment inequalities between regions.

Free school meal (FSM) eligibility is widely used as a standard measure of disadvantage in children. However, the MCS contains a battery of questions allowing an alternative measure to be derived. An index of multiple deprivation was derived,

[5] This study was unable to link individuals to school level information due to the risk of data disclosure.

incorporating 4 domains; material deprivation, income deprivation, subjective deprivation and receipt of benefits (specifically income support, working tax credit, housing benefit or council tax benefit). The index has scores ranging from 0 to 4, with those with a score of 3 or higher being considered to be disadvantaged [6]. Approximately 31%, 27% and 25% of children were disadvantage in the MCS sample at ages 3, 5 and 7 respectively.

3.3.1 Raw Gap Size and over time trends

Descriptive analysis of the MCS was weighted to control for the clustered sample design, oversampling of disadvantaged groups, the ethnic boost and non-response bias using the weights provided by the Centre for Longitudinal Studies (CLS). Cross sectional weights for England only were used for the analysis of each age. The study was unable to use the longitudinal weight to account for attrition as a 4 wave longitudinal sample yielded an analytic sample too small for meaningful analysis. However, cross sectional weights at each age can be considered nationally representative.

The first step was to measure the size of the regional attainment gap comparing attainment results at different ages for all the outcomes considered across regions and ONS clusters (e.g. coastal towns versus cosmopolitan towns), grouping local authorities not by their geographical location, but by their own characteristics. This is of particular interest as regions could be diverse areas within themselves. Furthermore, when exploring differences for disadvantaged children, a larger regional aggregation was included, dividing England into 4 main geographical areas: the North, the South, London and the Centre.

3.3.2 Model Fit

The way the overall model of attainment ‘fit’ varied by different region has also been investigated. In other words, whether or not the proposed explanatory model of

[6] A measure of ‘multiple disadvantage was derived, ranging from 0 to 4 and based on how many of the following 4 components of poverty families were rated as ‘poor’:

• income poverty (<60% national median income).

• material poverty (not able to afford one or more of: birthday celebrations; annual holidays; money to spend on self; two pairs of shoes, a weather-proof coat).

• subjective poverty (whether the main respondent felt that they were just about getting by financially or worse).

• receipt of one or more benefits (income support, working tax credit, housing or council tax benefit).

attainment worked for all regions (and clusters) as they worked to explain national attainment figures. These results enabled us to understand how diverse factors take different levels of relevance in single areas of the country. This stage of the analysis allows us to determine which factors are significantly associated with differences in attainment within regions. Further, it is possible to observe which factors vary in their importance in explaining attainment by looking across models in different regions.

3.3.3 Decomposition Analysis

Decomposition analysis was used to identify the drivers of the regional differences in attainment. Specifically, Oaxaca-Blinder decomposition estimated how far the variation in regional attainment was explained by aggregated area characteristics at individual and neighbourhood level. This methodology attempted to isolate the relative importance of each factor in explaining the regional differences in child outcomes. Logically it follows that decomposition analysis is only possible when significant regional differences are observable.

It is important to note here that the amount explained by any given factor is conditional upon everything else included in the model. The amount explained by each factor (e.g. parents' educational level) reflects by how much the study predicts the regional attainment gap would close if the regional difference in this factor alone were equalised, whilst holding other factors constant. This means that models estimate the proportion of regional gaps in attainment explained by factors such as parental education after controlling for all other components in the model.

4 Are there regional differences in attainment and development in the early years?

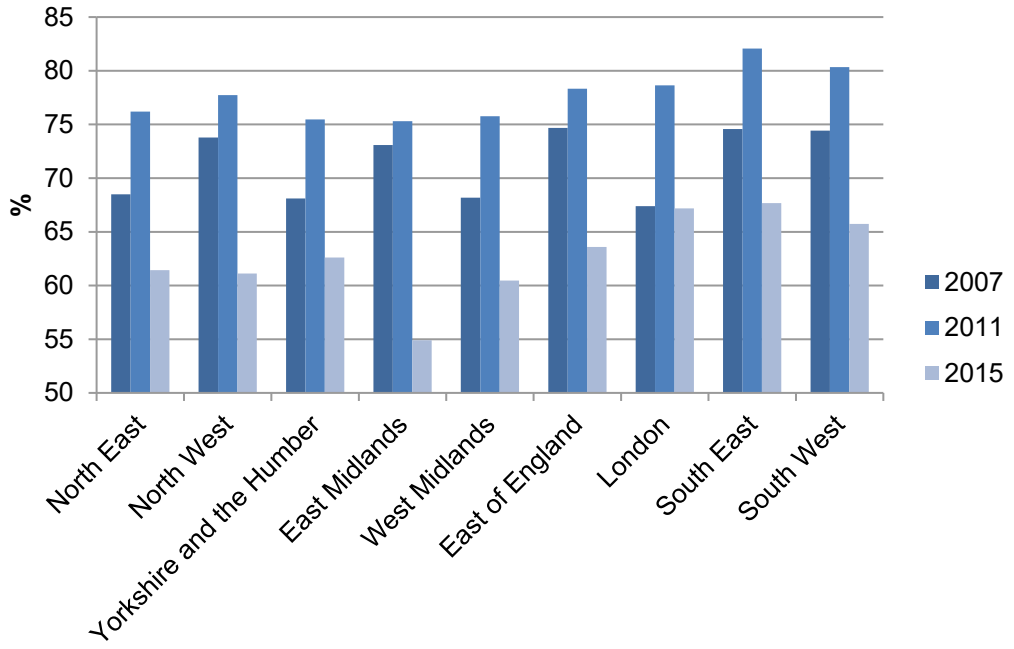
This chapter begins by looking at the proportion of pupils achieving a good level of development on the Early Years Foundation Stage Profile at age 5 at 3 time points (2007, 2011 and 2015), to assess whether there were regional differences and whether they changed over time. A range of regional units were investigated in order to describe the geographic patterns of attainment, as well account for the considerable variation within these aggregated regions. Patterns of attainment at age 5 by different indicators of deprivation and ethnicity were investigated. Lastly, the analysis considered whether improvements in educational attainment during the first 3 years of primary school varied by region.

4.1 Regional differences in attainment over time across Government Office Regions (GORs) – evidence from the NPD

There were considerable changes in regional differences in the proportion of 5 year olds reaching a good level of development within the EYFSP between 2007 and 2015 (Figure 4-1). In 2007 the highest performing regions were spread widely across England. The East of England, the South East and the South West, closely followed by the North West and the East Midlands performed highest, whereas London, Yorkshire and the Humber and the North East were the lowest performing regions. Although the relative differences between regions were narrower in 2011, the North-South divide became more prominent. This can be attributed to the considerably higher performance of London, whereas the North East/West and the East/West Midlands and Yorkshire and the Humber were lower performing.

The introduction of a new measurement instrument in 2012 led to a universal decline across all regions in the overall proportion reaching a good level of development by 2015. This significant change to the assessment makes comparisons problematic between 2007 and 2012/2015 when assessing the absolute proportions achieving a GLD. Nevertheless, the relatively higher performance and upward trajectory of London, the South East, South West, and to a lesser extent the East of England, was sustained across the EYFSP's transition period . The higher relative performance of these areas, and lower performances of northern regions and the East Midlands consolidated the formation of the North/South divide which began to emerge in 2011.

Figure 4-1 Proportion achieving a good level of development (EYFSP, age 5) between 2007 and 2015, by GOR (NPD)



[Table C-1]

4.1.1 Within-region differences in attainment

Differences in attainment are observable at the aggregated level of Government Office Region. However, this unit of analysis is likely to mask variation in attainment within neighbourhoods at local authority level. The following analysis demonstrates this diversity among Government Office Regions by plotting the geographical location of the top 20% and bottom 20% scoring local authorities (LAs) in the country (using attainment data from the EYFSP, at age 5).

In 2007 (Table 1) a majority of London's LAs were in the lowest performing category (42% of LAs in London were in the bottom 20% performers). However, there was a general mixed distribution of high and low performing LAs across all the other regions. This suggests that the level of variation in performance within GORs is greater than the variation between them.

Table 1 Highest and lowest performing local authorities (LAs) at age 5 – 2007&2015 (NPD)

Region	2007		2015	
	Top 20%	Lowest 20%	Top 20%	Lowest 20%
East	27.7	14.9	22.0	41.7
East Midlands	25.0	10.0	35.0	30.0
London	9.1	42.4	12.1	0.0
North East	25.0	41.7	0.0	0.0
North West	15.4	7.7	13.2	23.7
South East	22.4	16.4	20.9	37.3
South West	21.6	13.5	22.2	30.6
West Midlands	16.7	33.3	26.7	13.3
Yorkshire and The Humber	9.5	33.3	0.00	19.1

Source: EYFSP (NPD, 2007&2015) Authors' analysis

By 2015, there was a clear divide between London and other regions, with a majority (12%) of its local authorities in the top 20% of performers and 0% in the bottom 20% of performers (Table 1). Conversely, the North West and the East of England, the East Midlands and the South East showed an increase in the proportion of the lowest performing LAs. The North/South divide was not obvious at LA level however, as inequalities were particularly common in the South West and the South East, where the highest and lowest performing LAs co-existed within the same region.

4.2 Regional differences in attainment over time across ONS neighbourhood clusters

The previous analysis at LA level demonstrated a high level of variation in performance within any given Government Office Region. Re-grouping LAs into clusters with common key population characteristics, provides a different perspective to regional differences by accounting for the local context. Therefore this classification not only

includes a geographical component, but the clustering of multiple characteristics accounts for the diversity within geographical regions[7].

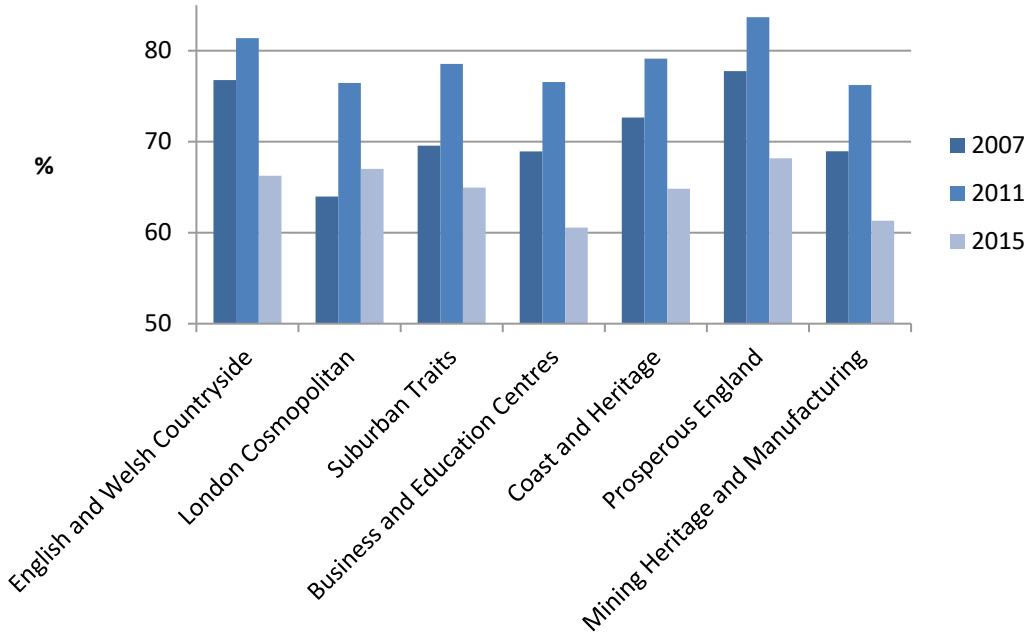
Local Authorities were classified into 7 different clusters which have similar unemployment level, age distribution, and education and deprivation levels. In total, 60 different LA-level characteristics were used to create these clusters:

- London Cosmopolitan
- English and Welsh Countryside
- Business & Education Centres
- Mining Heritage and Manufacturing
- Suburban Traits
- Prosperous England
- Coast and Heritage

Figure 4-2 shows that LAs within the Prosperous England cluster were the highest performing areas in the country. These areas had the highest proportion of pupils at age 5 achieving the good level of development - 78%, 85% and 68%, in 2007, 2011 and 2015 respectively. This level of development was closely followed by LAs within the English Countryside cluster. By contrast, pupil development in London Cosmopolitan was significantly lower than all regions in 2007 (64%), but by 2015 it was one of the highest performing clusters (67%), almost equal with Prosperous England (68%).

[7] For further information on the construction of the ONS neighbourhood classifications: https://www.ons.gov.uk/methodology/geography/geographicalproducts/areaclassifications/2011areaclassifications/methodologyandvariables

Figure 4-2 Proportion achieving a good level of development over time (NPD EYFSP, age 5) by ONS cluster



[Table C-2]

The improving performance of the London Cosmopolitan cluster correlates closely with patterns observed within the analysis at GOR level. This is expected due to the London Cosmopolitan cluster containing a high proportion of LAs within the London Government Office Region.

4.3 Attainment and deprivation

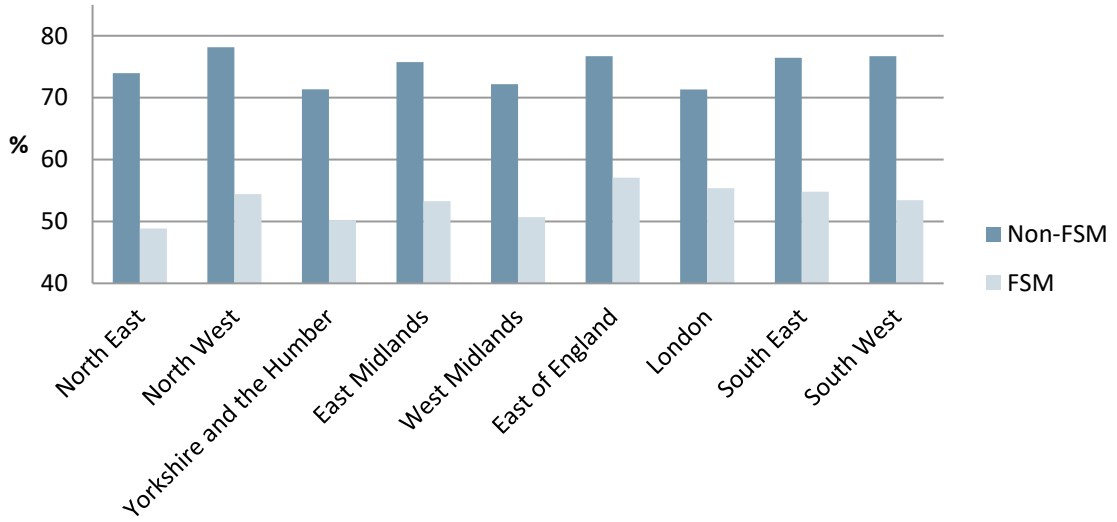
4.3.1 Evidence within Government Office Regions

There is a well-established association between higher deprivation and lower attainment. The following analysis investigates whether this relationship varies according to region. By identifying regions with higher than expected performance of deprived pupils, further research could possibly pinpoint what properties of the region might drive higher attainment.

Deprivation in the NPD was defined as whether the pupil was eligible for free school meals. In 2007, the largest attainment gap between children eligible for and not receiving free school meals (FSM) was in the North East (where the proportion of

deprived pupils achieving a good level of development at age 5 was 50%, compared to 74% of less deprived pupils. The smallest attainment gap was in London (55% for FSM children and 71% for non-FSM children). The East of England was the highest achieving region for deprived pupils and the North East was the lowest.

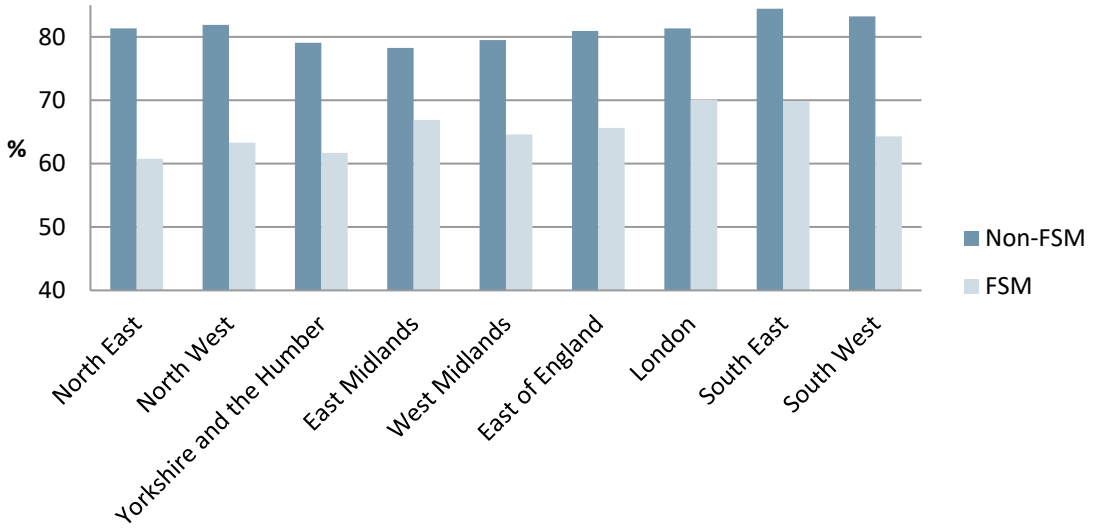
Figure 4-3 Proportion achieving a good level of development (EYFSP, age 5) for FSM and not FSM pupils by GOR (2007 NPD)



[Table C-7 Table C-10]

A similar pattern was evident in 2011. The largest attainment gap between children eligible for and not eligible for free school meals (FSM) was in the North East (61% and 81% for non-FSM and FSM children respectively) and the smallest gap was in London (70% for FSM children and 81% for non-FSM children). In 2011, deprived pupils in London were the highest achieving out of all the regions, with the North West, North East and Yorkshire and the Humber being the lowest achieving.

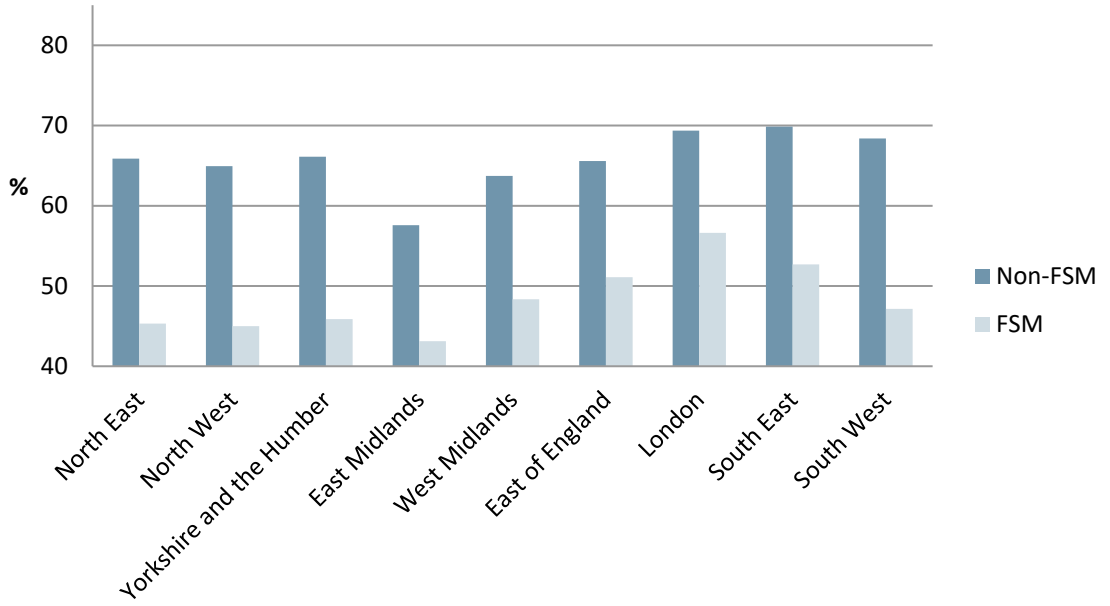
Figure 4-4 Proportion achieving a good level of development (EYFSP, age 5) for FSM and non FSM pupils by GOR (2011)



[Table C-7 Table C-10]

In 2015, the attainment gap in London was narrower compared to all other regions, with London's FSM pupils performing to the highest level overall. The largest inequalities in attainment were in the North East, North West, Yorkshire and the Humber and to a lesser extent the West Midlands. Perhaps the biggest change in 2015 compared to 2011 is the widening of the inequality gaps in all regions. This is likely to be due in part to the different EYFSP assessment used in 2015. It would appear that this newer assessment identifies differences in attainment by FSM status to a greater extent than the previous measure. Regional differences for non-FSM pupils in 2015 tended to be similar to 2011 and 2007, when the older EYFSP assessment was deployed.

Figure 4-5 Proportion achieving a good level of development (EYFSP, age 5) for FSM and not FSM pupils by GOR (2015 NPD)



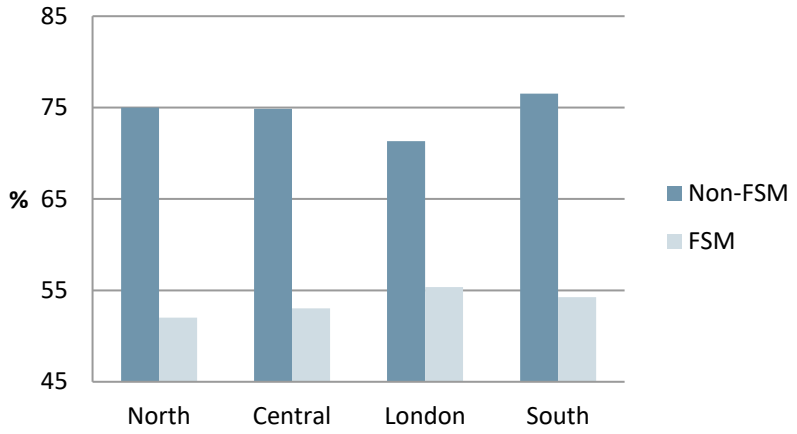
[Table C-7 Table C-10]

4.3.2 Attainment, deprivation and the North/South divide

Government Office Regions were aggregated to larger regional distributions[8] to investigate whether there was North/South divide in the attainment of deprived pupils. London had the narrowest gap between deprived and not deprived pupils in 2007, 2011 and 2015 (52%, 62% and 45% for FSM children and 75%, 81% and 66% for not deprived children respectively) (Figure 4-6). By contrast, the South of the country presented the highest inequalities between children with different levels of deprivation.

[8] *North*: North East, North West, Yorkshire and The Humber; *Central*: East Midlands, West Midlands, East of England; *South*: South East, South West; and *London*

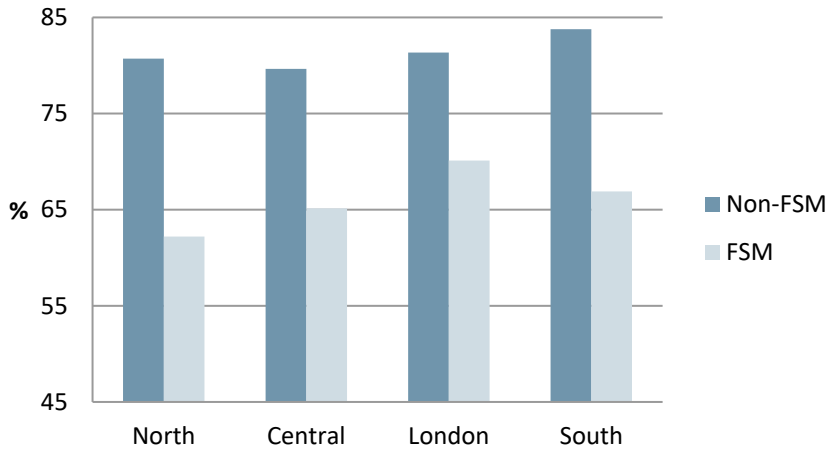
Figure 4-6 Proportion achieving a good level of development (EYFSP, age 5) for FSM and non FSM pupils by aggregated regions (2007 NPD)



[Table C-9 Table C-12]

In 2011, the North-South divide became evident for non-FSM and FSM children. Deprived pupils in London and the South were more likely to attain a good level of development compared to their counterparts in the North and Central regions. Allied to this was the finding that the non-deprived pupils in the South were also more likely to achieve development goals at age 5 than pupils elsewhere.

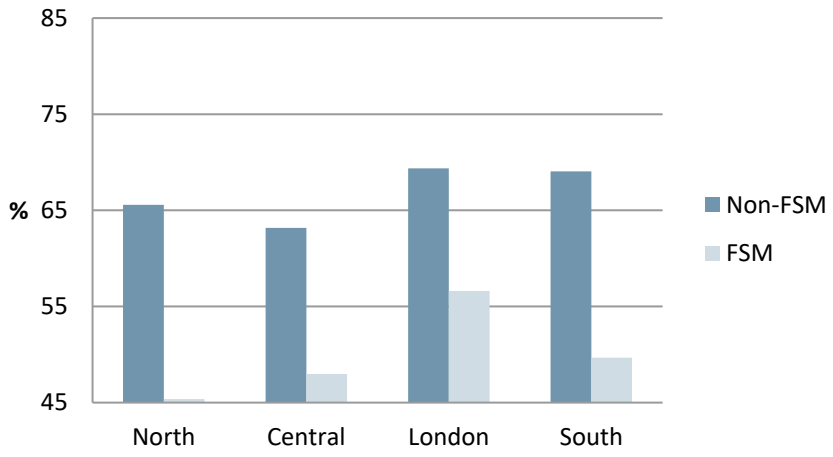
Figure 4-7 Proportion achieving a good level of development (EYFSP, age 5) for FSM and non FSM pupils by aggregated regions (2011 NPD)



[Table C-9 Table C-12]

In 2015 the regional North/South divide is clearly established. Non-FSM pupils in London and the South were the most likely to achieve a good level of development at age 5. Importantly, FSM pupils were considerably more likely than their counterparts in the North and Central regions to achieve their development goals. It is unclear how much of the improved performance of deprived pupils is due to the changes to the EYFSP assessment. Nevertheless, these findings are consistent with the overall upward trajectory of FSM pupils between 2007 and 2011.

Figure 4-8 Proportion achieving a good level of development (EYFSP, age 5) for FSM and non FSM pupils by aggregated regions (2015 NPD)

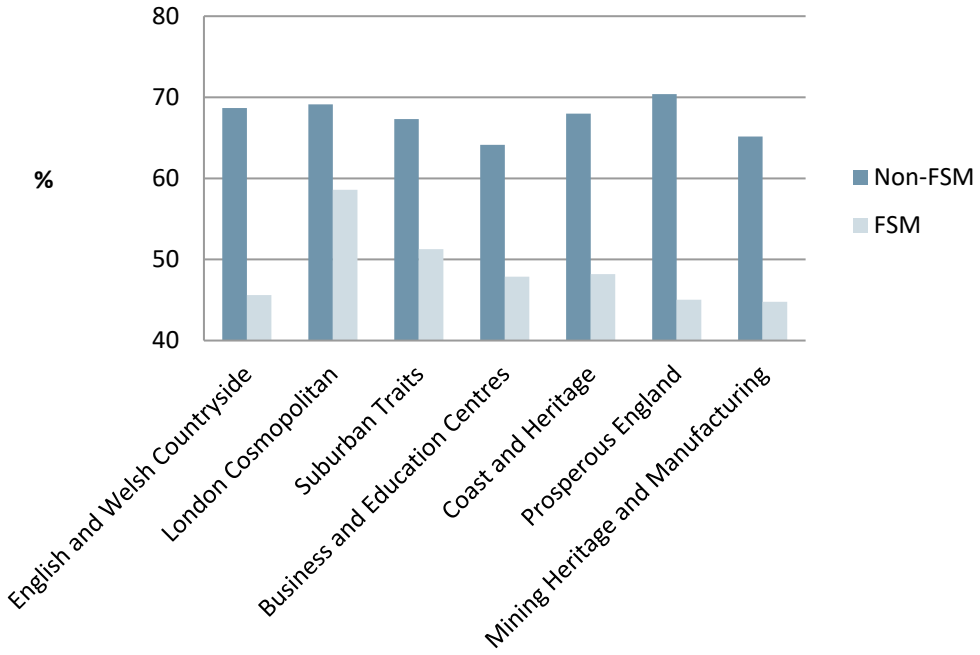


[Table C-9 Table C-12]

4.3.3 Attainment and deprivation within the ONS regional clusters

ONS clusters are derived from LAs of similar neighbourhood attributes, implying that deprived pupils in any given cluster experience broadly the same level of deprivation as one another. It is therefore noteworthy that the association between deprivation and attainment at age 5 varies widely by cluster in 2015. This suggests that the wider characteristics of clusters interact with the association between deprivation and attainment. For instance, Figure 4-9, deprived pupils in London Cosmopolitan were considerably more likely to achieve a good level of development compared to pupils in all other clusters. Therefore there was a weaker association here between attainment and deprivation. Relatedly, deprived pupils in LAs located in Prosperous England, Mining, Heritage and Manufacturing and in the English and Welsh countryside achieved a much lower level of development, implying a stronger association between deprivation and attainment. It is worth noting that LAs in Prosperous England were the highest achieving, suggesting that the effect of deprivation in this region is particularly acute.

Figure 4-9 Differences in attainment (EYFSP, age 5) for FSM and non-FSM pupils by ONS cluster (2015 NPD)



[Table C-8 Table C-11]

These findings raise the question of what are the broader characteristics of the clusters which potentially buffer pupils from the effects of deprivation, such as in the London Cosmopolitan cluster? Conversely, what common factors appear to exacerbate the effects of deprivation in other clusters, as observed in Prosperous England? Both questions above assume that deprivation operates similarly for pupils in each cluster, and that the measure of 'eligible for of free school meals' captures deprivation, and its association with attainment, to the same extent. The following analysis explores this assumption.

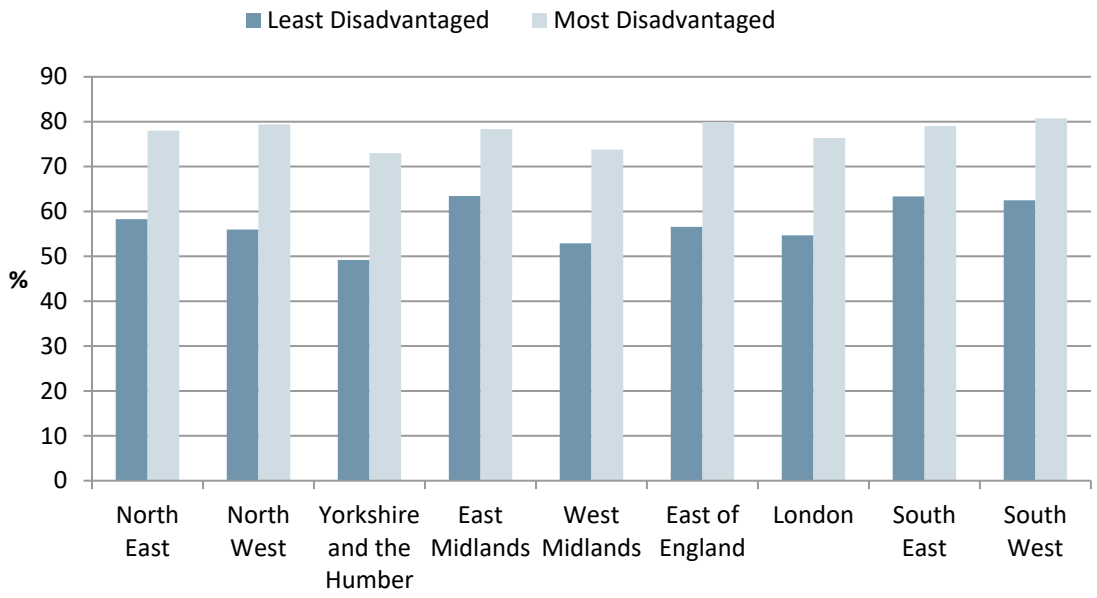
4.3.4 Alternative measures of deprivation and attainment – evidence from the Millennium Cohort Study (MCS)

The deprivation measure in the MCS captures a more complete concept of disadvantage than it was possible to measure using the NPD (which is limited to eligibility for free school meals). For this analysis, the most deprived pupils were those in the lowest quintile of a derived deprivation score which assessed income deprivation, material deprivation, subjective deprivation and receipt of means-tested benefits. The least deprived pupils were in the uppermost quintile. The following analysis investigates

the levels of development on the EYFSP by deprivation, of MCS pupils during the same year as our NPD data, in 2006/7.

The most deprived group had the lowest proportion of pupils achieving a good level of development in all regions in 2006 (sweep 3 of the MCS). Proportions achieving a good level of development were lowest in Yorkshire and the Humber, though this is in the context of low levels of development generally. Meanwhile deprived pupils in the East Midlands, and South East and South West were more likely to attain their development goals.

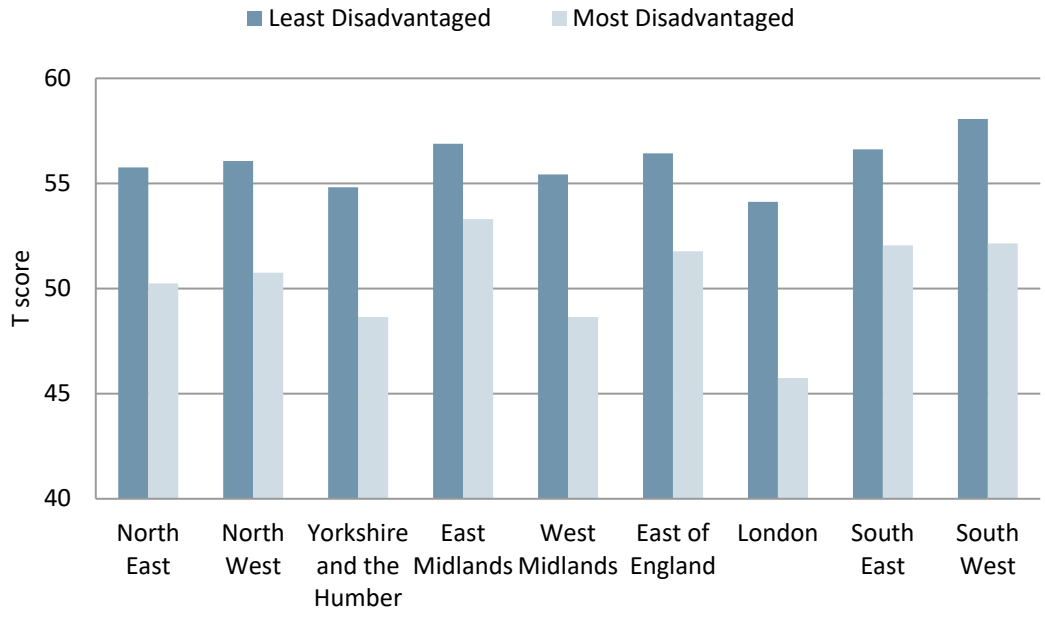
Figure 4-10 Proportion reaching a good level of development at EYFSP by level of deprivation, by GOR (2006, MCS)



[Table C-5]

These findings were broadly similar when the BAS II vocabulary outcome was considered. Again, deprived pupils the East Midlands, and the South East and South West were the highest scoring, with Yorkshire and the Humber and London scoring lowest (Figure 4-11).

Figure 4-11 Mean BAS II vocabulary T scores by level of deprivation at age 5 by GOR[9] (2006, MCS)



[Table C-13 Table C-17]

Based on this more refined measure of deprivation, it was noteworthy that deprived pupils in London had the lowest average BAS II vocabulary scores at age 5 in 2006/7 (Figure 4-11), as well as relatively low performance on the EYFSP measure (Figure 4-10). Furthermore, London also exhibited the largest attainment gap between the least and the most deprived children, suggesting a high level of inequality in attainment. This is in contrast to Figure 4-3 (which showed that London's deprived pupils were one of the relatively higher performing groups when FSM status was used as an indicator of deprivation (these pupils were out-performed by deprived pupils in the East of England only).

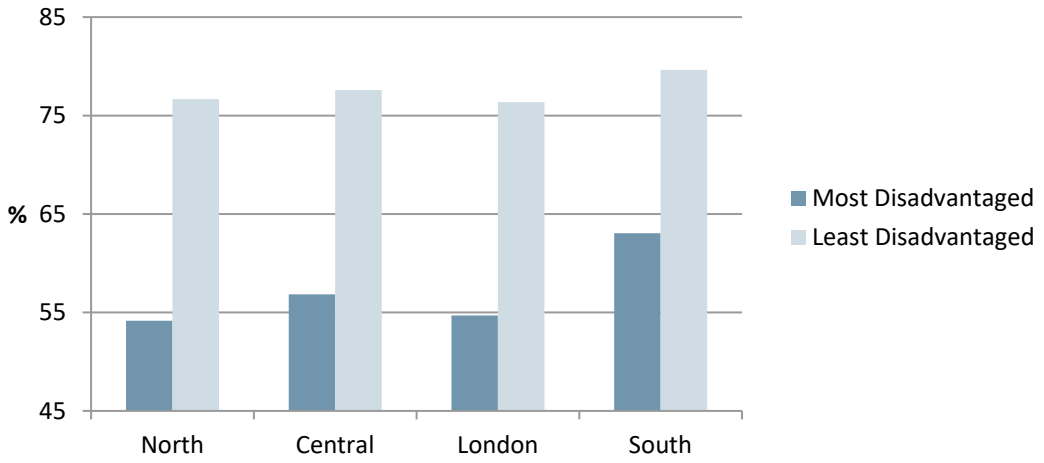
It is important to note that the association between the EYFSP score and the multiple measure of deprivation and the single item measure of FSM varied by region. For instance, in London the proportion of pupils obtaining a "good level of development" was similar over both measures. Conversely in other regions, such as the North East, East

[9] Disadvantage score is an inherent characteristic of each ONS cluster. Therefore it is not possible to analyse differences in attainment by disadvantage within all ONS clusters due to small sample sizes in certain groups. For instance, "Prosperous England" cluster contained no "disadvantaged" MCS members.

Midlands, the South East and the South East and the South West, there was much greater variation in scores between indicators of disadvantage - a greater proportion (~10%) of pupils outside of London reached a good level of development on the multiple scale compared to the FSM scale.

Further evidence of the variable associations between attainment and the two measures of disadvantage is presented in Figure 4-12. Using the multiple measure of disadvantage, disadvantaged pupils in the South had the relatively highest levels of development whereas their counterparts in the North, Central and London regions were at generally lower levels. This is in contrast to Figure 4-6 which showed that disadvantaged pupils (based on FSM) in London were the most likely to reach good levels of development, closely followed by those in the South. Again, across both measures, the aggregated regions outside of London showed a greater sensitivity to the disadvantage measure used.

Figure 4-12 Least and most disadvantaged pupils: EYFSP scores at age 5 by aggregated regions MCS (2006)



[Table C-6]

These observations raise the possibility that the association between attainment and disadvantage measures vary by region. Although the relationship between EYFSP score and disadvantage was consistent for each measure in London in 2006, other regions were more sensitive to each measure. More detailed work is required to understand whether the measure of disadvantage matters when assessing the attainment gap today.

[Table C-15 Table C-16]

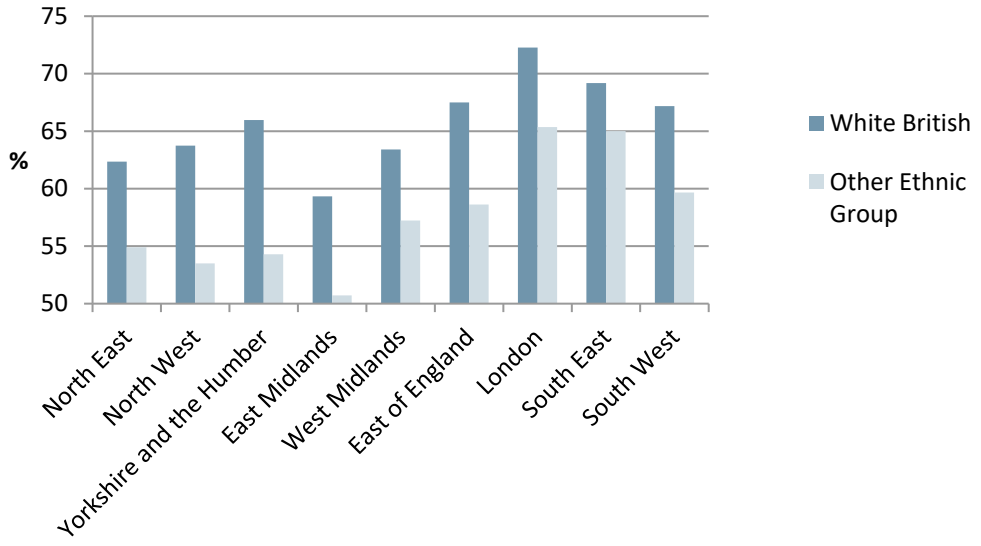
4.4 Regional variation in ethnic inequalities in attainment at age 5

Considerable ethnic differences in educational success at KS4 have been identified and these have been suggested as a potential driver of regional differences in attainment (Burgess 2014). Less is known about the extent of ethnic differences in the early years at EYFSP. Given the multiple comparisons being made across several regions at 3 time points, for brevity, ethnic categories have been collapsed into the White British versus other minority group.

White British pupils had higher attainment on average compared to other ethnic groups in 2007, 2011 and 2015. These inequalities were apparent across all GORs (Figure 4-13 for 2015 only) as well as when neighbourhoods with similar characteristics were clustered together on the ONS classifications (Figure 4-14 for 2015 only). The consistent ethnic inequalities within the clusters are particularly important as they suggest that inequalities are present irrespective of the types of neighbourhoods in which the ethnic categories live. That is, ethnic differences are, broadly speaking, independent of region. However, this is a descriptive finding only and does not take other factors into account.

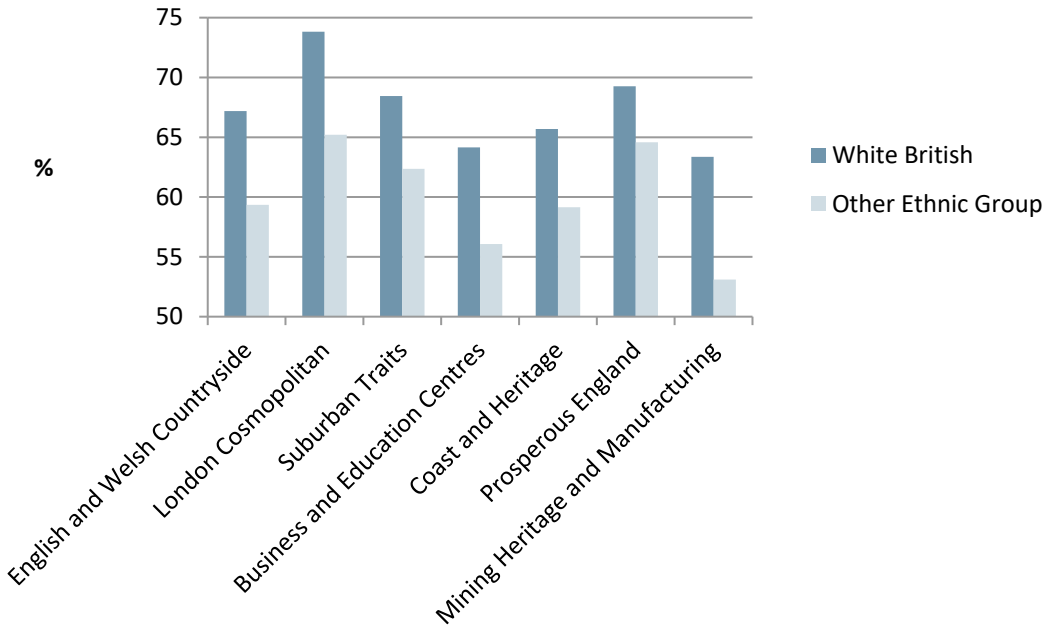
[Table C-21 Table C-22 Table C-23 Table C-24]

Figure 4-13 Ethnic differences in proportions reaching a good level of development at age 5 (EYFSP) in 2015, by GOR (NPD)



[Table C-21 Table C-23]

Figure 4-14 Ethnic differences in proportions reaching a good level of development at age 5 (EYFSP) in 2015, by ONS cluster (NPD)



[Table C-22 Table C-24]

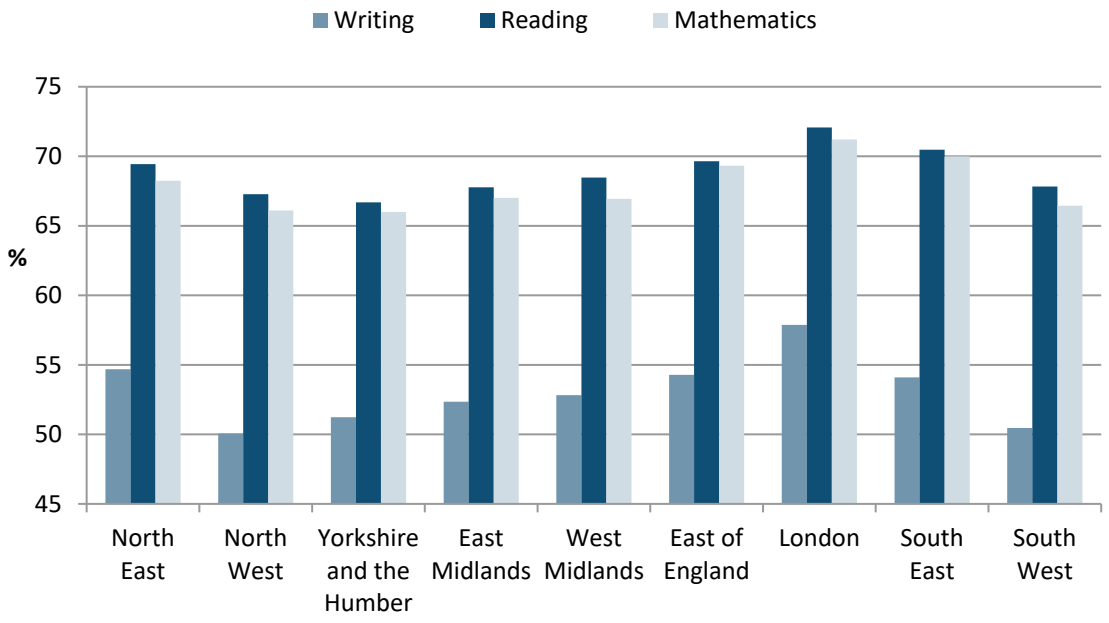
These early years' inequalities may be a consequence of White British pupils being more proficient in English, assuming that children from other ethnic groups were more likely to be or have parents who were not native English speakers. Further analysis will investigate trends in later years where language proficiency is likely to be less of a confounding issue.

4.5 Regional variation in improvement between ages 5 and 7

NPD data was used to examine regional variation in improvements in attainment between ages 5 and 7. Improvement was defined as the proportion of children who were below a good level of development at the EYFSP but were at or above the expected level at Key Stage 1.

Pupils in London in 2015 who were below a good level of development at age 5 were significantly more likely to improve than their counterparts in all other regions. This was the case for KS1 results in reading (72%), writing (58%) and mathematics (71%). This contrasted with lower levels of improvement made by children the North West and Yorkshire and the Humber.

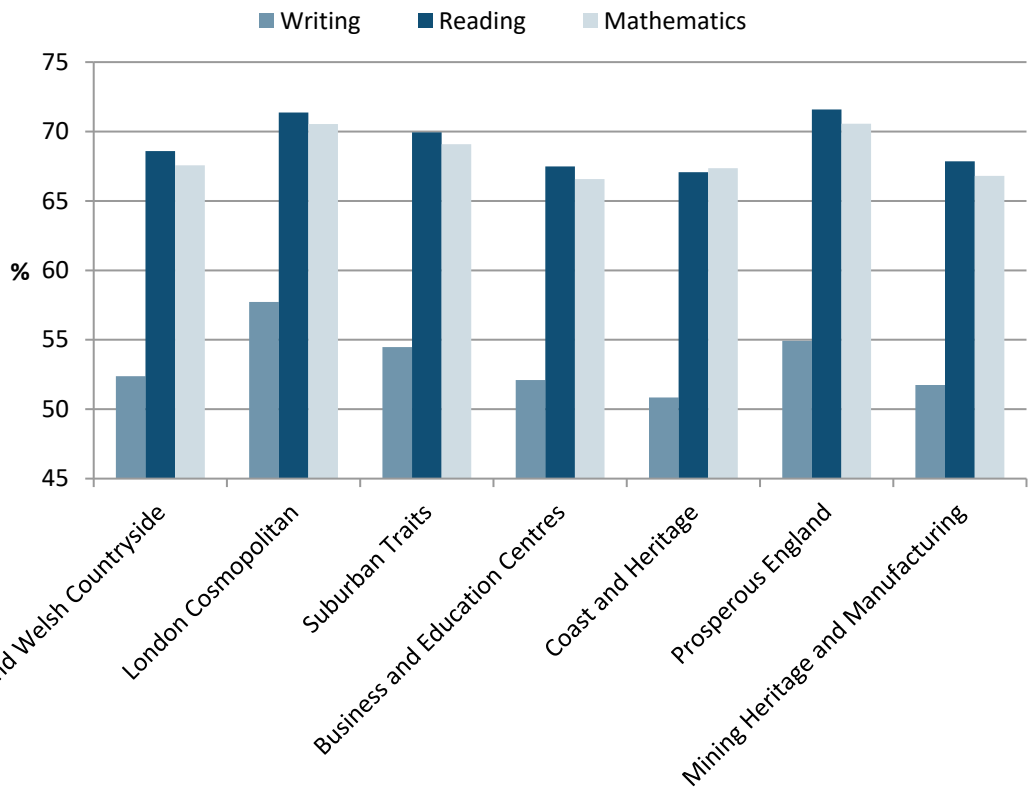
Figure 4-15 Proportion of children improving between EYFSP and KS1, in 2015 by GOR (NPD)



[Table C-3]

When investigating pupil progress between ages 5 and 7 within ONS Local Authority clusters in 2015, it is apparent that pupils in Coastal Towns and Business and Education Centres were the least likely to improve if they did not achieve a good level of development by age 5 (Figure 4-16). Meanwhile pupils in LAs within the London Cosmopolitan and Prosperous England clusters experienced the highest levels of progress. Trends in progress were consistent across all 3 measures of writing, reading and mathematics at age 7, in the ONS clusters as well as at GOR level.

Figure 4-16 Proportion of pupils that made an improvement between their EYFSP and their Key Stage 1 (KS1) in 2015, by ONS cluster (NPD)



[Table C-4]

4.6 Summary

This chapter has described shifting patterns of regional differences in attainment at age 5, between 2007 and 2015. The most obvious finding, already documented elsewhere, is how London has the second-highest proportion of pupils achieving a good level of development in 2015, despite it having the lowest level in 2007. Meanwhile, the

achievement of pupils in the early years in the East Midlands has declined markedly, as it has in the North West to a lesser extent. A more stable pattern over time is evident when local areas with similar social, economic and demographic characteristics are grouped together and analysed as specific clusters. For instance, pupils from areas defined as Prosperous England had the highest levels of development 2007, 2011 and 2015. At the other end of the achievement scale, areas with characteristics common to Business and Education Centres were one of the lower performing regions over the same time period. This consistency suggests that the characteristics common to these distinct regions may well underpin their overall levels of attainment. Furthermore, it suggests caution when using GOR to make generalised claims about levels of attainment due the higher level of variability in the background characteristics of the local population.

Although attainment varies by region, it also varies by sub-group. Disadvantaged pupils in the South and London are more likely to achieve a good level of development at age 5 than pupils in the North or Central regions. The emergence of the North/South divide appears to have been consolidated between 2011 and 2015, driven mainly by the improving performances of London's pupils. By 2015, disadvantaged pupils in London are considerably more likely to achieve a good level of development than their disadvantaged counterparts elsewhere.

However, the findings presented here suggest that relative success of pupils eligible for free school meals in London does not hold if a different and more detailed measure of disadvantage is applied. Our findings showed that in 2006, multiply- disadvantaged Millennium Cohort members aged 5 living in London had some of the *relatively* lowest levels of attainment, and considerably lower levels of cognitive development than all other regions. This is not to say that London's pupils scored lower using this more detailed measure – the proportion reaching a good level of development was the same irrespective of which disadvantage indicators were used – but it was the pupils living in regions outside of London which scored higher when the multiple indicator of disadvantage was used. A more detailed analysis of FSM which maps onto wider characteristics within the regions will be needed to understand whether FSM does indeed vary regionally in its meaning or importance.

5 Regional differences in attainment and development across the early years

The previous chapter explored at which year regional differences have emerged in the early years, specifically for 5 year olds. This chapter provides a brief overview of the raw differences in attainment between different parts of England at different ages. The analysis examines how a range of attainment outcomes vary by the age of the Millennium Cohort member, starting at age 3 in 2002/3, at age 5 in 2006 and again at age 7 in 2008/9.

5.1 Regional changes in attainment and development by age

At age 3, children in the South West of England significantly outperform their counterparts, scoring just under 2.5 points higher on the BAS II vocabulary assessment than the next best performing region (the East of England). Children in this region are also the best performing when pupils are aged 5, although the difference between their scores and the other regions are much smaller at this age. However, at age 7, children from the South West score similarly to many of the other regions of England.

Conversely, pupils from London are amongst the weakest performers on the BAS II assessments at age 3, with only Yorkshire and the Humber scoring lower. However, pupil's scores in London increased substantially relative to their peers as they got older. At age 5, pupils in London were very similar to a large number of other regions, but at age 7 pupils from London scored significantly higher than pupils from all other regions. These pupils scored almost 4.5 points more than the next high performing region (the North East) at this age[10].

This dynamic effect is also observed when considering the results by ONS cluster, with some regions scoring lower at an early age before showing higher attainment as children get older. Children in London Cosmopolitan and Suburban Traits areas are the 2 poorest performing areas on the BAS II assessments at ages 3 and 5. This trend is reversed when children are 7 years old, with children in these areas scoring highest on

[10] The BAS II word reading score used at age 7 follows a different scaling to that of the vocabulary score used at ages three and five, and therefore differences in point scores should not be directly compared between age groups).

the BAS II assessments. SDQ scores appear to be more static, with little variation between clusters over time.

[Table D-1 Table D-2]

5.2 Regional stability in attainment and development by age

Children from Yorkshire and the Humber had the lowest BAS II scores at ages 3 and 5. Unlike London and the South West of England, their results did not change substantially as children got older. Although pupils from Yorkshire and the Humber were not the worst performing region at age 7 (East Midlands), they were still in the bottom 3 performing regions.

The SDQ scores are more static, and less likely to change relative to other regions as pupils get older. Children from London consistently score lowest on the Strengths and Difficulties questionnaires at all ages considered (higher socioemotional development). Conversely, children from the West Midlands consistently exhibit higher SDQ scores than their peers.

When looking at the ONS clusters this trend can also be observed. Children living in Prosperous England were amongst the highest performers at each age category, consistently scoring highly on the BAS II assessments and with low SDQ scores. These children also had the highest levels of attainment at KS1. Conversely, children in Business & Education Centres were amongst the lowest performers across each age category, scoring highest on average on the Strengths and Difficulties questionnaire and consistently amongst the poorest performers on the BAS II assessments.

[Table D-1 Table D-2]

5.3 Widening of the cognitive attainment gap at age 5

Regional differences in BAS II vocabulary scores across GORs regions were modest and not significantly different at age 3. There was weak evidence of inequalities widening to a small degree at ages 5 and 7. This trend was similar on the SDQ scale as well as EYFSP and KS1.

However, there was much stronger evidence of increasing regional inequalities in BAS II scores with age when children were classified into ONS clusters. Between ages 3 and 5, children in Prosperous England scored higher than their counterparts elsewhere, but generally there was a low level of regional equality at both ages. By age 7, children in

London Cosmopolitan performed at considerably higher level than those in all other regions. Meanwhile, children in Coastal and Heritage, Business and Education Centres and to a lesser extent Mining and Manufacturing areas were clearly behind all other regions in terms of their cognitive development. There were less marked regional trends throughout the early years in terms of SDQ scores as well as the transition between EYFSP and KS1.

[Table D-1 Table D-2]

5.4 Summary

Relative to other regions, attainment in some regions changed as children grew older. This is most obvious in London, where children on average have lower attainment at age 3, but become the highest performing region by the time children are 7 years old. However, in other regions, such as Yorkshire and the Humber, performance relative to other regions remains stable during the early years. Differences in raw attainment between regions are small when children are 5, but it appears that this gap is growing as children get older.

6 Drivers of regional differences in early years attainment and development

There are well-established risk factors underpinning developmental inequalities, though it should be stressed that the identification of these is not the key line of inquiry in this project. Rather, this study is more concerned with whether these risk factors might vary by region and consequently underpin regional differences in attainment.

This phase of the analysis determines whether these established explanatory factors are associated with attainment outcomes within the Millennium Cohort data. The characteristics of the Millennium cohort which are associated with attainment can then be used in later phases of analysis aimed at directly identifying which factors might explain regional variations in attainment.

6.1 Explanatory factors

This analysis investigates a wide range of factors identified *a priori* from the existing literature as likely to be associated with educational attainment and socioemotional and cognitive development. These are grouped into the following categories: socio-demographic, home and parenting, childcare, neighbourhood characteristics and prior attainment. The variables used in this study are detailed in Table 2 below.

Table 2 List of variables included in the analysis

	Variable	Description
Socio-demographic	Mother's age at birth	Age of the child's mother at birth
	Birth weight	Weight (in kilos) of the child at birth
	Mother's education	Highest educational qualification of the child's mother
	Social Class	The social class (NSSEC) of the child's mother, father and highest parental, collapsed into 3 categories: managerial and professional, intermediate and lower
	Household work status	The employment status of the household, distinguishing between single parent and dual parent households
	Household disadvantage score	Multiple disadvantage is constructed using domains: Material deprivation, Income deprivation, subjective deprivation and whether receiving means tested benefits
	Mother's generational status	Whether the child's mother was born in the UK or abroad
	Ethnicity	Child's ethnicity

	Variable	Description
Home Learning	Ever breastfed	Whether the child was ever breastfed
	Mother's life satisfaction	Mothers self-reported life satisfaction
	Home Learning Environment	The number of activities the child participates in at home. For example, being read to
	Attendance at parents night	Whether the child's parents have been to parents evening
	Parental involvement in school	How many activities the parents get involved with at school
	Parental university aspirations	Whether the parents would like their child to attend university
	Kessler Scale	The Kessler psychological distress scale is used as a measure of anxiety and depression in the child's parent
	Pianta Scale	The Pianta child parent relationship scale is a measure of the relationship between a child and their parent.
	Parental Competence	Self-reported parental competence. It is important that any results from this variable are interpreted cautiously because we cannot establish causality
	Work life balance	Self-reported work-life balance of a child's parent
	Regular bed/meal/TV hour	Whether the child has a routine. Activities depend on the age of the child (Bed and Meal times at a ages 3 and 5, meal and TV times at 7 years)
	Regular breakfast	Whether the child eats breakfast on a regular basis
Childcare	Age started childcare	How old the child was when starting childcare
	Hours childcare per week	Hours per week the child attended childcare
	Full time or part-time childcare at reception	Whether the child attended reception part time or full time
	Flexible working	Whether the mother has ever used flexible working
Neighbourhood characteristics	Ethnicity Theil index	Whether the child's school is representative of the area in which it is located (Local Authority District). Scores at either end of the distribution suggest the school is very different from the area it is located in.
	Area ethnicity	Percentage of residents who are of a White ethnicity in the Local Authority District
	FSM Theil index	Whether the proportion of children eligible for FSM at the child's school is representative of the proportion of children eligible for FSM in the Local Authority District. Scores at either end of the distribution suggest the school is very different from the area it is located in.
	School quality	The percentage of schools in the child's Local Authority District rated 'Outstanding' by Ofsted.
	Area educational level	The percentage of people in the Local Authority District with qualifications at NVQ level 4 or higher
	Area unemployment	The percentage of people in the Local Authority District who are unemployed

	Variable	Description
	Budget per capita	The budget of the Local Authority per person in the Local Authority
	Generational status	The proportion of residents in the Local Authority District born outside of the UK
Prior attainment	BAS II score	BAS II vocabulary assessment (aged 3 and 5) – note that age 7 this is a word reading score with a different scale of scores
	SDQ score	Strengths and Difficulties Questionnaire, higher scores indicate a greater likelihood of problem behaviours
	EYFSP score	Early Years Foundation Stage Attainment

There was clear evidence that the majority of the well-established factors had significant associations with attainment. The key exception to this was related to development outcomes at 9 months of age. In this case, there was a generally weak relationship between socioeconomic and demographic factors, parental care and the home learning environment, as well as neighbourhood attributes. The few significant findings could be due to chance given the large numbers of statistical tests which have been performed at this point of the analysis. For this reason, developmental outcomes at 9 months of age were not included in any further analysis on account of there being little variation between individuals.

The detailed discussion of these findings preliminary to the main analysis can be found in appendix E, along with the supporting tables.

The following chapter builds on these foundations, by examining whether the factors associated with attainment at a national level remain associated with attainment at a regional level. Differences in the relationship at a regional level would suggest that these determinants operate differently depending on geography, meaning that they might be important factors in explaining regional differences in attainment.

7 How important are individual regional characteristics in explaining regional differences?

The previous analysis determined which factors are likely to predict differences in attainment within the context of the Millennium cohort. The next phase of analysis investigates whether these characteristics predict differences in attainment within each individual region. This process will identify those characteristics which are shown to be independently associated with attainment and worth consideration as factors likely to vary by region and underpin differences in attainment between regions. While this analysis can identify associations, these should not be interpreted as proof of a causal link.

7.1 Differences in attainment and development by region aged 3

7.1.1 BAS II vocabulary score

Aged 3, there was a significant association between a mother having low or no qualifications (NVQ Level 2 and below) and lower scores in 6 of the 9 regions of England. The magnitude of these differences was greatest in the North East, where a child whose mother had no qualifications is predicted to score on average 6.9 points less than a child whose mother has qualifications at NVQ Level 4 or 5.

Household employment is also an important predictor. Children in workless households (either a couple or single parent household) scored significantly lower than their peers in the majority of regions. The exceptions were in Yorkshire and the Humber, London and the South East.

If a child's mother was born outside of the UK, they are expected to score significantly lower than their peers in London and the South East (by 2.8 and 3.0 marks respectively). The generational status of a child's mother was not significant in any other region.

[Table F-1]

7.1.2 SDQ total difficulties score

Mother's educational qualifications are positively associated with SDQ scores of 3 year old children in just over half of the regions of England. That is, higher levels of

qualifications were associated with higher socioemotional development. This association is strongest in Yorkshire and the Humber, the West Midlands and London.

Girls had higher levels of socioemotional development than boys, in all English regions. However, this association was only significant in approximately half of cases.

Multiple disadvantage is significantly associated with lower levels of socio-emotional development. For each additional domain of disadvantage, children on average score 0.2 points higher (i.e. lower socioemotional outcomes) on the SDQ. The magnitude of disadvantage was greatest in the West Midlands, where for each additional domain of deprivation children scored 0.4 points higher on the SDQ.

White children in London had significantly higher levels of development when aged 3. There was no significant association between ethnicity and SDQ scores elsewhere in the country.

Finally, the relationship between a child and their parent (measured by the Pianta scale) was significantly associated with development across all regions. There was a negative association between being higher up the Pianta scale and SDQ scores, meaning that lower levels of socioemotional development were associated with lower relationship scores.

[Table F-3]

7.2 Differences in attainment and development by region aged 5

7.2.1 BAS II vocabulary score

Children of mothers with low or no qualifications (NVQ Level 2 or below) score significantly lower than their peers in the majority of English regions (with exception to the West Midlands and London). These scores were lowest in the East of England.

White children in Yorkshire and the West Midlands score significantly higher than their peers (by 2.9 and 2.8 points respectively). However, this is not significant in any other region of England.

[Table F-5]

7.2.2 SDQ total difficulties score

Mother's educational qualifications and the gender of children are less relevant when predicting SDQ scores when children are 5. Children whose mothers have no educational qualifications scored significantly higher on the SDQ than their peers in London and the South West, but this association was not significant elsewhere in England. Meanwhile girls scored significantly lower than boys in the South East only. Both of these factors were more important when children were 3 years old.

[Table F-7]

7.2.3 EYFSP[11]

Mother's educational qualifications are predictive of a child's EYFSP scores in 4 of the 9 regions of England (North East, North West, East of England and the South West). Children whose mothers had no qualifications scored lowest in the South West, scoring 1.1 points lower than their peers.

Girls outperform boys in the majority of regions. The only regions where this association is not significant are the West Midlands, London and the South West. The gender gap in attainment is greatest in the North East and lowest in London (0.4 and 0.1 marks respectively).

Children in workless households scored significantly lower than their peers in all regions except for the North East, London and the South West. The impact of being in a workless household on children's attainment was greatest in the West Midlands.

Children who had breakfast on a regular basis performed significantly better than their peers in the East Midlands, London and the South East. This effect was particularly strong in the East Midlands, where children eating a regular breakfast scored on average 0.8 points higher than their peers.

[Table F-9]

[11] EYFSP scores were modelled using a mean score across all domains, ranging between 0 and 9

7.3 Differences in attainment and development by region aged 7

7.3.1 BAS II word reading score

Mother's social class was predictive of children's BAS II word reading scores in the East of England and London. Those children whose mother was from lower social class classifications scored on average 4.9 and 5.2 marks lower than their peers [12]. This association was not significant elsewhere in England.

Multiple disadvantage was also a strong predictor of BAS II scores in Yorkshire and the Humber and in London. For each additional domain of disadvantage, children in these regions scored 1.9 and 2.3 points lower than their peers. This was not significant in any other English region.

There is significant regional variation in children's BAS II scores when considering their mother's generational status. At 7 years old, children in the North East, whose mothers were born outside of the UK scored, on average a considerable 11.3 points lower than their peers. However, in other regions, such as Yorkshire and the Humber, the East of England and the South East, the opposite association is observed. Children in the East of England whose mother was not born in the UK score, on average 8.0 points higher than their peers.

White children do particularly poorly in London, compared with non-white peers aged 7. There is significant regional variation. Whilst non-white pupils outperform their peers in the vast majority of England, white pupils do outperform their classmates in the South-East.

[Table F-11]

7.3.2 SDQ total difficulties score

Boys have lower socioemotional development than girls in 4 English regions – Yorkshire and the Humber, the East Midlands, the East of England and the South West. The gender gap is largest in the South West, where boys score on average 0.8 points higher on the SDQ.

[12] Word reading scores range between 55 and 145, with a mean of 107

Multiple disadvantage is a strong indicator of lower socioemotional development in the East of England and the South West. In these regions, for each additional domain of disadvantage, children score 0.3 and 0.5 points higher on the SDQ assessment. This association was not significant elsewhere in England.

[Table F-13]

7.3.3 KS1 Attainment

Multiple deprivation is also a strong predictor of KS1 attainment in the North East and the South West. For each additional domain of disadvantage, a child scores on average 0.7 and 0.5 points lower than their peers respectively. The association was not significant elsewhere in England, with some regions, such as the North West and the East of England, exhibiting particularly low coefficients.

If a child's parent was involved in 2 or more activities in school, children in the West Midlands, East Midlands and the East of England had significantly higher levels of attainment than their peers. This association was not apparent elsewhere in England.

A child whose parents aspired for their child to go to university was a very strong predictor of KS1 attainment in the South West. These children scored on average 6.6 marks higher than their peers. This was not significant elsewhere in England.

[Table F-15]

7.4 Differences in attainment and development between ONS clusters aged 3

7.4.1 BAS II

Variation in BAS II scores when children were 3 years old predominately came from socio-demographic factors. The background of a child's mother is important as significant variation across clusters is observed when considering a mother's highest qualification and social class. In addition, the working status of the household is highly predictive of BAS II scores, with children in workless households scoring significantly lower than their peers in the majority of clusters. However, this is not observed in the Business & Education Centres, Coastal & Heritage and Prosperous England clusters. Ethnicity of the child is also a strong predictor of attainment, with White children scoring significantly lower than their peers in a majority of clusters, all other things being equal.

There is significant regional variation when considering ethnicity, with a premium of over 8 points afforded to White children living in the Mining and Manufacturing cluster at 3 years old.

[Table F-2]

7.4.2 SDQ

The strengths and difficulties questionnaire measures very different outcomes to the BAS II score. Socio-demographic factors are also predictive of SDQ scores when children were aged 3. The highest educational qualification of the mother is also a predictor of SDQ scores. There is a positive association between a mother having low (NVQ level 2 and below) or no qualifications and higher SDQ scores in the majority of clusters. Furthermore, girls have significantly lower SDQ scores than boys in all clusters with the exception of the Suburban Traits and Prosperous England clusters.

Having a better relationship between the child and their parents was significantly associated with lower SDQ scores in all clusters, suggesting that this is a universally important factor across England.

[Table F-4]

7.5 Differences in attainment and development between ONS clusters aged 5

7.5.1 BAS II

Socio demographic factors continue to be important when a child is 5 years old. Similarly to when the child was 3 years old, the background of the mother is important. When a mother has low or no educational qualifications there is a significant association with lower BAS II scores in the majority of clusters (the exceptions being the London Cosmopolitan and Coastal & Heritage clusters). There is also significant regional variation by the social class of the mother and their generational status. Interestingly children whose mothers were born outside of the UK score significantly lower than their peers in the London Cosmopolitan and Coastal & Heritage clusters. Ethnicity is predictive of differing levels of attainment in several clusters at age 5, as well as at age 3.

[Table F-6]

7.5.2 SDQ

As with SDQ scores at age 3, the highest educational qualification of a child's mother is highly predictive of SDQ scores in some clusters, although this is now a significant minority, rather than a majority of clusters. Girls also have significantly lower SDQ scores than boys in the Coastal & Heritage and Prosperous England clusters.

A mother's perceived parental competence is significantly associated with differences in SDQ scores in all of the ONS clusters. As causality cannot be established these results must be interpreted with caution.

[Table F-8]

7.5.3 EYFSP

Three socio-demographic factors are highly important in determining the EYFSP scores in a majority of clusters. Mother's education continues to be an important predictor. Children whose mothers had low level or no qualifications also had significantly lower EYFSP scores than their peers in the majority of clusters. Girls also outperform boys at the Early Years Foundation Stage in most clusters and Children in workless households also score significantly lower than their peers in all but 2 of the 7 clusters.

Interestingly, the socio-demographic factors discussed above are not significantly associated with differences in EYFSP scores in the London Cosmopolitan and Suburban Traits clusters, suggesting socio-demographic factors are less important in determining children's outcomes at this age. These 2 clusters together mostly refer to Inner and Outer London, as well as some areas in the South East.

[Table F-10]

7.6 Differences in attainment and development between ONS clusters aged 7

7.6.1 BAS II

Similarly to when children were aged 3 and 5, socio demographic factors continue to be important predictors of BAS II scores. Mother's social class is a significant predictor of BAS II scores in the English Countryside, Business & Education Centres and Prosperous England. Disadvantaged children scored significantly lower than their peers in the London Cosmopolitan and Mining & Manufacturing clusters. There is evidence of

significant regional variation, with disadvantage being poorly predictive of BAS scores in the English Countryside and Coastal & Heritage clusters.

The background of a child's parents continues to be important in predicting attainment in some clusters. A child whose parents have never had depression do significantly better than their peers in the English Countryside and Coastal & Heritage clusters, exhibiting strong coefficients, suggesting parental mental health is very important in these areas.

White children, having outperformed their non-white peers at 3 years old, now perform significantly lower. This switch is interesting, particularly as white children were performing best in the Mining and Manufacturing cluster aged 3, but these now have the lowest scores compared with non-white pupils, all other things being assumed equal. Furthermore, white pupils in the London Cosmopolitan and Coastal and Heritage clusters outperform their peers.

[Table F-12]

7.6.2 SDQ

Socio-demographic factors are less important in predicting SDQ scores when children are 7 years old. The educational qualifications of a child's mother are no longer a significant predictor of SDQ scores when children are 7 years old as they were at both 3 and 5 years of age. Girls continued to exhibit lower SDQ scores than their male peers in a majority of clusters. However, there is evidence of significant regional variation, with boys in Prosperous England scoring, on average, the same as girls.

Disadvantaged children had significantly higher SDQ scores, indicative of poorer socioemotional development, than their peers in the majority of clusters. The coefficients in the remaining clusters were very low, suggesting that this factor varies significantly due to regional factors.

Children who eat a regular breakfast display significantly lower SDQ scores than their peers in the Coastal & Heritage and Prosperous England clusters, displaying very strong coefficients. This suggests that having a regular routine is more effective in determining child behaviour in these clusters than elsewhere in England.

[Table F-14]

7.6.3 KS1 Attainment

Socio-demographic factors explain much less of the variation in attainment at age 7 than with other outcomes early in a child's life course. The highest qualification of a child's mother is significant of a minority of clusters, displaying the same relationship exhibited in BAS and EYFSP scores at younger ages.

A child's parenting is more relevant in predicting attainment when a child is 7 years old. Children whose parents do not attend parents evening have significant lower scores than their peers in 'Business and Education' and Coastal & Heritage clusters, displaying strong coefficients. Furthermore, children whose parents were involved in one or more activity at school displayed significantly higher levels of KS1 attainment in 3 clusters; London Cosmopolitan, Coastal & Heritage, and Prosperous England. This suggests there is significant regional variation.

If a child has at least one parent that aspires for their child to go to university, they are associated with significantly higher scores in the Mining & Manufacturing cluster than in any other cluster. It is unclear why this factor is significant in this cluster and not in any other part of England.

[Table F-16]

7.7 Summary

There is significant variation in the extent to which our explanatory model explains attainment across the different regions of England.

When considering the model fit using ONS clusters, a slightly clearer story can be read. At ages 3 and 5 it appears that regional differences are primarily associated with socio-demographic factors, with the home and parenting environment becoming a more significant predictor at age 7. Clear patterns emerge, especially with clusters with very different characteristics (for example comparing London Cosmopolitan with the Coastal & Heritage cluster).

The story is less clear when considering how well the models explain attainment in GORs. Whilst socio-demographic factors are still seen as a key factor, the patterns are highly mixed, being significant for some outcomes and regions, but not for others. This suggests that considering variation between regions is less informative than comparing different areas of England that exhibit particular characteristics.

8 Decomposition Analysis

This chapter presents the results for our Oaxaca-Blinder decomposition analysis identifying the drivers of differences in attainment between London and other regions in England. Using both Government Office Region and ONS clusters as region indicators, this analysis estimated the extent to which individual, household and neighbourhood characteristics explain regional differences in attainment.

This approach estimates how far the regional gaps in attainment would reduce if differences in a given characteristic were equalised in all regions. The strength of decomposition analysis is to allow the expression of the overall domains (socioeconomic factors, home learning and child care, and the neighbourhood characteristics) as the sum of a number of 'pathways', which are derived up from a set of underlying regressions. All predictive factors which enter the model are pre-specified based on existing literature as to what is purported to predict attainment, and what might reasonably be expected to vary between regions. Prior to the specification of the final models all predictive factors were inspected to ensure that they were independently associated with the outcome. For the decomposition approach to work successfully, the raw gaps in attainment must be sufficiently large so that the factors potentially driving these differences can be decomposed. As a consequence of this, results are presented only where statistically significant regional differences in attainment exist. it is not possible to decompose a difference if no difference can be observed.

One drawback to this modelling approach is that it does not work well with extreme values (Fairlie 2005). For instance, the London Cosmopolitan and Coastal & Heritage clusters are very different in ethnic diversity. London Cosmopolitan was the most ethnically diverse cluster, whilst the Coastal & Heritage cluster had the least ethnic diversity. As such, the decomposition analysis did not work well when considering variables such as the Theil index of ethnic diversity in these clusters. As a result it is recommended to interpret results in extreme ends of distributions with caution.

Decomposition within Government Office Regions

8.1 Age 3

8.1.1 BAS II

At age 3, children in London scored significantly lower on the BAS II vocabulary scale than those in the East of England and the South West, with the largest gap between

children in London and the South West (3.63 points). Regional differences in ethnic composition were important factors in explaining these gaps, accounting for 71% of the London-East of England gap and 31% of the London South West gap. Regional differences in mothers' generational status were also significant, explaining 29% of the gap between London and the East of England and 10% of the gap between London and the South West. Additionally, differences in the number of hours per week children spend childcare explained 10% of the attainment gap between London and the East of England.

[Table 3 Table G-2]

Table 3 Decomposing regional gaps (GOR) in Age 3 BAS II vocabulary score - summary

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	1.17	0.11	-0.84	0.78	1.01	1.24*	0.74	3.63**
SE	0.78	0.55	0.58	0.58	0.58	0.55	0.49	0.60
Socio-demographic (%)						11.7		0.6
SE						0.25		0.24
Ethnicity (%)						71.0**		31.2**
SE						0.22		0.29
Home learning (%)						<0**		<0
SE						0.10		0.09
Childcare (%)						5.5		<0
SE						0.08		0.11
Neighbourhood characteristics (%)						5.7		58.8
SE						0.85		1.39
N	1297	1840	1720	1562	1668	1731	2125	1619

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

8.1.2 SDQ

At age 3, children in London performed better on the Strength and Difficulties Questionnaire (SDQ) than children in other Government Office Regions (GORs), with children in London scoring significantly lower than their counterparts in the North East, North West, Yorkshire and the Humber, East Midlands and West Midlands. Regional differences in socio-demographic characteristics were important in explaining each of these differences, accounting for 35% to 82% of regional attainment gaps. Mothers' age

at birth was also significant across regions, explaining 12% to 32% of regional SDQ gaps. Regional differences in household disadvantage were significant only in some regions, accounting for 19% of the gap between London and both the North East and the North West.

[Table G-3]

Table 4 Decomposing regional gaps (GOR) in Age 3 SDQ attainment - summary

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	1.02**	0.65**	1.31**	0.76**	1.09**	0.27	0.35	0.37
SE	0.34	0.24	0.25	0.28	0.27	0.24	0.22	0.25
Socio-demographic (%)	81.4**	81.6**	40.3**	48.5**	34.9**			
SE	0.17	0.12	0.12	0.13	0.13			
Ethnicity (%)	<0	<0	<0	13.6	<0			
SE	0.11	0.08	0.09	0.09	0.09			
Home learning (%)	3.8	<0	<0	<0	<0			
SE	0.11	0.07	0.06	0.08	0.06			
Childcare (%)	2.2	0.0	2.8	4.0	5.2			
SE	0.06	0.03	0.04	0.04	0.04			
Neighbourhood characteristics (%)	38.3	<0	22.6	37.0	8.2			
SE	0.97	0.64	0.61	0.61	0.46			
N	1323	1876	1746	1599	1718	1770	2166	1655

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

8.2 Age 5

8.2.1 BAS II

Similar to age 3, at age 5 children in London were significantly outperformed by those in the East of England and the South West. They were also outperformed by children in the East Midlands. In general, neighbourhood characteristics were important factors in explaining these differences, although the specific factors that were influential differed across regions. The extent to which the ethnic composition of local schools reflects the

ethnic composition of the local population (measured by the Ethnicity Theil index) explained over 100% [13]of the BAS II gap between London and the East of England. Differences in budget per capita explained over 100% of the attainment gap between London and the East Midlands. BAS II attainment at age three explained 84% of the gap between London and the South West.

[Table G-4 Table G-5]

8.2.2 SDQ

Unlike at age 3, at age 5 SDQ scores among children in London did not differ significantly from children in most other GORs. Children in London still scored better than those in the West Midlands, although the gap reduced from 1.09 points at age 3 to 0.64 points at age 5. Decomposition analysis revealed the only significant factor explaining this regional gap to be SDQ attainment at age 3, which accounted for 69% of regional differences in SDQ attainment.

[Table G-6 Table G-7]

8.2.3 EYFSP

Children in London scored an average of 0.25 points lower than children in the North East on the Early Years Foundation Stage. Regional differences in BAS II attainment at age 3 accounted for 24% of this gap. No other factors were significant in explaining regional differences in EYFSP attainment.

[Table G-8 Table G-9]

8.3 Age 7

8.3.1 BAS II

In stark contrast to ages 3 and 5, by age 7 children in London performed significantly better than children in all other GORs on the BAS II word reading scale, with the largest gap between London and the East Midlands (6.68 points). Regional differences in

[13] Under rare conditions it is possible for the decomposition model to explain more than 100%. This occurs because the linear model used in the decomposition analysis is unable to limit the probability that the outcome can occur at extreme values.

socio-demographic factors explained 16- 35% of attainment gaps between children in London and those in the North East, North West, Yorkshire and the Humber, East if England and the South East. Differences in maternal education were important in explaining the gap between London and Yorkshire and the Humber and East of England, accounting for 6% and 7% of these gaps, respectively. Mothers' generational status explained 10-11% of the gaps between London and Yorkshire and the Humber, East of England and the South East. Differences in ethnic composition accounted for 14-19% of the BAS II gap between London and the North West, Yorkshire and the Humber and the South West.

Neighbourhood characteristics also played a significant role in explaining regional attainment gaps in some areas. The proportion of the local area that is ethnically white explained 90% of the gap between London and the East Midlands. The proportion of early years providers rated 'Outstanding' by Ofsted explained 17-36% of the gaps between London and the North West, Yorkshire and the Humber and the East Midlands.

[Table G-10 Table G-11]

8.3.2 SDQ

Children in London scored nearly one point lower on average on the SDQ compared with children in the West Midlands and the East of England.

Decomposition analysis revealed that none of the factors explored were significant in explaining these regional gaps.

[Table G-12 Table G-13]

8.3.3 KS1 attainment

Children in London scored more than one point higher on average than children in the North West, Yorkshire and the Humber and the West Midlands on Key Stage 1. Regional differences in socio-demographic characteristics explained 35-47% of these gaps, with mothers' generational status alone for 19-26% of the gaps. Mothers' age at birth explained 17% of the gap between London and the North West and birth weight explained a further 4%.

[Table G-14Table G-15]

Decomposition within ONS clusters

8.4 Age 3

8.4.1 BAS II

At age 3, children in the London Cosmopolitan cluster scored lower than their counterparts in other ONS Clusters on the BAS II vocabulary scale, with the largest gap between children in the London Cosmopolitan cluster and children in the English Countryside, who scored 2 points better on average. Regional differences in ethnic composition were among the most influential factors at work in driving regional differences in attainment, explaining between 70 and 100% of regional BAS II gaps. Regional differences in socio-demographic characteristics like household disadvantage and mothers' generational status were also important factors, explaining 20% and 35% (respectively) of the BAS II gap between London and Prosperous England. Meanwhile, differences in the home learning environment explained 16% the gap between London and the English Countryside.

[Table G-16 Table G-17]

8.4.2 SDQ

At age 3, children in London Cosmopolitan areas tended to perform better on the SDQ, scoring significantly better than children in Suburban Trait, Business & Education Centres, Coastal & Heritage, and Mining & Manufacturing areas. Regional differences in socio-demographic characteristics were important in explaining these gaps, with differences in birth weight explaining between 25% and 72% of the gap between London and Suburban areas, Business & Education Centres and Mining & Manufacturing areas. Differences in maternal education explained around 25% of SDQ gaps between London and Business & Education Centres and Mining & Manufacturing areas. Regional differences in breastfeeding were also at work in explaining differences in attainment between London and Mining & Manufacturing and Business & Education Centres, explaining 17% and 20% of gaps, respectively.

[Table G-18] Table G-19

8.5 Age 5

8.5.1 BAS II

BAS II attainment differences persisted among children from London Cosmopolitan areas and those from the English Countryside and Prosperous England at age 5, with children in London scoring approximately 3 points lower than children in the other clusters. As at age 3, regional differences in socio-demographic characteristics were important in explaining these gaps, with differences in mothers' generational status explaining 24% of the gap between London and the English Countryside and differences in household disadvantage explaining 10% of the gap between London and Prosperous England. Regional differences in BAS II attainment at age 3 were also significant in explaining gaps in BAS II attainment at age 5, accounting for 26-36% of gaps.

[Table G-20 Table G-21]

8.5.2 SDQ

Children in London exceeded children in Business & Education Centres on SDQ attainment at age 5, scoring one point lower on average. This difference in attainment was largely explained by variation in socio-demographic characteristics across regions, which accounted for 34% of the gap.

[Table G-22 Table G-23]

8.5.3 EYFSP

Children in London also tended to perform better on EYFSP than children in other regions in England, although these regional differences were explained by varying factors across regions. The attainment gap between children in the London and Suburban Trait clusters was driven by regional differences in home learning environment (16%) and prior attainment (4%). In contrast, gap between London and Business & Education Centres and Coastal & Heritage areas was explained more by socio-demographic factors like mothers' social class (accounting for 23% and 20% of gaps, respectively).

[Table G-24 Table G-25]

8.6 Age 7

8.6.1 BAS II

In contrast to patterns among children aged 3 and 5, at age 7 children in London performed better on the BAS II word reading scale than children in all other Clusters, with the largest gaps emerging between children in London and Coastal & Heritage areas (9 points), Business & Education Centres (9 points), and Mining & Manufacturing areas (8 points). Regional differences in ethnicity accounted for 16% of gaps in BAS II attainment between London and Business & Education Centres and Mining & Manufacturing areas. As at ages 3 and 5, differences in socio-demographic characteristics like mothers' generational status were important in explaining the gap between London and Prosperous England (16%) while prior attainment was most significant in explaining the gap between London and Business and Educational Centres (21%).

[Table G-26 Table G-27]

8.6.2 SDQ

Consistent with findings at age 3 and 5, children in London continued to perform better on the SDQ than their counterparts in other clusters, with significant differences found between London and Suburban Trait areas, Business & Education Centres, Coastal & Heritage areas and Mining & Manufacturing areas. These gaps in SDQ attainment were largely driven by regional differences in neighbourhood characteristics and prior attainment. Differences in how well the ethnic composition of local schools reflect the ethnic composition of the local population explained over 100% of the SDQ gap between London and Suburban trait areas, while differences in the proportion of local early years providers rated "Outstanding" by Ofsted explained over 100% of the SDQ gap between London and Coastal & Heritage areas. Differences in age 5 SDQ attainment explained over 60% of the age 7 SDQ gap between London and Business & Education Centres and Mining & Manufacturing areas. Differences in EYFSP attainment at age 5 explained nearly 10% of the SDQ gap between London and Suburban trait areas and Business & Education Centres.

[Table G-28 Table G-29]

8.6.3 KS1 Attainment

KS1 attainment was also highest among children in London compared with children in other Clusters, with significant gaps found between children in London and children in Business & Education Centres, Coastal & Heritage areas and Mining & Manufacturing areas. Regional differences in prior attainment were particularly important factors explaining the gap between London and Business & Education Centres and Mining & Manufacturing areas, accounting for 45% and 20% of gaps, respectively. Regional differences in socio-demographic factors and ethnic composition were influential in explaining the KS1 gap between London and Mining & Manufacturing areas, explaining 45% and 52% percent of the gap, respectively.

[Table G-30 Table G-31]

8.7 Summary

The decomposition analysis demonstrates how few regional differences in attainment exist once a range of contextual, explanatory factors have been accounted for. In the majority of cases for most outcomes at all ages, it was not possible to attempt to explain which factors underpinned regional differences on the basis that no (significant) regional differences were observable. This suggests that, all things being equal, regional differences were generally small.

Where difference was observable, the study showed that across ages, attainment measures, GORs and ONS clusters, it was the regional differences in ethnicity and socio-demographic characteristics which were consistent and important factors driving attainment differences between London and other GORs and ONS clusters. Neighbourhood characteristics were also significant contributors to attainment gaps although with somewhat less consistency. It should be noted that rarely was all of the difference between regions explained in full. Results of the ‘model fit’ in the previous chapter, which investigated how well a series of predictive factors explained differences in attainment within each region, produced stable R squared values of around 0.60 at age 7 (with R squared values being less stable at earlier ages). This implies that even with the best model, there is still unexplained variation. Further decomposition of the difference between regions outlined in this chapter experienced the same issue, with models unable to routinely explain all the variance in attainment or development between each region with London. One key factor that may be missing from our models was school level information (school quality, teaching quality, class sizes for example) – the study was unable to link to this data due to the risk of identification of individual cohort members. A further explanation for unexplained variance may surround the lack

of information in the decomposition model for types or quality of child care which is known to predict development throughout early life. The most detailed information was based on demographic and socioeconomic characteristics of the individual and their family. This is potentially a reason why these characteristics were the most likely to explain variance, given the higher quality and more complete level of data within the model.

Within these broad domains, the specific factors explaining regional gaps in attainment varied substantially by age, region and attainment measure. While household disadvantage may explain one attainment gap in one region at a particular age, it does not necessarily explain that gap at all ages – nor does it always explain similar gaps in other regions. These results suggest that the nature of regional attainment gaps is highly context specific, with no single factor promising to close attainment gaps across the country.

9 Conclusions

This report describes a considerable change in regional differences in early years' attainment across Government Office Regions at age 5, between 2007 and 2015 based on data from the NPD. Principally, the variation between regions has become wider, reflecting greater regional inequality in reaching a good level of development at the end of reception year. These regional differences were most strongly consolidated between 2011 and 2015 as the North/South divide became fully established, driven primarily by consistently high levels of development in the South, accompanied by the considerable improvements seen for early years pupils in London during this time.

Using data from the longitudinal Millennium Cohort Study (MCS), there was evidence to suggest that it was the social, economic and demographic characteristics of the regions which underpinned differences in attainment. For instance, temporal trends in early years' development at age 5 were less stable across Government Office Regions than across areas sharing similar characteristics (ONS clusters). This suggests that pupil performance was more stable in areas with a common set of characteristics than it was across GORs where the local area characteristics can vary over time. The implication is that it is the socioeconomic and demographic characteristics of the local area which predicts early years attainment. The ONS cluster classification does not include any indicators related directly to educational attainment, such as school quality, so it is not possible to infer whether these factors have any role to play in determining the level of attainment within a cluster. In order to preserve the anonymity of the Millennium Cohort Study sample, it was not possible to link school level information to individual records within the MCS to test whether regional differences in schooling might determine regional differences.

Further evidence for the characteristics of regions driving differences was provided by the decomposition analysis of MCS data. This ought to be placed in the context that models showed relatively few significant regional differences once all explanatory factors had been accounted for. Where significant differences were apparent, it was the social and economic profile of the household, ethnicity and to a lesser extent the demographic and economic characteristics of the neighbourhood which explained most of the variation in attainment.

A key strength of this project was our ability to investigate whether different measures of disadvantage were associated with attainment in all regions. Disadvantaged early years pupils in London in 2007 were relatively high performing given their eligibility for free school meals, only being out-performed by the pupils in the South East. Yet this relationship did not hold when a more detailed measure of disadvantage was used

based on income, material and subjective disadvantage as well as benefit receipts. Using this alternative indicator, relative to other regions, London's pupils had the lowest cognitive vocabulary scores at age 5, and were considerably less likely than other regions to reach a good level of development at the end of reception. However, London's lower relative position compared to other groups was a consequence of pupils in others regions performing to a higher level when the multiple measure of disadvantage was used. This analysis was not designed to test the differences between measures of disadvantage and the characteristics of the FSM group in different regions were not probed further. However, this descriptive comparison highlights potential shortcomings of using free school meals as a measure of disadvantage across different regions; researchers should continue to exercise caution when using FSM as comparative measure between regions.

Our supplementary analysis of data from the MCS identified that regional differences in a range of cognitive, non-cognitive and educational outcomes were broadly stable between the ages of 3 and 5 years. It was at age 7 when regional differences in cognitive outcomes began to widen considerably. The general lack of change in regional inequality in the early years may be due to measurement issues in these data. For instance, there were a negligible number of associations between levels of physical and cognitive development at 9 months of age and a range of factors expected to predict later life attainment, such as mother's education. Similarly, by ages 3 and 5, the cumulative effects of longer-term exposure to environments more (or less) conducive to child development have yet to have a measurable impact on indicators of attainment. It may be that by age 7 the 'accumulation of risk' has eventually reached a level where it is manifested in measures of cognitive or non-cognitive attainment. Whichever mechanism is at play, the emergence of this gap suggests that early intervention on a regional level may be appropriate. This is especially so given regional inequalities in attainment at age 7 are predicted by performance at ages 3 and 5, mirroring the formation of inequalities at an individual level.

It is important to remember that the socioeconomic and demographic factors which most strongly explain regional differences are the aggregate of the characteristics of individuals living there. Therefore pupil background, on average, explains the regional differences in attainment observed here and therefore individual and family socioeconomic circumstances appear to be the most appropriate intervention point. It is worth noting that there was a high level of inconsistency in regional differences according to the measure of attainment and the age of the child, with no particular region appearing to be significantly better or worse off than any other. Overall, our findings show that, all things being equal, regional differences in attainment were generally small and not significant.

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Appendix A List of tables

Appendix B List of figures

Appendix C Are there regional differences in attainment and development in the early years?

Table C-1 Proportion achieving a good level of development (EYFSP, age 5) between 2007 and 2015, by GOR

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
North East	24,112	68.49**	26,982	76.19**	29,719	61.43**
North West	70,147	73.79**	60,460	77.73**	66,852	61.11**
Yorkshire and the Humber	51,539	68.11**	52,238	75.47**	58,907	62.61**
East Midlands	43,056	73.08**	10,068	75.30**	12,000	54.91**
West Midlands	56,006	68.18**	42,076	75.77**	47,769	60.46**
East of England	54,652	74.67**	13,709	78.33	16,548	63.59**
London †	**76,129**	**67.39**	**87,353**	**78.64**	**102,153**	**67.19**
South East	77,992	74.57**	24,095	82.08**	28,686	67.60
South West	46,436	74.42**	29,194	80.35**	34,701	65.73**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-2 Proportion achieving a good level of development (EYFSP, age 5) between 2007 and 2015, by ONS cluster

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
English and Welsh Countryside	93,468	76.77**	25,789	81.38**	28,420	66.26*
London Cosmopolitan †	**42,078**	**63.96**	**47,996**	**76.46**	**55,589**	**67.01**
Suburban Traits	82,499	69.57**	77,768	78.55**	92,026	64.96**
Business & Education Centres	69,499	68.93**	71,014	76.56	84,939	60.55**
Coast and Heritage	27,770	72.66**	11,442	79.13**	12,645	64.84**
Prosperous England	71,837	77.75**	18,921	83.68**	21,931	68.17**
Mining Heritage and Manufacturing	112,918	68.95**	93,245	76.22	101,785	61.31**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-3 Proportion of children improving between EYFSP and KS1 in reading, writing and mathematics, in 2015 by GOR

Region	N	R - EY	W - EY	M - EY
		%	%	%
North East	15,880	69.43**	54.69**	68.24**
North West	40,620	67.28**	50.06**	66.10**
Yorkshire and the Humber	31,453	66.68**	51.23**	66.00**
East Midlands	25,959	67.77**	52.34**	67.01**
West Midlands	33,305	68.47**	52.82**	66.94**
East of England	32,654	69.65**	54.28**	69.33**
London †	**42,208**	**72.07**	**57.87**	**71.20**
South East	43,751	70.47**	54.10**	69.99**
South West	24,584	67.83**	50.46**	66.44**

Source: *NPD (2015)* † reference

Table C-4 Proportion of children improving between EYFSP and KS1 in reading, writing and mathematics, in 2015 by ONS cluster

ONS Cluster	N	R - EY	W - EY	M - EY
		%	%	%
English and Welsh Countryside	49,368	68.60**	52.38**	67.57**
London Cosmopolitan †	**22,434**	**71.37**	**57.73**	**70.54**
Suburban Traits	50,295	69.94**	54.48**	69.09**
Business & Education Centres	45,452	67.49**	52.11**	66.57**
Coast and Heritage	15,574	67.07**	50.84**	67.36**
Prosperous England	38,000	71.59	54.93**	70.57
Mining Heritage and Manufacturing	69,291	67.85**	51.75**	66.80**

Source: *NPD (2015)* † reference

Table C-5 Proportion of children reaching a good level of development, by GOR and level of disadvantage

	Overall		Disadvantage		Not Disadvantaged	
Region	**N**	**%**	**N**	**%**	**N**	**%**
North East	412	71.43	395	58.30	396	77.99
North West	1,083	73.05*	1,061	55.98	1,064	79.39**
Yorkshire and the Humber	940	67.32	904	49.18**	900	72.99
East Midlands	703	75.42**	683	63.45	685	78.37
West Midlands	1,000	67.77	969	52.89	961	73.78
East of England	902	74.95**	871	56.57	883	79.93
London †	**1,365**	**69.47**	**1,327**	**54.69**	**1,316**	**76.35**
South East	1,313	75.81**	1,292	63.36	1,287	79.04
South West	733	76.57**	712	62.51	723	80.75

Source: Source: *MCS* 2006† reference

Table C-6 Proportion of children reaching a good level of development, by GOR and level of disadvantage

	Overall		Disadvantaged		Not Disadvantaged	
Region	**N**	**%**	**N**	**%**	**N**	**%**
North	2435	70.63	2360	54.17	2360	76.66
Central	2,605	72.73*	2,523	56.84	2,529	77.58
London †	**1,365**	**69.47**	**1,327**	**54.69**	**1,316**	**76.35**
South	2046	76.08**	2004	63.04	2010	79.65

Source: *MCS 2006*† reference

Table C-7 Children eligible for FSMs achieving a good level of development (EYFSP) by GOR

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
North East	5,255	48.85**	6,747	60.77**	6,434	45.32**
North West	12,893	54.42	13,549	63.33**	12,825	44.99**
Yorkshire and the Humber	7,902	50.20**	10,833	61.69**	10,200	45.87**
East Midlands	5,121	53.29**	2,619	66.90**	2,217	43.12**
West Midlands	10,399	50.69**	10,517	64.59**	10,171	48.34**
East of England	5,673	57.08*	2,339	65.63**	2,274	51.10**
London †	**18,773**	**55.36**	**21,033**	**70.11**	**17,479**	**56.62**
South East	6,732	54.81	3,896	69.84	3,648	52.69**
South West	4,536	53.44**	4,446	64.30**	4,333	47.15**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-8 Children eligible for FSMs achieving a good level of development (EYFSP) by ONS cluster

	2007		2011		2015	
ONS Cluster	**N**	**%**	**N**	**%**	**N**	**%**
English and Welsh Countryside	7,765	55.93	3,508	64.45**	2,969	45.60**
London Cosmopolitan †	**13,089**	**55.57**	**13,634**	**69.98**	**11,204**	**58.59**
Suburban Traits	13,144	52.94**	15,391	67.44**	13,524	51.28**
Business & Education Centres	15,912	54.42	18,935	65.44**	18,727	47.87**
Coast and Heritage	3,405	52.86**	2,153	64.84**	2,009	48.18**
Prosperous England	4,603	54.94	1,851	66.13**	1,916	45.04**
Mining Heritage and Manufacturing	19,366	50.25**	20,507	61.33**	19,232	44.78**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-9 Children eligible for FSMs achieving a good level of development (EYFSP) by aggregated regions

	2007	2011	2015

Region	N	%	N	%	N	%
North	26,050	52.02**	31,129	62.20**	29,459	45.37**
Centre	21,193	53.03**	15,475	65.14**	14,662	47.98**
London †	**18,773**	**55.36**	**21,033**	**70.11**	**17,479**	**56.62**
South	11,268	54.26	8,342	66.89**	7,981	49.68**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-10 Children not eligible for FSMs achieving a good level of development (EYFSP) by GOR

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
North East	18,857	73.97**	20,235	81.33	23,285	65.88**
North West	57,254	78.15**	46,911	81.89*	54,027	64.94**
Yorkshire and the Humber	43,637	71.35	41,405	79.07**	48,707	66.11**
East Midlands	37,935	75.75**	7,449	78.25**	9,783	57.58**
West Midlands	45,607	72.16**	31,559	79.50**	37,598	63.73**
East of England	48,979	76.71**	11,370	80.94	14,274	65.58**
London †	**57,356**	**71.33**	**66,320**	**81.35**	**84,674**	**69.37**
South East	71,260	76.44**	20,199	84.43**	25,038	69.87
South West	41,900	76.69**	24,748	83.23**	30,368	68.38**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-11 Children not eligible for FSM achieving a good level of development (EYFSP) by ONS cluster

	2007		2011		2015	
ONS Cluster	**N**	**%**	**N**	**%**	**N**	**%**
English and Welsh Countryside	85,703	78.66**	22,281	84.04**	25,451	68.67
London Cosmopolitan †	**28,989**	**67.76**	**34,362**	**79.03**	**44,385**	**69.13**
Suburban Traits	69,355	72.72**	62,377	81.30**	78,502	67.31**
Business & Education Centres	53,587	73.23**	52,079	80.61**	66,212	64.14**
Coast and Heritage	24,365	75.42**	9,289	82.44**	10,636	67.99*
Prosperous England	67,234	79.31**	17,070	85.58**	20,015	70.38**
Mining Heritage and Manufacturing	93,552	72.82**	72,738	80.42**	82,553	65.16**

Source: *NPD (2007, 2011 and 2015) reference*

Table C-12 Children not eligible for FSM achieving a good level of development (EYFSP) by aggregated regions

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
North	119,748	75.01**	108,551	80.71**	126,019	65.57**
Centre	132,521	74.87**	50,378	79.64**	61,655	63.18**
London	**57,356**	**71.33**	**66,320**	**81.35**	**84,674**	**69.37**
South	113,160	76.53**	44,947	83.77**	55,406	69.05

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-13 BAS II score for disadvantaged children by GOR

BAS	**Aged 3**		**Aged 5**		**Aged 7**	
Region	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
North East	164	46.87**	136	50.24**	120	104.02**
North West	436	44.28**	368	50.76**	310	105.73**
Yorkshire and the Humber	317	43.02	296	48.64**	269	106.23*
East Midlands	208	46.26**	164	53.30**	145	107.04
West Midlands	373	43.44	365	48.64*	282	105.06**
East of England	225	47.39**	210	51.77**	206	105.92**
London †	**474**	**41.62**	**497**	**45.74**	**413**	**108.95**
South East	309	47.26**	293	52.05**	269	106.51*
South West	195	49.65**	176	52.14**	152	108.22

Source: *MCS* † reference

Table C-14 BAS II score for disadvantaged children by aggregated regions

BAS	**Aged 3**		**Aged 5**		**Aged 7**	
Region	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
North	917	44.37**	800	49.95**	699	105.59**
Centre	806	45.58**	739	50.87**	633	105.91**
London †	**474**	**41.62**	**497**	**45.74**	**413**	**108.95**
South	504	48.18**	469	52.09**	421	107.13*

Source: *MCS* † reference

Table C-15 SDQ score for disadvantaged children by GOR

SDQ	Aged 3		Aged 5		Aged 7	
Region	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
North East	162	12.29*	135	9.76	123	10.24
North West	405	12.05**	349	9.05	293	9.92
Yorkshire and the Humber	302	13.40**	284	10.26*	255	10.15
East Midlands	198	12.04	166	10.08	145	9.66
West Midlands	329	13.05**	319	10.16	259	10.90**
East of England	216	10.77	191	9.02	195	10.05
London †	**499**	**11.42**	**419**	**9.33**	**376**	**9.05**
South East	302	11.21	288	8.83	267	9.87
South West	194	11.49	175	8.51	153	10.39**

Source: *MCS* † reference

Table C-16 SDQ score for disadvantaged children by aggregated regions

SDQ	Aged 3		Aged 5		Aged 7	
Region	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
North	869	12.52**	768	9.59	671	10.06*
Centre	743	11.98**	676	9.77	599	10.26**
London †	**499**	**11.42**	**419**	**9.33**	**376**	**9.05**
South	496	11.32	463	8.71	420	10.06*

Source: *MCS* † reference

Table C-17 BAS II score for children who are not disadvantaged by GOR

BAS	Aged 3		Aged 5		Aged 7	
Region	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
North East	268	51.92**	282	55.76**	263	114.24**
North West	752	50.88**	830	56.06**	781	113.84**
Yorkshire and the Humber	725	49.63	754	54.82	707	112.36**
East Midlands	539	51.72**	607	56.89**	568	112.24**
West Midlands	673	50.96*	705	55.43*	706	113.78**
East of England	700	51.74**	794	56.43**	745	113.36**
London	**1,020**	**49.72**	**1,042**	**54.12**	**937**	**119.18**
South East	1,103	51.19**	1,140	56.63**	1,059	114.61**
South West	575	54.54**	611	58.07**	600	114.66**

Source: *MCS* † reference

Table C-18 BAS II score for children who are not disadvantaged by aggregated regions

BAS	Aged 3		Aged 5		Aged 7	
Region	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
North	1,745	50.53**	1,866	55.53**	1,751	113.32**
Centre	1,912	51.49**	2,106	56.27**	2,019	113.16**
London †	**1,020**	**49.72**	**1,042**	**54.12**	**937**	**119.18**
South	1,678	52.34**	1,751	57.13**	1,659	114.63**

Source: *MCS* † reference

Table C-19 SDQ score for children who are not disadvantaged by GOR

SDQ	Aged 3		Aged 5		Aged 7	
Region	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
North East	270	9.48**	285	6.80	267	6.90
North West	746	8.69	820	6.93*	778	7.07
Yorkshire and the Humber	709	9.61**	727	6.80*	694	7.64**
East Midlands	543	8.91	600	6.68	571	7.09
West Midlands	678	9.33**	680	6.94*	673	7.67**
East of England	701	8.64	775	6.80	737	7.22*
London †	**1,014**	**8.43**	**992**	**6.48**	**906**	**6.69**
South East	1,111	8.68	1,143	6.43	1,050	6.77
South West	588	8.43	612	6.64	598	6.46

Source: *MCS* † reference

Table C-20 SDQ score for children who are not disadvantaged by aggregated regions

SDQ	Aged 3		Aged 5		Aged 7	
Region	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
North	1,725	9.18**	1,832	6.86*	1,739	7.27*
Centre	1,922	8.93*	2,055	6.81	1,981	7.32**
London †	**1,014**	**8.43**	**992**	**6.48**	**906**	**6.69**
South	1,699	8.59	1,755	6.50	1,648	6.66

Source: *MCS* † reference

Table C-21 Proportion of White British children achieving a good level of development (EYFSP, age 5) between 2007 and 2015, by GOR

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
North East	21,982	69.70**	22,792	77.44**	25,550	62.36**
North West	56,922	75.65**	45,737	79.76**	48,135	63.74**
Yorkshire and the Humber	40,500	71.28**	38,401	78.53**	41,608	65.97**
East Midlands	35,394	75.15**	3,956	78.24**	5,421	59.32**
West Midlands	39,919	71.58**	18,790	77.72**	21,345	63.41**
East of England	43,695	76.80	8,499	82.13**	9,444	67.50**
London †	**25,892**	**77.09**	**25,604**	**84.90**	**26,343**	**72.27**
South East	62,924	76.24**	16,690	83.64**	18,137	69.18**
South West	40,644	75.06**	24,461	81.48**	27,530	67.18**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-22 Proportion of White British children achieving a good level of development (EYFSP, age 5) between 2007 and 2015, by ONS cluster

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
English and Welsh Countryside	85,840	77.25**	23,190	82.04**	24,720	67.18**
London Cosmopolitan †	**9,960**	**74.92**	**9,823**	**84.74**	**10,791**	**73.83**
Suburban Traits	47,255	74.86**	36,051	82.13**	38,913	68.44**
Business & Education Centres	45,459	72.41**	37,306	78.98**	42,463	64.15**
Coast and Heritage	24,186	73.53**	10,062	79.71**	10,679	65.69**
Prosperous England	60,203	78.96**	15,556	84.62	17,140	69.26**
Mining Heritage and Manufacturing	94,969	70.59**	72,942	78.13**	78,807	63.36**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-23 Proportion of Non-White British children achieving a good level of development (EYFSP, age 5) between 2007 and 2015, by GOR

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
North East	2,002	55.59**	2,447	70.00**	3,471	54.91**
North West	11,721	64.31**	13,002	70.68**	16,127	53.49**
Yorkshire and the Humber	10,500	55.85**	13,027	67.10**	15,998	54.29**
East Midlands	7,284	63.11	4,431	73.03**	6,222	50.72**
West Midlands	15,311	59.45**	9,044	71.14**	13,702	57.23**
East of England	10,310	66.00**	5,029	73.12**	6,671	58.63**
London †	**48,780**	**62.27**	**59,451**	**76.11**	**68,996**	**65.35**
South East	13,869	66.97**	7,093	78.36**	9,773	65.01
South West	5,081	70.62**	3,977	74.68*	6,054	59.66**

Source: *NPD (2007, 2011 and 2015)* † reference

Table C-24 Proportion of Non-White British children achieving a good level of development (EYFSP, age 5) between 2007 and 2015, by ONS cluster

	2007		2011		2015	
Region	**N**	**%**	**N**	**%**	**N**	**%**
English and Welsh Countryside	6,009	71.49**	2,013	74.71	2,632	59.35**
London Cosmopolitan †	**31,179**	**60.52**	**36,352**	**74.34**	**42,335**	**65.20**
Suburban Traits	34,235	62.21**	38,528	75.77**	46,864	62.36**
Business & Education Centres	23,269	62.15**	21,236	72.00	29,924	56.07**
Coast and Heritage	3,048	65.26**	1,090	74.13	1,584	59.15**
Prosperous England	10,648	71.22**	3,047	80.31**	4,391	64.59
Mining Heritage and Manufacturing	16,470	59.34	15,235	68.93**	19,284	53.11**

Source: *NPD (2007, 2011 and 2015)* † reference

Appendix D Explaining regional differences in attainment

Table D-1 Mean early years educational attainment by Government Office Region

	London	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	South East	South West
Age 3 BAS II	50.49	51.67	50.60	49.65	51.27	51.50	51.73	51.23	54.12
SE	0.39	0.67	0.39	0.44	0.43	0.43	0.39	0.30	0.45
N	992	305	848	728	570	676	739	1133	627
P-value comparing to London		0.13	0.84	0.15	0.18	0.08	0.02	0.13	0.00
Age 3 SDQ	8.46	9.48	9.11	9.76	9.22	9.54	8.73	8.81	8.83
SE	0.16	0.29	0.18	0.19	0.23	0.21	0.18	0.15	0.19
N	1019	304	857	727	580	699	751	1147	636
P-value comparing to London		0.00	0.01	0.00	0.01	0.00	0.26	0.11	0.14
Age 5 BAS II T score	56.07	55.91	57.13	55.79	57.69	56.50	57.53	56.84	58.00
SE	0.46	0.61	0.37	0.43	0.44	0.47	0.43	0.32	0.41
N	734	252	712	567	510	559	652	1017	542
P-value comparing to London		0.83	0.07	0.65	0.01	0.51	0.02	0.17	0.00
Age 5 SDQ	6.27	6.47	6.74	6.58	6.25	6.91	6.55	6.36	6.36
SE	0.18	0.28	0.18	0.20	0.19	0.21	0.18	0.15	0.19
N	739	255	713	561	508	563	648	1016	544
P-value comparing to London		0.53	0.06	0.24	0.95	0.02	0.26	0.69	0.71
Age 5 EYFSP	6.96	7.21	7.00	6.92	7.03	6.84	6.97	6.93	7.03
SE	0.06	0.09	0.05	0.06	0.06	0.06	0.05	0.04	0.05
N	638	248	645	531	471	517	574	928	510
P-value comparing to London		0.01	0.55	0.62	0.38	0.17	0.87	0.68	0.33
Age 7 BAS II	120.63	116.17	115.42	114.41	113.96	115.54	114.21	115.71	115.41
SE	0.81	1.27	0.81	0.86	0.84	0.85	0.79	0.58	0.77
N	518	189	499	419	396	441	516	781	426

P-value comparing to London		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age 7 SDQ	6.23	6.42	6.57	6.85	6.38	7.06	6.97	6.29	6.44
SE	0.24	0.34	0.24	0.24	0.26	0.27	0.23	0.18	0.22
N	520	191	499	419	400	439	515	780	428
P-value comparing to London		0.64	0.31	0.06	0.66	0.02	0.02	0.82	0.51
Age 7 KS1	33.73	33.55	32.60	32.33	33.33	32.37	32.97	33.54	33.14
SE	0.34	0.50	0.35	0.36	0.37	0.37	0.32	0.24	0.30
N	433	173	461	383	365	409	480	692	395
P-value comparing to London		0.77	0.02	0.00	0.43	0.01	0.11	0.65	0.19

Table D-2 Mean early years educational attainment by ONS Cluster

	London Cosmopolitan	English Countryside	Suburban traits	Business & Education Centres	Coastal & Heritage	Prosperous England	Mining & Manufac.
Age 3 BAS II	50.58	52.62	49.82	50.07	52.09	52.32	50.81
SE	0.57	0.31	0.38	0.38	0.51	0.34	0.27
N	603	1167	882	950	458	901	1657
P-value comparing to London		0.00	0.26	0.45	0.05	0.01	0.72
Age 3 SDQ	8.47	8.73	9.09	9.85	9.21	8.11	9.59
SE	0.23	0.15	0.17	0.18	0.22	0.15	0.13
N	617	1184	913	978	472	906	1650
P-value comparing to London		0.32	0.03	0.00	0.02	0.19	0.00
Age 5 BAS II	55.82	58.52	54.61	55.10	56.19	59.09	56.12
SE	0.64	0.30	0.45	0.40	0.51	0.33	0.27
N	415	1075	703	763	379	843	1367
P-value comparing to London		0.00	0.12	0.34	0.65	0.00	0.67
Age 5 SDQ	6.26	6.27	6.54	7.27	6.53	6.00	6.71
SE	0.25	0.14	0.19	0.19	0.21	0.15	0.13
N	417	1073	700	762	380	845	1370

P-value comparing to London		0.96	0.37	0.00	0.41	0.39	0.11
Age 5 EYFSP	7.05	7.15	6.76	6.81	6.84	7.06	6.94
SE	0.08	0.04	0.05	0.05	0.07	0.04	0.04
N	362	974	626	708	362	736	1294
P-value comparing to London		0.27	0.00	0.01	0.05	0.93	0.21
Age 7 BAS II	122.28	115.09	117.50	113.64	113.55	117.36	114.36
SE	1.22	0.57	0.79	0.78	0.91	0.60	0.57
N	264	846	553	570	309	650	993
P-value comparing to London		0.00	0.00	0.00	0.00	0.00	0.00
Age 7 SDQ	5.72	6.28	6.75	7.28	6.80	6.23	6.75
SE	0.31	0.16	0.23	0.24	0.29	0.19	0.16
N	265	851	549	569	311	652	994
P-value comparing to London		0.11	0.01	0.00	0.01	0.16	0.00
Age 7 KS1	33.56	33.44	33.36	32.15	32.27	33.94	32.50
SE	0.49	0.24	0.32	0.32	0.41	0.25	0.24
N	210	771	498	529	287	581	915
P-value comparing to London		0.83	0.73	0.02	0.04	0.49	0.05

Appendix E Drivers of regional differences in early years attainment

This appendix describes the findings from chapter 6 which aimed to identify whether well-established determinants of educational attainment and development were present within the Millennium Cohort data used in this study. The findings present here demonstrate which are the key variables associated with attainment and which might underpin regional differences when they are investigated at an area-level. Note that the differences reported here do not take other factors into consideration.

The appendix provides a narrative summary of the key findings, supported by the detailed tables of results.

Socio demographic characteristics

Mother's, father's and the parental highest qualification

At 9 months old, children were significantly more likely to be delayed in developing gross motor function, fine motor function and communicative gestures if neither parent nor the household held any qualifications. Between the ages of 3 and 7, higher parental qualifications were strongly associated with higher BAS II naming vocabulary T scores, higher word reading standard scores and lower SDQ scores. Higher parental qualifications were also associated with significantly higher levels of attainment at Key Stage One.

[Table E-1 Table E-18 Table E-53 Table E-88]

Mother's, father's and the parental highest NSSEC

At 9 months, children with parents in lower level occupations were more likely to be delayed across all 3 developmental domains compared with children with parents in higher occupations. Between 3 and 7 years, having parents with higher level occupations was associated with higher BAS II naming vocabulary T scores and word reading standard scores, and lower SDQ scores. Children with mothers in lower level occupations were also associated with significantly lower levels of attainment at KS1.

[Table E-2 Table E-19 Table E-54 Table E-89]

Mother's age at birth

At age nine months, children with older mothers were less likely than children with mothers under the age of 20 at birth to be delayed in fine motor function and communicative gestures development. However, they were more likely to be delayed in gross motor function development (although this difference was only significant for mothers aged 35-39 and 40-44 at birth). Between the ages of 3 and 7, children's verbal cognitive outcomes increased significantly with mothers' age at birth until age 45 and over, where children's outcomes are not statistically different from those with mothers under the age of 20. Similarly, KS1 attainment was significantly associated with their mothers' age at birth. Attainment was highest for children whose mothers were aged between 30 and 39, with scores being lower at the higher and lower ends of the distribution of ages at birth. Lower SDQ scores (i.e. better development) at ages 3 to 7 were associated with the increasing age of the mother at birth, though this was not significant at age 3.

[Table E-3 Table E-20 Table E-55 Table E-90]

Ethnicity and parental generational status

Black Caribbean (7%) and Black African (5%) children were least likely to exhibit developmental delays in gross motor functioning. Pakistani (4%) and Bangladeshi (10%) children were most likely to be delayed in fine motor functioning. In sweeps 2 and 3, white children scored significantly higher than all other ethnicities in all cognitive outcomes. However, by sweep 4 this was no longer true – Indian children averaged the highest score on the BAS II word reading assessment (118 points, compared with 112 for white students) and Black Caribbean scored the lowest (108 points). No ethnic groups had significantly higher attainment at KS1 than White British pupils. Pakistani, Bangladeshi, Black African and Black Caribbean students all had significantly lower attainment than their White British counterparts, with Pakistani pupils performing the worst.

[Table E-4 Table E-21 Table E-56 Table E-92]

At age nine months, children of a foreign born mother or father were more likely to exhibit a delay in fine motor function and communicative gestures. In sweep 2 children of a foreign born mother or father scored on average 8 and 9 points lower on the BAS II naming vocabulary assessment than those born to UK native parents. Although these differences are similar when children were aged 5 by age 7, children of a foreign born mother or father scored an average of 2 points higher than children of UK native parents. At KS1, attainment was significantly lower for children whose parents were born outside of the UK.

[Table E-7 Table E-8 Table E-25 Table E-26 Table E-60 Table E-61 Table E-96]

Parental employment status

Children from two parent households where one or both parents were not working are significantly more likely to have a developmental delay in gross motor and fine motor functioning compared to dual earner households. In subsequent years, children from workless households (both two parent and single parent) scored lowest across all cognitive assessments and highest on the SDQ. This is reflected in KS1 attainment, where children from workless households performed worst, and those from households with 2 working parents performing the best.

[Table E-6 Table E-23 Table E-58 Table E-94]

Economic disadvantage

Recognising the complexity and multiple dimensions of economic disadvantage, a suite of indicators were examined to explore the relationship between disadvantage and children's outcomes. These were income deprivation, material deprivation, being in receipt of means tested benefits and subjective deprivation which were used to create an index of multiple disadvantage [14]. Across all sweeps, children from families experiencing disadvantage measured by any of these indicators performed worse on all outcomes compared with their non- disadvantaged counterparts. This relationship is also observed in pupils' attainment at KS1.

[Table E-24 Table E-59 Table E-95]

Home and parenting

Biological factors

Birth weight had a significant effect on outcomes as children grew up. At 9 months old, children with lower birth weights were significantly more likely to be delayed than their peers in developing gross motor function. Similarly, aged 3, children with higher birth weights (4-6 Kilos) were associated with significantly higher BAS II Vocabulary T-Scores. This association was not significant when children were 5, but the relationship returned when children were 7, where there was a significant association between higher birth weight and obtaining a higher word reading standard score. Aged 9 months, 3 years and 5 years old, there was a significant association between having a low birth weight (less than one kilo) and scoring higher on the SDQ. Birth weight is also associated with

[14] Only income deprivation and receipt of means tested benefits were available in sweep one.

significant differences in KS1 attainment, with children who were heavier at birth achieving better results than their peers.

[Table E-9 Table E-27 Table E-62 Table E-97]

Children were more likely to be delayed in developing gross motor function than their peers if they were never breastfed. However the magnitude of the difference was small (13% compared with 10%). Across the remaining sweeps there was a significant, negative association between not being breastfed and vocabulary (aged 3 and 5 years old) and reading (aged 7) scores. Never being breastfed was also positively associated with a higher SDQ score between 3 and 7 years old. KS1 attainment was significantly lower for children who were never breastfed.

[Table E-10 Table E-30 Table E-65 Table E-100]

Psychological/ parent-child relationship

There was a consistent association across sweeps between the Kessler scale of psychological distress and outcomes. Vocabulary/reading scores were lower for mothers in the highest quintile (highly stressed) of Kessler scores. Children scored approximately 3.5 points less on the vocabulary T-Score and approximately 5.5 points less on the word reading score than those with mothers in the bottom quintile. Children in this quintile also had higher SDQ scores. The same relationship between the Kessler Scale and vocabulary/reading outcomes can be observed for fathers, but the coefficients were smaller. Whilst there was a significant association between the father's Kessler Scale and SDQ scores, the relationship is mainly seen for those with the highest end of the distribution of Kessler Scores, rather than the dose-response relationship observed for mothers. Children whose relationship with their parents fell into the highest quintile of the Kessler scores had significantly lower levels of attainment at KS1.

[Table E-28 Table E-29 Table E-63 Table E-64 Table E-98 Table E-99]

Having at least one parent who has ever been diagnosed with depression is associated with significant differences in vocabulary and reading scores between the ages of 3 and 7. Aged 5 and 7 there was a strong positive association between not having a parent that had ever been diagnosed with depression and vocabulary/reading scores. Similarly, children whose parents had never been diagnosed with depression had significantly higher levels of attainment at KS1.

[Table E-11 Table E-31 Table E-66 Table E-101]

The Pianta child-parent relationship scale (measured only when the children were aged 3) had a significant and positive association with vocabulary T-Score, and a significant negative association with SDQ, following a dose-response relationship.

[Table E-42 Table E-43 Table E-77 Table E-78]

Parental competence had a significant effect on SDQ scores. Children whose mothers perceived themselves as better or significantly better than average parents had significantly lower SDQ scores between the ages of 3 and 7. Aged 3, children with fathers who self-report having significant difficulties being a parent had significantly lower vocabulary T-Scores. Similarly, at 7 years old, children with mothers that perceive themselves as better than average parents had significantly higher vocabulary T-Scores. These results should be interpreted with caution, as causality is not established.

[Table E-32 Table E-33 Table E-67 Table E-68 Table E-102]

A similar pattern can be observed for life satisfaction. Between the ages of 3 and 7 SDQ scores were lower for children whose mothers reported that they were very satisfied with life. The same pattern can be observed for father's life satisfaction. At 3 and 7 years old there was a positive association between life satisfaction and vocabulary/reading scores (1.18 and 2.27 points respectively). There did not appear to be a significant relationship between father's life satisfaction and vocabulary or word reading at any age. These results are reflected in KS1 attainment, where mothers' life satisfaction is positively associated with the children's attainment, but this relationship is not significant for fathers' life satisfaction. Results regarding life satisfaction, like parental competence, should be interpreted with caution, as causality is not established in this relationship.

[Table E-14 Table E-15 Table E-38 Table E-39 Table E-71 Table E-72 Table E-103 Table E-104]

Children whose mothers and fathers report a good work-life balance scored significantly lower on the Strengths and Difficulties Questionnaire (i.e. had more positive socio-emotional development). However the effect sizes for both maternal and paternal work-life balance were very small, suggesting any effect they have on a child's development is minimal. This is reinforced by evidence from KS1 attainment, where no significant differences were observed.

[Table E-38 Table E-39 Table E-73 Table E-74 Table E-109]

Locus of control was calculated when children were aged 9 months and 3 years old. Children whose mothers who feel most in control of their lives had significantly lower SDQ scores than their less in-control counterparts.

[Table E-12 Table E-13 Table E-34 Table E-35 Table E-69 Table E-70]

Home life

When children were aged 3 and 5 years old, there was a strongly significant, positive association between a more active home-learning environment and higher vocabulary scores. The magnitude of these impacts diminishes as children get older. When children were aged 7 there were still significant differences in reading score dependent upon the home learning environment, but this relationship was negative. Similarly, more active

home learning environments are associated with significantly lower SDQ scores in sweeps 2 and 3, but there were no clear significant relationship when children were aged 7. The implication is that the home learning environment is more strongly associated with healthier development in the early years than the later years. This is reflected in the KS1 attainment results, where those in the most active home-learning environments scored significantly lower than those with less active home environments.

[Table E-40 Table E-75 Table E-105]

Having regular mealtimes or bedtimes was positively associated with higher vocabulary scores and lower SDQ scores when children were 3 and 5 years old. However, there was no significant association between having a regular bedtime or hours to watch TV and either of these outcomes when children were aged 7. When children were 5 and 7 years old there was a positive association between a child having breakfast regularly and their vocabulary T-Score (4.19 and 4.89 points respectively). Children who eat breakfast regularly also had significantly lower SDQ scores. There was no significant relationship between having a regular bedtime or hours to watch TV and KS1 attainment, but children who had breakfast regularly did have significantly better levels of attainment.

[Table E-41 Table E-76 Table E-106]

School life

A child's development is associated with a parent being actively involved in their school life. If a child's parent attended parents' evening, they had significantly higher vocabulary T-scores and word reading scores (aged 5 and 7). The magnitude of this effect was very large, with children whose parents attended parents evening scoring 5.09 and 9.83 marks higher than their counterparts. Children whose parents didn't attend parents evening also had significantly higher SDQ scores. The KS1 attainment results reinforce these findings. Children whose parent's attended parents evening achieved on average over 5 points higher than their peers.

[Table E-44 Table E-79 Table E-107]

Having a parent involved in school activities can also have a positive effect on a child (when children were 7 years old). For couple households, having at least one parent involved in school activities were positively associated with higher word reading scores. In households with a lone mother, this relationship also exists, though the effect is smaller in magnitude. Children in couple households or single mother households whose parents are actively engaged in school activities also had lower SDQ scores, and these decrease the more school activities a parent is involved in. KS1 attainment was also highest amongst pupils whose parents were involved in school activities. Children whose parents were involved in 3 or more activities at school scored on average 4 points higher than their peers at KS1.

[Table E-45 Table E-80 Table E-110]

Parental aspirations for their child's education were also an important factor. Children with at least one parent that wanted a child to attend university had significantly higher word reading scores, and significantly lower SDQ scores. Similarly, children whose parents had this aspiration had significantly higher levels of attainment at KS1.

[Table E-46 Table E-81 Table E-111]

Children who enjoy school scored significantly higher on word reading assessments, and had lower ('better') SDQ scores. The less often a child enjoys school, the stronger these relationships were. This relationship is also observed in KS1 attainment.

[Table E-47 Table E-82 Table E-112]

Childcare

The age at which a child started to attend childcare was also an important factor in development. Attending childcare before the age of 3 years old has a significant and positive association with vocabulary T-Scores. This association is strongest for children who started attending childcare whilst aged between zero and twelve months old. This relationship follows the same pattern when considering pupil's attainment at KS1.

[Table E-49 Table E-84 Table E-113]

The hours a person attends childcare each week was also significant. Whilst attending childcare for any time is associated with a significantly higher vocabulary T-Score, those who attended 21-30 hours of childcare (regardless of whether this is the main arrangement or any arrangement) yielded the highest premium (4.03points). This is reflected in attainment at KS1, where those attending 21-30 hours of childcare achieved the highest premium compared with peers who did not attend childcare (3.12 points).

[Table E-50 Table E-85 Table E-114]

If a child attended reception full time, they scored significantly higher on the BAS II Vocabulary T-Score than those children that attended reception on a part-time basis. However, this relationship is not significant when comparing KS1 attainment of those attending reception on a full-time and a part-time basis.

[Table E-52 Table E-87 Table E-115]

Parents' use of flexible working was significantly associated with a child's development. Across all ages considered, there was a positive association between flexible working arrangements and our outcome measures. Children, whose mothers used flexible working arrangements, were significantly less likely to be delayed than their peers in the development of gross and fine motor function. Between the ages of 3 and 7 a positive

association between mother's use of flexible working arrangements and vocabulary/word reading scores existed. Flexible working arrangements did not have a significant impact on SDQ scores, except when children were aged 7, where use of flexible working was associated with lower SDQ scores on average. Children whose mothers used flexible working arrangements scored significantly higher than their peers at KS1.

[Table E-16 Table E-17 Table E-51 Table E-86 Table E-116 Table E-117]

Neighbourhood characteristics

In addition to the characteristics and circumstances discussed above, several variables relating to conditions in children's Local Authority District (LAD) were explored to analyse the relationship between environment outside the home and children's outcomes. The variables explored are described below.

Theil ethnicity quintiles

Children at schools with a similarly diverse ethnic population as their Local Authority District appear to perform better than pupils in schools whose population is less reflective of their local area. Note that Theil measures do not indicate whether an area has a higher concentration of ethnic minorities per se, rather that the proportion of minorities in the local area is similar to that of the proportion of that in schools. At ages 3 and 5, children in areas with highly reflective ethnic populations scored significantly higher than their counterparts on the BAS II assessments, although this trend was reversed at age 7. Pupils in areas with a more representative ethnic population also consistently scored significantly lower on the Strengths and Difficulties questionnaire at all the age categories considered. These differences can also be observed in children's attainment at the Early Years Foundation Stage and Key Stage 1. Pupils at schools whose population is reflective of the local area scored significantly higher than their peers at both EYFSP and KS1.

[Table E-118 Table E-126 Table E-134]

Theil FSM quintiles

Pupils at schools with populations that are highly representative of the economic diversity of their local area also have significantly higher vocabulary and word reading BAS II scores than pupils at less representative schools at ages 3, 5 and 7. Pupils at these schools also have significantly lower SDQ scores than their peers at all age categories considered. This is supported by the attainment data, with pupils from more representative schools scoring significantly higher both at EYFSP and KS1.

[Table E-119 Table E-127 Table E-135]

Proportion of schools with Ofsted outstanding quintile

The quality of local schools may also have a significant impact on children's educational attainment. Pupils in areas with the highest proportion of 'Outstanding' schools scored significantly higher than their counterparts at ages 3, 5 and 7 (although this difference is only weakly significant at age 7). Pupils in areas with high quality schools also scored significantly lower on the Strengths and difficulties questionnaire at ages 5 and 7. This positive association is also found in the EYFSP and KS1 data, suggesting the quality of local schools may have an effect on children's educational attainment.

[Table E-120 Table E-128 Table E-136]

Proportion with highest qualification NVQ 4 quintile

Living in an area with a higher proportion of highly educated residents (NVQ Level 4 or above) is associated with higher educational attainment for children at ages 3, 5 and 7. This effect appears to gain in magnitude as children get older, as differences in BAS II scores are very small when children are 3 years old, but get considerably larger when children are 5 and 7. SDQ scores are also significantly lower for children in more highly educated areas, but the differences in scores are static, and do not get significantly larger when pupils are older. Children living in highly educated areas also scored significantly higher at the EYFSP and KS1

[Table E-122 Table E-130 Table E-138]

Proportion of UK born residents

Children in areas with higher proportions of UK born residents tended to score higher on the vocabulary and word reading assessments at all ages considered, although scores were highest for those in the 4th quintile, suggesting that some diversity in the local area is associated with high educational attainment. SDQ scores were not significantly different for children in these areas compared with those in areas with a higher proportion of foreign born residents, with the exception of children aged 5, where SDQ scores were lower in areas with a higher proportion of UK born residents. The evidence from the attainment data supports these findings. Children in areas with a higher proportion of UK-born residents scored higher at both EYFSP and KS1.

[Table E-121 Table E-129 Table E-137]

Proportion unemployed

There is a negative association between higher proportions of unemployment in the local area and children's attainment. BAS II word reading and vocabulary scores were significantly lower for children in areas with higher levels of unemployment, these differences are also reflected in children's SDQ scores, with living in areas with the

highest levels of unemployment scoring significantly higher than their peers. This negative association is also found in the attainment results, with pupils from areas with higher proportions of unemployment scoring significantly lower at the EYFSP and KS1.

[Table E-123 Table E-131 Table E-139]

LA budget per capita

Perhaps surprisingly, there is a negative association between the Local Authority budget per capita and BAS II scores at all ages considered. Children in areas with higher levels of per capita funding also scored significantly higher on the Strengths and Difficulties questionnaires across all age groups. The evidence from the attainment results supports these findings, with pupils living in areas with higher per capita Local Authority budgets performing significantly poorer than their peers at both the EYFSP and KS1. This phenomenon probably occurs because of the pupil premium, ensuring that disadvantaged areas receive more funding.

[Table E-124 Table E-132 Table E-140]

Ethnic densities in the local area

When children are aged 3 and 5 there is a significant positive association between having a higher proportion of white residents in the local authority and BAS II vocabulary scores. However this effect is reversed at age 7, when children in areas with the highest proportion of white residents score significantly lower than their peers. This switch is not reflected in the SDQ scores, where children in areas with a higher proportion of white residents score significantly higher than their counterparts across all age categories. These findings are reflected in the attainment results. The evidence from the Early Years Foundation Stage data suggests that living in an area with a higher proportion of white residents is associated with significantly higher attainment. However at age 7, when then pupils were taking their KS1 assessments; there is no clear relationship between the proportion of white residents in the local area and attainment.

[Table E-125 Table E-133 Table E-141]

Table E-1 Probability of a delay by mother's education

	Gross Motor		Fine Motor		Communicative Gestures	
Qualification Level	**Mean**		**Mean**		**Mean**	
NVQ Level 4/5	0.10		0.05		0.00	
NVQ Level 3	0.09		0.06		0.00	
NVQ Level 2/1	0.10		0.05		0.00	
Overseas	0.13		0.11	**	0.00	
None	0.16	**	0.10	**	0.01	**
N	11,327		11,327		11,327	

Note: asterisks indicate where means are significantly different to NVQ Level 4/5, ** p<0.01 and * p<0.05

Table E-2 Probability of a delay by mother's NSSEC

	Gross Motor		Fine Motor		Communicative Gestures	
NSSEC Classification	**Mean**		**Mean**		**Mean**	
Managerial and Professional	0.09		0.05		0.00	
Intermediate	0.09		0.06		0.00	
Lower	0.11	*	0.07	**	0.00	**
N	9,686		9,686		9,686	

Note: asterisks indicate where means are significantly different to Managerial and Professional, ** p<0.01 and * p<0.05

Table E-3 Probability of a delay by mother's age at birth

	Gross Motor		Fine Motor		Communicative Gestures	
Mothers' age at birth	**Mean**		**Mean**		**Mean**	
Under 20	0.09		0.11		0.01	
20-24	0.11		0.08	*	0.00	
25-29	0.11		0.06	**	0.01	
30-34	0.10		0.05	**	0.00	
35-39	0.12	*	0.05	**	0.00	
40-44	0.16	*	0.07	*	0.00	**
45-49	0.09		0.12		0.00	**
N	11,345		11,357		11,357	

Note: asterisks indicate where means are significantly different to Under 20, ** p<0.01 and * p<0.05

Table E-4 Probability of a delay by child's ethnic group

	Gross Motor		Fine Motor		Communicative Gestures	
Ethnicity	**Mean**		**Mean**		**Mean**	
White	0.11		0.06		0.01	
Mixed	0.08	*	0.05		0.01	
Indian	0.09		0.08		0.01	
Pakistani	0.18	**	0.1	**	0.02	*
Bangladeshi	0.15		0.16	**	0.04	**
Black Caribbean	0.04	**	0.07		0.01	
Black African	0.06	**	0.06		0.02	
Other ethnic group (inc. Chinese, Other)	0.11		0.12	**	0.02	
N	11,336		11,337		11,337	

Note: asterisks indicate where means are significantly different to White, ** p<0.01 and * p<0.05

Table E-5 Probability of a delay by household structure

	Gross Motor		Fine Motor		Communicative Gestures	
Household structure	**Mean**		**Mean**		**Mean**	
Two natural parents	0.11		0.06		0.01	
Blended family	0.15		0.14		0.00	**
Single parent	0.11		0.09	**	0.02	
Other	0.00	**	0	**	0.00	**
N	11,362		11,374		11,374	

Note: asterisks indicate where means are significantly different to two natural parents ** p<0.01 * p<0.05

Table E-6 Probability of a delay by household employment

	Gross Motor		Fine Motor		Communicative Gestures	
Household employment	**Mean**		**Mean**		**Mean**	
Two parents working	0.09		0.05		0.01	
One parent working, one not	0.11	*	0.07	*	0.01	
Two parents not working	0.16	**	0.08	*	0.01	
Single parent hh, working	0.07		0.07		0.01	
Single parent hh, not working	0.11		0.09	**	0.02	
N	11,185		11,197		11,197	

Note: asterisks indicate where means are significantly different to two parents working ** p<0.01 and * p<0.05

Table E-7 Probability of a delay by mother's generational status

	Gross Motor	Fine Motor		Communicative Gestures	
Index	**Mean**	**Mean**		**Mean**	
UK born	0.10	0.05		0.00	
Foreign born	0.12	0.08	**	0.01	**
N	9,044	9,051		9,051	

Note: asterisks indicate where means are significantly different to UK born mothers ** p<0.01 and * p<0.05

Table E-8 Probability of a delay by father's generational status

	Gross Motor		Fine Motor		Communicative Gestures	
Index	**Mean**		**Mean**		**Mean**	
UK born	0.10		0.05		0.00	
Foreign born	0.13	**	0.08	**	0.01	*
N	6,590		6,593		6,593	

Note: asterisks indicate where means are significantly different to UK born father ** p<0.01 and * p<0.05

Table E-9 Probability of a delay by birth weight

	Gross Motor		Fine Motor		Communicative Gestures
Birth Weight	**Mean**		**Mean**		**Mean**
Less than 1 Kilo	0.84		0.22		-0.00
1-2 Kilos	0.39	**	0.12		0.01
2-3 Kilos	0.15	**	0.08	*	0.01
4-5 Kilos	0.10	**	0.06	*	0.01
5-6 Kilos	0.07	**	0.05	*	0.01
6 Kilos	0.08	**	0.04	*	0.00
N	11,324		11,325		11,325

Note: asterisks indicate where means are significantly different to Less than 1 Kilo ** p<0.01 and * p<0.05

Table E-10 Probability of a delay by whether the child was ever breastfed

	Gross Motor		Fine Motor		Communicative Gestures
Breastfed	**Mean**		**Mean**		**Mean**
Yes	0.10		0.06		0.01
No	0.13	**	0.08	*	0.01
N	11,340		11,340		11,340

Note: asterisks indicate where means are significantly different those who have ever been breastfed ** p<0.01 and * p<0.05

Table E-11 Probability of a delay by whether either parent was every diagnosed with depression

	Gross Motor		Fine Motor	Communicative Gestures
Had depression	**Mean**		**Mean**	**Mean**
Yes	0.12		0.06	0.01
No	0.10	*	0.06	0.01
N	10,257		10,258	10,258

Note: asterisks indicate where means are significantly different to those with parents diagnosed with depression ** p<0.01 and * p<0.05

Table E-12 Probability of a delay by mother's locus of control

	Gross Motor	Fine Motor	Communicative Gestures

Parental competence	Mean		Mean		Mean
1 (Lowest)	0.16		0.11		0.00
2	0.11		0.09		0.01
3	0.11		0.08		0.00
4 (Highest)	0.09	*	0.05	**	0.00
N	8,073		8,073		8,073

Note: asterisks indicate where means are significantly different to the lowest loci of control ** p<0.01 and * p<0.05

Table E-13 Probability of a delay by father's locus of control

	Gross Motor	Fine Motor	Communicative Gestures
Parental competence	Mean	Mean	Mean
1 (Lowest)	0.09	0.11	0.04
2	0.15	0.08	0.01
3	0.11	0.06	0.01
4 (Highest)	0.10	0.05	0.01
N	5,887	5,896	5,896

Note: asterisks indicate where means are significantly different to the lowest loci of control ** p<0.01 and * p<0.05

Table E-14 Probability of a delay by mother's life satisfaction

	Gross Motor	Fine Motor		Communicative Gestures	
Life satisfaction	Mean	Mean		Mean	
Less than highly satisfied	0.11	0.07		0.01	
Highly satisfied	0.10	0.06	*	0.01	*
N	10,824	10,824		10,824	

Note: asterisks indicate where means are significantly different to those less than highly satisfied ** p<0.01 and * p<0.05

Table E-15 Probability of a delay by father's life satisfaction

	Gross Motor	Fine Motor	Communicative Gestures
Life satisfaction	Mean	Mean	Mean
Less than highly satisfied	0.11	0.06	0.01
Highly satisfied	0.10	0.05	0.01
N	7,831	7,842	7,842

Note: asterisks indicate where means are significantly different to those less than highly satisfied *** p<0.01, ** p<0.05, * p<0.1

Table E-16 Probability of a delay by mother's use of flexible working

	Gross Motor	Fine Motor	Communicative Gestures
Flexible working	Mean	Mean	Mean
Yes	0.09	0.05	0.01

No	0.11	**	0.07	**	0.01	**
N	11,362		11,374		11,374	

Note: asterisks indicate where means are significantly different to those without flexible working ** p<0.01 and * p<0.05

Table E-17 Probability of a delay by father's use of flexible working

	Gross Motor		Fine Motor		Communicative Gestures	
Flexible working	**Mean**		**Mean**		**Mean**	
Yes	0.11		0.07		0.01	
No	0.11	**	0.06	**	0.01	**
N	11,362		11,374		11,374	

Note: asterisks indicate where means are significantly different to those without flexible working ** p<0.01 and * p<0.05

Table E-18 Mean BAS II score by mother's education

	Age 3		Age 5		Age 7	
Qualification Level	**Mean**		**Mean**		**Mean**	
NVQ Level 4/5	52.99		58.69		118.02	
NVQ Level 3	50.93	**	55.21	**	113.38	**
NVQ Level 2/1	48.89	**	53.61	**	109.84	**
Overseas	41.66	**	46.66	**	109.59	**
None	42.12	**	46.09	**	103.42	**
N	9,076		9,351		8,507	

Note: asterisks indicate where means are significantly different to NVQ Level 4/5, ** p<0.01 and * p<0.05

Table E-19 Mean BAS II score by mother's NSSEC

	Age 3		Age 5		Age 7	
NSSEC Classification	**Mean**		**Mean**		**Mean**	
Managerial and Professional	53.09		58.67		118.14	
Intermediate	51.83	**	56.52	**	114.71	**
Lower	47.53	**	52.28	**	108.33	**
N	7,868		8,117		7,511	

Note: asterisks indicate where means are significantly different to Managerial and Professional, ** p<0.01 and * p<0.05

Table E-20 Mean BAS II score by mother's age at birth

	Age 3		Age 5		Age 7	
Mothers' age at birth	**Mean**		**Mean**		**Mean**	
Under 20	46.51		50.57		105.04	
20-24	46.41		50.79		108.73	**
25-29	49.71	**	54.76	**	112.21	**
30-34	51.07	**	56.42	**	115.32	**
35-39	51.09	**	56.28	**	115.57	**
40-44	52.01	**	56.18	**	115.44	**
45-49	52.32		51.02		115.83	*
N	9,151		9,375		8,535	

Note: asterisks indicate where means are significantly different to Under 20, ** p<0.01 and * p<0.05

Table E-21 Mean BAS II score by child's ethnicity

	Age 3		Age 5		Age 7	
Ethnicity	**Mean**		**Mean**		**Mean**	
White	50.89		55.93		112.26	
Mixed	48.50	**	53.90	**	113.27	
Indian	42.27	**	49.86	**	117.69	**
Pakistani	35.70	**	40.87	**	111.04	
Bangladeshi	33.53	**	41.14	**	113.94	
Black Caribbean	44.32	**	49.81	**	108.11	*
Black African	40.91	**	45.26	**	115.37	*
Other ethnic group (inc. Chinese, Other)	40.91	**	44.57	**	111.25	
N	9,105		9,455		8,625	

Note: asterisks indicate where means are significantly different to White, ** p<0.01 and * p<0.05

Table E-22 Mean BAS II score by household structure

	Age 3		Age 5		Age 7	
Household structure	**Mean**		**Mean**		**Mean**	
Two natural parents	50.42		55.35		114.34	
Blended family	46.79	**	53.21	**	107.26	**
Single parent	46.29	**	51.87	**	108.14	**
Other	49.33		53		106.53	*
N	9,139		9,455		8,623	

Note: asterisks indicate where means are significantly different to two natural parents ** p<0.01 and * p<0.05

Table E-23 Mean BAS II score by household employment

	Age 3		Age 5		Age 7	
Household employment	**Mean**		**Mean**		**Mean**	
Two parents working	52.00		57.15		115.67	
One parent working, one not	49.36	**	53.66	**	112.41	**
Two parents not working	42.72	**	47.62	**	104.34	**
Single parent hh, working	48.53	**	53.82	**	111.03	**
Single parent hh, not working	44.63	**	48.93	**	103.19	**
N	8,214		8,123		7,170	

Note: asterisks indicate where means are significantly different to two parents working ** p<0.01 and* p<0.05

Table E-24 Mean BAS II score by index of multiple disadvantage

	Age 3		Age 5		Age 7	
Index	**Mean**		**Mean**		**Mean**	
0	52.78		57.72		117.51	
1	50.90	**	55.05	**	112.36	**
2	48.59	**	53.57	**	110.32	**
3	46.03	**	50.25	**	107.39	**
4	44.45	**	49.82	**	105.67	**
N	9,056		9,270		8,532	

Note: asterisks indicate where means are significantly different to an index score of 0 ** p<0.01 and * p<0.05

Table E-25 Mean BAS II score by mother's generational status

	Age 3		Age 5		Age 7	
Index	**Mean**		**Mean**		**Mean**	
UK born	50.52		55.82		112.32	
Foreign born	42.65	**	47.64	**	114.77	**
N	9,056		8,520		7,814	

Note: asterisks indicate where means are significantly different to UK born mothers ** p<0.01 and * p<0.05

Table E-26 Mean BAS II scores by father's generational status

	Age 3		Age 5		Age 7	
Index	**Mean**		**Mean**		**Mean**	
UK born	51.39		56.64		115.72	
Foreign born	42.69	**	48.26	**	113.71	**
N	6,507		6,340		6,340	

Note: asterisks indicate where means are significantly different to UK born father ** p<0.01 and * p<0.05

Table E-27 Mean BAS II scores by birth weight

	Age 3		Age 5		Age 7	
Birth Weight	**Mean**		**Mean**		**Mean**	
Less than 1 Kilo	43.89		51.45		101.77	
1-2 Kilos	44.33		51.32		107.14	
2-3 Kilos	47.55		52.51		110.49	
4-5 Kilos	50.03	*	54.99		112.89	*
5-6 Kilos	51.58	**	56.23	*	114.84	*
6 Kilos	46.46		54.41		113.99	*
N	9,020		9,246		8,423	

Note: asterisks indicate where means are significantly different to Less than 1 Kilo ** p<0.01 and * p<0.05

Table E-28 Mean BAS II scores by Mother's Kessler Scale

	Age 3		Age 5		Age 7	
Quintile	**Mean**		**Mean**		**Mean**	
1	50.66		55.36		113.80	
2	51.28		56.71	**	114.83	
3	51.48		56.28	**	113.99	
4	50.23		54.82		111.69	**
5	47.23	**	52.22	**	108.31	**
N	8,003		8,574		7,902	

Note: asterisks indicate where means are significantly different to quintile ** p<0.01 and * p<0.05

Table E-29 Mean BAS II scores by father's Kessler Scale

	Age 3		Age 5		Age 7	
Quintile	**Mean**		**Mean**		**Mean**	
1	51.01		56.04		114.00	
2	51.36		56.69		115.22	
3	51.32		57		115.38	
4	50.96		56.7		115.13	
5	49.71	**	53.66	**	111.57	**
N	5,997		6,185		5,557	

Note: asterisks indicate where means are significantly different to quintile ** p<0.01 and * p<0.05

Table E-30 Mean BAS II scores by whether the child was ever breastfed

	Age 3		Age 5		Age 7	
Breastfed	**Mean**		**Mean**		**Mean**	
Yes	50.39		55.36		114.42	
No	47.67	**	52.35	**	107.94	**
N	8,495		8,776		8,018	

Note: asterisks indicate where means are significantly different those who have ever been breastfed ** p<0.01 and ** p<0.05

Table E-31 Mean BAS II scores by whether either parents has ever been diagnosed with depression

	Age 3		Age 5		Age 7	
Had depression	**Mean**		**Mean**		**Mean**	
Yes	49.07		53.92		114.81	
No	45.68	**	55.47	**	108.37	**
N	3,407		5,639		4,556	

Note: asterisks indicate where means are significantly different to those with parents diagnosed with depression ** p<0.01 and * p<0.05

Table E-32 Mean BAS II score by mother's perceived parental competence

	Age 3	Age 5		Age 7	
Parental competence	**Mean**	**Mean**		**Mean**	
Not very good at being a parent	50.93	52.07		105.39	
Some trouble being a parent	49.71	55.27		106.4	
An average parent	49.48	54.38		110.64	
A better than average parent	51.96	57.09	*	115.95	**
A very good parent	50.23	54.63		113	*
N	7,934	8,523		7,766	

Note: asterisks indicate where means are significantly different to not very good parents ** p<0.01 and * p<0.05

Table E-33 Mean BAS II scores by father's perceived parental competence

	Age 3		Age 5	Age 7
Parental competence	**Mean**		**Mean**	**Mean**
Not very good at being a parent	42.87		53.42	101.73
Some trouble being a parent	51.69	**	55.24	-
An average parent	50.28	**	55.94	109.64
A better than average parent	52.08	**	56.89	113.45
A very good parent	50.62	**	55.57	109.4
N	5,946			

Note: asterisks indicate where means are significantly different to not very good parents ** p<0.01 and * p<0.05

Table E-34 Mean BAS II score by mother's locus of control

	Age 3	
Locus of control	**Mean**	
1 (Lowest)	44.82	
2	44.19	
3	47.35	
4 (Highest)	51.21	*
N	354	

Note: asterisks indicate where means are significantly different to the lowest loci of control ** p<0.01 and * p<0.05

Table E-35 Mean BAS II score by father's locus of control

	Age 3	
Locus of control	**Mean**	
1 (Lowest)	46.64	
2	48.49	
3	45.69	
4 (Highest)	49.52	
N	348	

Note: asterisks indicate where means are significantly different to the lowest loci of control ** p<0.01 and * p<0.05

Table E-36 Mean BAS II score by mother's life satisfaction

	Age 3		Age 5	Age 7	
Life satisfaction	**Mean**		**Mean**	**Mean**	
Less than highly satisfied	49.83		55.16	112.13	
Highly satisfied	51.01	**	55.67	114.4	**
N	8,090		8,463	7,795	

Note: asterisks indicate where means are significantly different to those less than highly satisfied ** p<0.01 and * p<0.05

Table E-37 Mean BAS II score by father's life satisfaction

	Age 3	Age 5	Age 7
Life satisfaction	**Mean**	**Mean**	**Mean**
Less than highly satisfied	50.93	56.11	114.30
Highly satisfied	51.09	55.67	114.14
N	5,969	8,463	5,519

Note: asterisks indicate where means are significantly different to those less than highly satisfied ** p<0.01 and * p<0.05

Table E-38 Mean BAS II score by mother's work life balance

	Age 5		Age 7	
Work life balance	**Mean**		**Mean**	
Yes	57.04		114.62	
No	56.73	**	114.78	**
N	4,850		4,979	

Note: asterisks indicate where means are significantly different to those who don't have a good work life balance ** p<0.01 and * p<0.05

Table E-39 Mean BAS II score by father's work life balance

	Age 5		Age 7	
Work life balance	**Mean**		**Mean**	
Yes	57.71		111.43	
No	56.88	**	109.81	**
N	3,739		206	

Note: asterisks indicate where means are significantly different to those who don't have a good work life balance ** p<0.01 and * p<0.05

Table E-40 Mean BAS II score by home learning environment score quintiles

	Age 3		Age 5		Age 7	
Quintile	**Mean**		**Mean**		**Mean**	
1	45.48		53.06		111.86	
2	48.81	**	54.69	**	114	**
3	50.63	**	55.36	**	113.51	**
4	51.30	**	55.75	**	111.66	
5	52.71	**	55.6	**	109.64	**
N	9,101		9,101		8,586	

Note: asterisks indicate where means are significantly different to quintile ** p<0.01 and * p<0.05

Table E-41 Mean BAS II score by the child having a regular meal/bed/TV hour

	Age 3		Age 5		Age 7	
Regular meal/bed/TV hour	**Mean**		**Mean**		**Mean**	
Yes	51.04		55.38		111.29	
No	48.85	**	53.69	**	112.67	**
N	6,483		6,452		3,449	

Note: asterisks indicate where means are significantly different to those without a regular meal/bed/TV hour ** p<0.01 and * p<0.05

Table E-42 Mean BAS II score by mother's Pianta score quintiles

	Age 3	
Pianta Quintile	**Mean**	
1	48.07	
2	50.05	**
3	50.73	**
4	51.45	**
5	52.46	**
N	7,907	

Note: asterisks indicate where means are significantly different to quintile 1 ** p<0.01 and * p<0.05

Table E-43 Mean BAS II score by father's Pianta score quintiles

	Age 3	
Pianta Quintile	**Mean**	
1	49.49	
2	50.7	**
3	51.5	**
4	51.54	**
5	52.15	**
N	5,961	

Note: asterisks indicate where means are significantly different to quintile 1 ** p<0.01 and * p<0.05

Table E-44 Mean BAS II score by whether a parent has attended Parents' evening

	Age 5		Age 7	
Parents evening	**Mean**		**Mean**	
Yes	54.93		112.89	
No	49.84	**	103.06	**
Parents evening not taken place yet	52.48	**	105.61	**
N	9,321		8,579	

Note: asterisks indicate where means are significantly different to those who have attended parents evening ** p<0.01 and * p<0.05

Table E-45 Mean BAS II score by parental involvement in school

	Age 7	
Activities	**Mean**	
None	110.54	
1	113.34	**
2	116.54	**
3 or more	117.55	**
N	6,811	

Note: asterisks indicate where means are significantly different to no involvement ** p<0.01 and * p<0.05

Table E-46 Mean BAS II score by parental aspiration

	Age 7	
University aspiration	**Mean**	
Yes	113.07	
No	104.7	**
N	8,165	

Note: asterisks indicate where means are significantly different to yes ** p<0.01 and * p<0.05

Table E-47 Mean BAS II score by whether the child enjoys school

	Age 7	
Activities	**Mean**	
Always	114.34	
Usually	110.78	**
Sometimes	101.84	**
Not at all	100.66	**
N	8,580	

Note: asterisks indicate where means are significantly different to always ** p<0.01 and * p<0.05

Table E-48 Mean BAS II scores by whether the child eats a regular breakfast

	Age 5		Age 7	
Regular Breakfast	**Mean**		**Mean**	
Yes	54.89		112.69	
No	50.70	**	107.80	**
N	9,408		8,592	

Note: asterisks indicate where means are significantly different to those without a regular breakfast ** p<0.01 and * p<0.05

Table E-49 Mean BAS II scores by age started childcare

	Age 3	
Age	**Mean**	
No childcare	47.69	
0-6 months	50.78	**
6-12 months	51.41	**
12-24 months	49.79	**
24-36 months	49.96	**
36 + months	44.80	**
N	8,501	

Note: asterisks indicate where means are significantly different to no childcare ** p<0.01 and * p<0.05

Table E-50 Mean BAS II scores by hours of childcare used

	Age 3	
Age	**Mean**	
No childcare	48.04	
1-10 hours	51.02	**
11-20 hours	50.8	**
21-30 hours	52.07	**
31-40 hours	50.13	**
40+ hours	50.59	**
N	9,148	

Note: asterisks indicate where means are significantly different to no childcare ** p<0.01 and * p<0.05

Table E-51 Mean BAS II scores by mother's use of flexible working

	Age 3		Age 5	Age 7	
Flexible working	**Mean**		**Mean**	**Mean**	
Yes	51.86		57.02	114.84	
No	50.83	**	55.53	111.64	**
N	2,398		1,538	1,163	

Note: asterisks indicate where means are significantly different to those without flexible working ** p<0.01 and ** p<0.05

Table E-52 Mean BAS II scores by attendance to reception

	Age 5	
Reception	**Mean**	
Full Time	54.14	
Part Time	55.40	**
N	9,321	

Note: asterisks indicate where means are significantly different to full time reception attendees ** p<0.01 and * p<0.05

Table E-53 Mean SDQ score by mother's education

	Age 3		Age 5		Age 7	
Qualification Level	**Mean**		**Mean**		**Mean**	
NVQ Level 4/5	7.97		5.88		6.23	
NVQ Level 3	9.30	**	7.09	**	7.53	**
NVQ Level 2/1	10.33	**	7.86	**	8.32	**
Overseas	11.50	**	8.96	**	9.67	**
None	12.72	**	10.34	**	10.71	**
N	8,936		8,984		8,278	

Note: asterisks indicate where means are significantly different to NVQ Level 4/5, ** p<0.01 and * p<0.05

Table E-54 Mean SDQ scores by mother's NSSEC

	Age 3		Age 5		Age 7	
NSSEC Classification	**Mean**		**Mean**		**Mean**	
Managerial and Professional	7.84		5.76		6.23	
Intermediate	8.75	**	6.75	**	7.02	**
Lower	10.99	**	8.30	**	8.77	**
N	7,855		7,979		7,427	

Note: asterisks indicate where means are significantly different to Managerial and Professional, ** p<0.01 and * p<0.05

Table E-55 Mean SDQ score by mother's age at birth

	Age 3		Age 5		Age 7	
Mothers' age at birth	**Mean**		**Mean**		**Mean**	
Under 20	12.77		9.64		10.29	
20-24	11.63	**	8.91	**	9.60	*
25-29	9.53	**	7.29	**	7.68	**
30-34	8.63	**	6.44	**	6.61	**
35-39	8.30	**	6.31	**	6.54	**
40-44	8.70	**	6.64	**	6.90	**
45-49	10.59		5.56	**	6.39	**
N	8,988		9,004		8,303	

Note: asterisks indicate where means are significantly different to Under 20, ** p<0.01 and * p<0.05

Table E-56 Mean SDQ score by child's ethnicity

	Age 3		Age 5		Age 7	
Ethnicity	**Mean**		**Mean**		**Mean**	
White	9.48		7.16		7.63	
Mixed	9.83		8.00	**	8.25	
Indian	10.28		7.53		7.98	
Pakistani	13.09	**	10.00	**	9.62	**
Bangladeshi	11.49	**	8.29	*	8.94	**
Black Caribbean	10.61	*	8.68	**	8.70	*
Black African	9.01		7.45		6.99	
Other ethnic group (inc. Chinese, Other)	10.31		8.28	*	8.01	
N	8,953		9,078			

Note: asterisks indicate where means are significantly different to White, ** p<0.01 and * p<0.05

Table E-57 Mean SDQ scores by household structure

	Age 3		Age 5		Age 7	
Household structure	**Mean**		**Mean**		**Mean**	
Two natural parents	9.16		6.73		7.00	
Blended family	11.76	**	9.16	**	10.06	**
Single parent	11.56	**	9.09	**	9.27	**
Other	10.69		8.5		9.85	**
N	9,079		9,079		8,390	

Note: asterisks indicate where means are significantly different to two natural parents ** p<0.01 and * p<0.05

Table E-58 Mean SDQ scores by household employment

Mean SDQ scores by household employment

	Age 3		Age 5		Age 7	
Household employment	**Mean**		**Mean**		**Mean**	
Two parents working	8.53		6.27		6.45	
One parent working, one not	9.76	**	7.36	**	8.14	**
Two parents not working	12.34	**	9.39	**	10.51	**
Single parent hh, working	9.59	**	8.5	**	9.27	**
Single parent hh, not working	12.81	**	10.36	**	10.72	**
N	8,109		7,796		6,960	

Note: asterisks indicate where means are significantly different to two parents working ** p<0.01 and* p<0.05

Table E-59 Mean SDQ score by index of multiple disadvantage

	Age 3		Age 5		Age 7	
Index	**Mean**		**Mean**		**Mean**	
0	7.84		5.88		5.88	
1	9.19	**	7.19	**	7.55	**
2	10.42	**	7.97	**	8.77	**
3	11.51	**	8.87	**	9.49	**
4	12.31	**	9.98	**	10.48	**
N	8,967		8,960		8,340	

Note: asterisks indicate where means are significantly different to an index score of 0 ** p<0.01 and * p<0.05

Table E-60 Mean SDQ score by mother's generational status

	Age 3		Age 5		Age 7	
Index	**Mean**		**Mean**		**Mean**	
UK born	9.63		7.16		7.63	
Foreign born	9.77		7.7	**	7.84	
N	8,946		8,209		7,622	

Note: asterisks indicate where means are significantly different to UK born mothers ** p<0.01 and * p<0.05

Table E-61 Mean SDQ score by father's generational status

	Age 3		Age 5		Age 7	
Index	**Mean**		**Mean**		**Mean**	
UK born	9.20		6.75		7.16	
Foreign born	9.78	**	7.62	**	7.60	
N	6,395		6,130		5,728	

Note: asterisks indicate where means are significantly different to UK born father ** p<0.01 and * p<0.05

Table E-62 Mean SDQ score by birth weight

	Age 3		Age 5		Age 7	
Birth Weight	**Mean**		**Mean**		**Mean**	
Less than 1 Kilo	13.18		10.35		9.85	
1-2 Kilos	10.38	*	9.04		9.19	
2-3 Kilos	10.51	**	8.14	*	8.61	
4-5 Kilos	9.48	**	7.13	**	7.54	
5-6 Kilos	9.01	**	6.69	**	7.07	*
6 Kilos	9.60	*	6.98	*	7.05	
N	8,863		8,884		8,200	

Note: asterisks indicate where means are significantly different to Less than 1 Kilo ** p<0.01 and * p<0.05

Table E-63 Mean SDQ score by mother's Kessler Scale

	Age 3		Age 5		Age 7	
Quintile	**Mean**		**Mean**		**Mean**	
1	7.61		5.47		5.79	
2	8.7	**	6.08	**	6.63	**
3	9.44	**	6.87	**	7.22	**
4	10.52	**	8.52	**	8.81	**
5	12.98	**	10.79	**	11.71	**
N	8,158		8,571		7,931	

Note: asterisks indicate where means are significantly different to quintile *** p<0.01, ** p<0.05, * p<0.1

Table E-64 Mean SDQ score by father's Kessler Scale

	Age 3		Age 5		Age 7	
Quintile	**Mean**		**Mean**		**Mean**	
1	8.73		6.15		6.57	
2	8.87		6.63	**	6.84	
3	9.13		6.36		6.53	
4	9.18	*	6.75	**	7.51	**
5	10.24	**	7.98	**	8.56	**
N	5,972		6,084		5,503	

Note: asterisks indicate where means are significantly different to quintile ** p<0.01 and * p<0.05

Table E-65 Mean SDQ score by whether the child was ever breastfed

	Age 3		Age 5		Age 7	
Breastfed	**Mean**		**Mean**		**Mean**	
Yes	9.06		6.86		7.22	
No	11.08	**	8.37	**	8.86	**
N	8,345		8,430		7,801	

Note: asterisks indicate where means are significantly different those who have ever been breastfed ** p<0.01 and ** p<0.05

Table E-66 Mean SDQ score by either parent ever being diagnosed with depression

	Age 3		Age 5		Age 7	
Had depression	**Mean**		**Mean**		**Mean**	
Yes	11.06		8.71		8.99	
No	10.84		6.49	**	6.69	**
N	3,409		5,425		4,416	

Note: asterisks indicate where means are significantly different to those with parents diagnosed with depression ** p<0.01 and * p<0.05

Table E-67 Mean SDQ score by mother's perceived parental competence

	Age 3		Age 5		Age 7	
Parental competence	**Mean**		**Mean**		**Mean**	
Not very good at being a parent	13.25		13.27		13.67	
Some trouble being a parent	13.96		11.68		13.21	
An average parent	10.77		8.3	**	8.85	**
A better than average parent	8.44	**	6.36	**	6.85	**
A very good parent	8.41	**	6.22	**	6.58	**
N	8,089		8,524		7,794	

Note: asterisks indicate where means are significantly different to not very good parents ** p<0.01 and * p<0.05

Table E-68 Mean SDQ score by father's perceived parental competence

	Age 3		Age 5	Age 7	
Parental competence	**Mean**		**Mean**	**Mean**	
Not very good at being a parent	11.84		6.93	16.18	
Some trouble being a parent	9.59	*	8.05	-	
An average parent	9.89		7.35	8.5	
A better than average parent	8.62	**	6.5	6.86	*
A very good parent	8.92	**	6.31	7.38	*
N	5,918		6,056	252	

Note: asterisks indicate where means are significantly different to not very good parents ** p<0.01 and * p<0.05

Table E-69 Mean SDQ score by mother's locus of control

	Age 3	
Locus of control	**Mean**	
1 (Lowest)	17.95	
2	15.44	
3	10.95	**
4 (Highest)	9.01	**
N	372	

Note: asterisks indicate where means are significantly different to the lowest loci of control ** p<0.01 and * p<0.05

Table E-70 Mean SDQ score by father's locus of control

	Age 3	
Locus of control	**Mean**	
1 (Lowest)	15.35	
2	14.01	
3	11.94	
4 (Highest)	9.68	**
N	351	

Note: asterisks indicate where means are significantly different to the lowest loci of control ** p<0.01 and * p<0.05

Table E-71 Mean SDQ score by mother's life satisfaction

	Age 3		Age 5		Age 7	
Life satisfaction	**Mean**		**Mean**		**Mean**	
Less than highly satisfied	10.27		7.71		8.30	
Highly satisfied	8.36	**	6.19	**	6.16	**
N	8,279		8,474		7,838	

Note: asterisks indicate where means are significantly different to those less than highly satisfied ** p<0.01 and * p<0.05

Table E-72 Mean SDQ score by father's life satisfaction

	Age 3		Age 5		Age 7	
Life satisfaction	**Mean**		**Mean**		**Mean**	
Less than highly satisfied	9.41		6.85		7.33	
Highly satisfied	8.70	**	6.36	**	6.53	**
N	5,954		6,040		5,469	

Note: asterisks indicate where means are significantly different to those less than highly satisfied ** p<0.01 and * p<0.05

Table E-73 Mean SDQ score by mother's work life balance

	Age 5		Age 7	
Work life balance	**Mean**		**Mean**	
Yes	5.93		6.28	
No	6.76	**	7.19	**
N	4,864		4,950	

Note: asterisks indicate where means are significantly different to those who don't have a good work life balance ** p<0.01 and * p<0.05

Table E-74 Mean SDQ score by father's work life balance

	Age 5		Age 7	
Work life balance	**Mean**		**Mean**	
Yes	5.97		6.61	
No	6.42	**	8.13	**
N	3,724		195	

Note: asterisks indicate where means are significantly different to those who don't have a good work life balance ** p<0.01 and * p<0.05

Table E-75 Mean SDQ score by home learning environment score quintiles

	Age 3		Age 5		Age 7	
Quintile	**Mean**		**Mean**		**Mean**	
1	11.35		8.19		8.19	
2	9.91	**	7.39	**	8.05	
3	9.41	**	6.96	**	7.33	**
4	9.05	**	6.5	**	7.71	*
5	8.23	**	6.83	**	7.74	
N	9,010		8,870		8,384	

Note: asterisks indicate where means are significantly different to quintile ** p<0.01 and * p<0.05

Table E-76 Mean SDQ scores by regular meal/bed/TV hours

	Age 3		Age 5		Age 7	
Regular meal/bed/TV hour	**Mean**		**Mean**		**Mean**	
Yes	8.57		6.7		7.98	
No	10.29	**	8.22	**	8.00	**
N	6,406		6,204		3,339	

Note: asterisks indicate where means are significantly different to those without a regular meal/bed/TV hour ** p<0.01 and * p<0.05

Table E-77 Mean SDQ score by mother's Pianta score quintiles

	Age 3	
Pianta Quintile	**Mean**	
1	14.33	
2	10.57	**
3	8.79	**
4	7.22	**
5	5.55	**
N	8,096	

Note: asterisks indicate where means are significantly different to quintile 1 ** p<0.01 and * p<0.05

Table E-78 Mean SDQ scores by father's Pianta score quintiles

	Age 3	
Pianta Quintile	**Mean**	
1	11.03	
2	9.8	**
3	8.88	**
4	8.13	**
5	7.38	**
N	5,938	

Note: asterisks indicate where means are significantly different to quintile 1 ** p<0.01 and * p<0.05

Table E-79 Mean SDQ scores by whether a parent has attended parents' evening

	Age 5		Age 7	
Parents evening	**Mean**		**Mean**	
Yes	7.16		7.60	
No	10.12	**	10.43	**
Parents evening not taken place yet	7.85	*	10.54	**
N	8,989		8,372	

Note: asterisks indicate where means are significantly different to those who have attended parents evening ** p<0.01 and * p<0.05

Table E-80 Mean SDQ scores by parental involvement in school

	Age 7	
Activities	**Mean**	
None	8.45	
1	7.23	**
2	6.59	**
3 or more	5.84	**
N	6,608	

Note: asterisks indicate where means are significantly different to no involvement ** p<0.01 and * p<0.05

Table E-81 Mean SDQ score by parental aspiration

	Age 7	
University aspiration	**Mean**	
Yes	7.58	
No	9.8	**
N	7,949	

Note: asterisks indicate where means are significantly different to yes ** p<0.01 and * p<0.05

Table E-82 Mean SDQ score by whether the child enjoys school

	Age 7	
Child enjoys school	**Mean**	
Always	6.51	
Usually	8.99	**
Sometimes	13.58	**
Not at all	14.88	**
N	8,373	

Note: asterisks indicate where means are significantly different to always ** p<0.01 and * p<0.05

Table E-83 Mean SDQ scores by child eating a regular breakfast

	Age 5		Age 7	
Regular Breakfast	**Mean**		**Mean**	
Yes	7.14		7.63	
No	9.66	**	9.98	**
N	9,074		8,389	

Note: asterisks indicate where means are significantly different to those without a regular breakfast ** p<0.01 and * p<0.05

Table E-84 Mean SDQ scores by age started childcare

	Age 3	
Age	**Mean**	
No childcare	20.34	
0-6 months	9.43	**
6-12 months	8.64	**
12-24 months	9.45	*
24-36 months	9.84	
36 + months	10.83	
N	8,349	

Note: asterisks indicate where means are significantly different to no childcare ** p<0.01 and * p<0.05

Table E-85 Mean SDQ score by hours of childcare used

	Age 3	
Age	**Mean**	
No childcare	10.24	
1-10 hours	9.53	**
11-20 hours	9.29	**
21-30 hours	8.56	**
31-40 hours	8.58	**
40+ hours	8.77	**
N	8,978	

Note: asterisks indicate where means are significantly different to no childcare ** p<0.01 and * p<0.05

Table E-86 Mean SDQ score by mother's use of flexible working

	Age 3		Age 5	Age 7	
Flexible working	**Mean**		**Mean**	**Mean**	
Yes	8.56		6.65	7.15	
No	8.99	**	6.86	8.81	**
N	2,431		1,534	1,154	

Note: asterisks indicate where means are significantly different to those without flexible working ** p<0.01 and ** p<0.05

Table E-87 Mean SDQ scores by attendance to reception

	Age 5
Reception	**Mean**
Full Time	7.36
Part Time	7.26
N	8,989

Note: asterisks indicate where means are significantly different to full time reception attendees ** p<0.01 and * p<0.05

Table E-88 Mean KS1 score by mother's education

	Mean KS1 score	
NVQ5/4	33.65	
NVQ3	31.86	**
NVQ2/1	30.19	**
Overseas	28.88	**
None	26.21	**
N	7,205	

Note: asterisks indicate where means are significantly different to NVQ 5/4: ** p<0.01, * p<0.05

Table E-89 Mean KS1 score by mother's NSSEC

	Mean KS1 score	
Managerial and Professional Occupations	33.69	
Intermediate Occupations	32.4	**
Lower Occupations	29.51	**
N	6,428	

Note: asterisks indicate where means are significantly different to Managerial and Professional: ** p<0.01, * p<0.05

Table E-90 Mean KS1 score by mother's age at birth of cohort member

	Mean KS1 score	
Under 20	28.15	
20-24	29.15	*
25-29	31.11	**
30-34	32.54	**
35-39	32.24	**

40-44	31.68	**
45-49	29.97	
N	7,275	

Note: asterisks indicate where means are significantly different to Under 20: ** p<0.01, * p<0.05

Table E-91 Mean KS1 score by mother's age at time of interview

	Mean KS1 score	
Under 20	24.00	
20-24	27.61	**
25-29	28.46	**
30-34	30.29	**
35-39	32.17	**
40-44	32.52	**
45-49	31.85	**
50+	33.06	**
N	7,205	

Note: asterisks indicate where means are significantly different to Under 20: ** p<0.01, * p<0.05

Table E-92 Mean KS1 score by cohort member's ethnicity

	Mean KS1 score	
White British	31.29	
Mixed	30.74	
Indian	32.15	
Pakistani	27.65	**
Bangladeshi	29.1	**
Black Caribbean	29.42	**
Black African	29.16	**
Other	30.6	
N	7,299	

Note: asterisks indicate where means are significantly different to White British: ** p<0.01, * p<0.05

Table E-93 Mean KS1 score by household type

	Mean KS1 score	
Two natural parents	31.99	
Blended Family	29.23	**
Single Parent	28.94	**
Other	25.96	**
N	7,297	

Note: asterisks indicate where means are significantly different to Two natural parents: ** p<0.01, * p<0.05

Table E-94 Mean KS1 score by household work status

	Mean KS1 score	
Two parents working	32.91	
One parent working, one not	30.59	**
Two parents not working	26.85	**
Single parent hh, working	30.03	**
Single parent hh, not working	26.16	**
N	6,068	

Note: asterisks indicate where means are significantly different to Two parents working: ** p<0.01, * p<0.05

Table E-95 Mean KS1 score by index of multiple disadvantage

Disadvantage score	Mean KS1 score	
0 (low disadvantage)	33.60	
1	31.22	**
2	30.11	**
3	28.65	**
4 (high disadvantage)	27.61	**
N	7,249	

Note: asterisks indicate where means are significantly different to 0 (low disadvantage): ** p<0.01, * p<0.05

Table E-96 Mean KS1 score by mother's generational status

	Mean KS1 score	
UK born	31.30	
Foreign born	30.59	*
N	6,684	

Note: asterisks indicate where means are significantly different to UK born: ** p<0.01, * p<0.05

Table E-97 Mean KS1 score by birth weight

	N	Mean KS1 score	
Under 1 Kilo	24	25.55	
1-2 Kilos	128	27.19	
2-3 Kilos	1570	29.78	*
4-5 Kilos	4720	31.45	**
5-6 Kilos	781	32.14	**
6 Kilos	12	33.06	**
N		7,235	

Note: asterisks indicate where means are significantly different to under 1 Kilo: ** p<0.01, * p<0.05

Table E-98 Mean KS1 score by Mother's Kessler quintile

Quintile	Mean KS1 score	
1 (low)	31.91	
2	32.38	
3	31.88	
4	30.81	***
5 (high)	28.81	***
N	6,770	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-99 Mean KS1 score by Father's Kessler quintile

Quintile	Mean KS1 score	
1 (low)	31.91	
2	32.65	*
3	32.85	**
4	32.08	
5 (high)	30.67	**
N	4,780	

Note: asterisks indicate where means are significantly different to Quintile 1: *** p<0.01, ** p<0.05

Table E-100 Mean KS1 score by whether ever breastfed

	Mean KS1 score	
Yes	31.96	
No	29.3	**
N	6,900	

Note: asterisks indicate where means are significantly different to Yes: *** p<0.01, ** p<0.05

Table E-101 Mean KS1 score by whether either parent has ever been depressed

	Mean KS1 score	
Yes	29.44	
No	32.17	**
N	3,813	

Note: asterisks indicate where means are significantly different to Yes: *** p<0.01, ** p<0.05

Table E-102 Mean KS1 score by mother's perceived parental competence

	Mean KS1 score	
Not very good at being a parent	27.81	
Has trouble being a parent	29.38	
Average parent	30.41	
Better than average parent	32.86	*
Very good parent	31.15	
N	6,655	

Note: asterisks indicate where means are significantly different to Not very good at being a parent: ** p<0.01, * p<0.05

Table E-103 Mean KS1 score by mother's life satisfaction

	Mean KS1 score	
Less than very satisfied	31.06	
Very satisfied	31.99	**
N	6,681	

Note: asterisks indicate where means are significantly different to Less than very satisfied: ** p<0.01, * p<0.05

Table E-104 Mean KS1 score by father's life satisfaction

	Mean KS1 score
Less than very satisfied	32.12
Very satisfied	31.93
N	4,749

Note: asterisks indicate where means are significantly different to Less than very satisfied: ** p<0.01, * p<0.05

Table E-105 Mean KS1 score by home learning environment quintile

Quintile	Mean KS1 score	
1 (low)	30.85	
2	31.95	**
3	31.48	*
4	30.6	
5 (high)	29.94	*
N	7,282	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-106 Mean KS1 score by regular bed/TV hour

	Mean KS1 score
No	31.16
Yes	30.52
N	2,932

Note: asterisks indicate where means are significantly different to No: ** p<0.01, * p<0.05

Table E-107 Mean KS1 score by parent evening attendance

	Mean KS1 score	
Yes	31.30	
No	26.22	***
Not happened yet	27.72	***
N	7,286	

Note: asterisks indicate where means are significantly different to Yes: ** p<0.01, * p<0.05

Table E-108 Mean KS1 score by regular breakfast

	Mean KS1 score	
No	27.91	
Yes	31.27	**
N	7,284	

Note: asterisks indicate where means are significantly different to No: ** p<0.01, * p<0.05

Table E-109 Mean KS1 score by mother's satisfaction with work-life balance

	Mean KS1 score
Less than very satisfied	32.42
Very satisfied	32.47
N	4,311

Note: asterisks indicate where means are significantly different to Less than very satisfied: ** p<0.01, * p<0.05

Table E-110 Mean KS1 score by parental involvement in school

	Mean KS1 score	
No involvement	30.02	
Helps with 1 activity	31.54	**
Helps with 2 activity	33.02	**
Helps with 3+ activity	34.09	**
N	5,759	

Note: asterisks indicate where means are significantly different to No involvement: ** p<0.01, * p<0.05

Table E-111 Mean KS1 score by whether at least one parent wants the cohort member to attend university

	Mean KS1 score	
Yes	31.40	
No	27.04	**
N	6,900	

Note: asterisks indicate where means are significantly different to Yes: ** p<0.01, * p<0.05

Table E-112 Mean KS1 score by whether enjoys school

	Mean KS1 score	
Always	31.95	
Usually	30.37	**
Sometimes	26.3	**
Not at all	25.24	**
N	7,287	

Note: asterisks indicate where means are significantly different to Always: ** p<0.01, * p<0.05

Table E-113 Mean KS1 score by age started childcare

	Mean KS1 score	
Not started	30.03	
0-6 months	31.59	**
6-12 months	32.77	**
12-24 months	31.61	**
24-36 months	31.01	*
36+ months	29.69	
N	6,909	

Note: asterisks indicate where means are significantly different to Not started: ** p<0.01, * p<0.05

Table E-114 Mean KS1 score by hours per week in childcare

	Mean KS1 score	
Not in childcare	30.27	
1-10 hours	31.58	**
10-20 hours	31.92	**
20-30 hours	33.39	**
30-40 hours	32.23	**
40+ hours	31.9	**
N	6,736	

Note: asterisks indicate where means are significantly different to Not in childcare: ** p<0.01, * p<0.05

Table E-115 Mean KS1 score by whether in full time or part time childcare at reception

	Mean KS1 score
Full time	31.22
Part time	31.23
N	6,919

Note: asterisks indicate where means are significantly different to Full time: ** p<0.01, * p<0.05

Table E-116 Mean KS1 score by whether mother uses flexible working

	Mean KS1 score	
No	30.78	
Yes	32.29	*
N	998	

Note: asterisks indicate where means are significantly different to No: ** p<0.01, * p<0.05

Table E-117 Mean KS1 score by whether father uses flexible working

	Mean KS1 score
No	32.53
Yes	33.17
N	507

Note: asterisks indicate where means are significantly different to No: ** p<0.01, * p<0.05

Table E-118 Mean BAS II vocabulary and word reading scores by Theil ethnic diversity quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	45.49		50.08		113.43	
2	49.15	**	53.51	**	112.55	
3	49.34	**	55.1	**	113.27	
4	51.17	**	55.82	**	111.81	*
5 (high)	51.21	**	56.48	**	111.3	**
N	9,184		9,457		8,626	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-119 Mean BAS II vocabulary and word reading scores by Theil FSM diversity quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	46.11		49.83		111.64	
2	46.86		52.11	**	110.71	
3	49.32	**	54.15	**	111.67	
4	51.01	**	55.74	**	112.89	
5 (high)	51.8	**	57.75	**	114.27	**
N	9,184		9,457		8,626	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-120 Mean BAS II vocabulary and word reading scores by Percent of schools rated Outstanding quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	48.78		53.14		111.71	
2	47.96		53.05		111.35	
3	48.45		53.75		112.53	
4	50.57	**	55.67	**	113.03	*
5 (high)	51.3	**	56.32	**	113.03	
N	9,184		9,457		8,626	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-121 Mean BAS II vocabulary and word reading scores by Percent UK born quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	46.12		50.44		50.44	
2	47.45	**	53.54	**	53.54	**
3	50.73	**	54.83	**	54.83	**
4	51.37	**	56.38	**	56.38	**
5 (high)	50.24	**	55.74	**	55.74	**
N	9,184		9,457		9,457	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-122 Mean BAS II vocabulary and word reading scores by Percent highest qualification NVQ 4 quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	49.27		53.29		109.66	
2	47.63	**	52.96		112.18	**
3	50.21	*	55.41	**	111.24	*
4	50.75	**	55.83	**	114.09	**
5 (high)	49.86		55.02	**	114.93	**
N	9,184		9,457		8,626	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-123 Mean BAS II vocabulary and word reading scores by Percent unemployed quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	52.22		57.71		114.21	
2	50.47	**	55.97	**	112.75	*
3	48.86	**	53.31	**	112	**
4	48.05	**	52.21	**	110.82	**
5 (high)	45.38	**	50.46	**	111.23	**
N	9,184		9,457		8,626	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-124 Mean BAS II vocabulary and word reading scores by LA budget per capita quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	51.48		51.48		51.48	
2	51.55		51.55		51.55	
3	48.86	**	48.86	**	48.86	**
4	47.24	**	47.24	**	47.24	**
5 (high)	45.76	**	45.76	**	45.76	**
N	9,184		9,184		9,184	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-125 Mean BAS II vocabulary and word reading scores by Percent white quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	44.14		49.18		113.32	
2	47.65	**	52.50	**	112.59	
3	50.4	**	55.68	**	113.47	
4	51.04	**	56.36	**	112.43	
5 (high)	51.37	**	56.17	**	110.56	**
N	9,184		9,457		8,626	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-126 Mean SDQ scores by Theil ethnic diversity quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	9.79		7.92		8.13	
2	9.98		7.48	*	8.01	
3	9.82		7.3	**	7.74	
4	9.69		7.31	**	7.79	
5 (high)	9.15	**	6.92	**	7.3	**
N	9,011		9,079		8,393	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-127 Mean SDQ scores by Theil FSM diversity quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	10.12		7.94		8.45	
2	11.04	**	8.08		8.57	
3	9.77		7.74		8.14	
4	9.39	**	7	**	7.17	**
5 (high)	8.71	**	6.51	**	6.97	**
N	9,011		9,079		8,393	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-128 Mean SDQ scores by Percent of schools rated Outstanding quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	9.64		7.69		8.12	
2	10.14	*	7.78		8.09	
3	9.67		7.39		7.83	
4	9.31		6.94	**	7.37	**
5 (high)	9.61		7.07	**	7.5	**
N	9,011		9,079		8,393	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-129 Mean SDQ scores by Percent UK born quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	9.64		7.88		7.98	
2	10.14	*	7.67		8.08	
3	9.67		7.11	**	7.77	
4	9.31		7.05	**	7.49	*
5 (high)	9.61		7.25	**	7.63	
N	9,011		9,079		8,393	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-130 Mean SDQ scores by Percent highest qualification NVQ 4 quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	10.52		7.94		8.45	
2	9.95	**	7.58		7.96	*
3	9.91	**	7.28	**	7.88	**
4	9.1	**	6.93	**	7.31	**
5 (high)	8.77	**	6.92	**	7.13	**
N	9,011		9,079		8,393	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-131 Mean SDQ by Percent unemployed quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	8.69		6.56		7.02	
2	9.36	**	6.98	**	7.30	
3	10.00	**	7.62	**	8.06	**
4	10.27	**	8.22	**	8.41	**
5 (high)	8.77	**	8.04	**	8.59	**
N	9,011		9,079		8,393	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-132 Mean SDQ scores by LA budget per capita quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	9.18		6.85		7.34	
2	9.15		7		7.32	
3	10.17	**	7.6	**	8.12	**
4	10.38	**	7.93	**	8.19	**
5 (high)	9.84	**	7.73	**	8.19	**
N	9,011		9,079		8,393	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-133 Mean SDQ scores by Percent white quintile

	Age 3		Age 5		Age 7	
Quintile	Mean		Mean		Mean	
1 (low)	10.14		8.01		8.28	
2	10.35		7.86		8.23	
3	9.42	**	7.14	**	7.49	**
4	9.19	**	6.86	**	7.5	**
5 (high)	9.59	**	7.25	**	7.62	**
N	9,011		9,079		8,393	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-134 Mean EYFSP (age 5) and KS1 (age 7) scores by Theil ethnic diversity quintile

	Age 5 (EYFSP)		Age 7 (KS1)	
Quintile	**Mean**		**Mean**	
1 (low)	6.45		30.17	
2	6.55		30.86	*
3	6.72	**	31.28	**
4	6.76	**	31.25	**
5 (high)	6.84	**	31.35	**
N	8,452		7,299	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-135 Mean EYFSP (age 5) and KS1 (age 7) scores by Theil FSM diversity quintile

	Age 5 (EYFSP)		Age 7 (KS1)	
Quintile	**Mean**		**Mean**	
1 (low)	6.35		30.06	
2	6.48	*	29.75	
3	6.7	**	30.63	
4	6.7	**	31.63	**
5 (high)	6.96	**	32.57	**
N	8,452		7,299	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-136 Mean EYFSP (age 5) and KS1 (age 7) scores by Percent of schools rated Outstanding quintile

	Age 5 (EYFSP)		Age 7 (KS1)	
Quintile	**Mean**		**Mean**	
1 (low)	6.35		30.06	
2	6.48	*	29.75	
3	6.7	**	30.63	
4	6.7	**	31.63	**
5 (high)	6.96	**	32.57	**
N	8,452		7,299	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-137 Mean EYFSP (age 5) and KS1 (age 7) scores by Percent UK born quintile

	Age 5 (EYFSP)		Age 7 (KS1)	
Quintile	**Mean**		**Mean**	
1 (low)	6.47		30.43	
2	6.57		30.63	
3	6.74	**	31.51	**
4	6.76	**	31.38	**
5 (high)	6.77	**	30.99	
N	8,452		7,299	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-138 Mean EYFSP (age 5) and KS1 (age 7) scores by Percent highest qualification NVQ 4 quintile

	Age 5 (EYFSP)		Age 7 (KS1)	
Quintile	**Mean**		**Mean**	
1 (low)	6.47		30.07	
2	6.57		30.99	**
3	6.74	**	30.96	**
4	6.76	**	31.91	**
5 (high)	6.77	**	31.53	**
N	8,452		7,299	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-139 Mean EYFSP (age 5) and KS1 (age 7) scores by Percent unemployed quintile

	Age 5 (EYFSP)		Age 7 (KS1)	
Quintile	**Mean**		**Mean**	
1 (low)	6.47		32.55	
2	6.57		31.43	**
3	6.74	**	30.75	**
4	6.76	**	29.77	**
5 (high)	6.77	**	30.09	**
N	8,452		7,299	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Table E-140 Mean EYFSP (age 5) and KS1 (age 7) scores by LA budget per capita quintile

	Age 5 (EYFSP)		Age 7 (KS1)	
Quintile	**Mean**		**Mean**	
1 (low)	6.47		31.77	
2	6.57	*	31.7	
3	6.74	***	30.63	***
4	6.76	***	30.29	***
5 (high)	6.77	***	30.32	***
N	8,452		7,299	

Note: asterisks indicate where means are significantly different to Quintile 1: *** p<0.01, ** p<0.05, * p<0.1

Table E-141 Mean EYFSP (age 5) and KS1 (age 7) scores by Percent white quintile

	Age 5 (EYFSP)		Age 7 (KS1)	
Quintile	**Mean**		**Mean**	
1 (low)	6.43		30.37	
2	6.51		30.16	
3	6.69	**	31.61	**
4	6.79	**	31.89	**
5 (high)	6.84	**	30.85	
N	8,452		7,299	

Note: asterisks indicate where means are significantly different to Quintile 1: ** p<0.01, * p<0.05

Appendix F Explaining regional differences in attainment

Table F-1 Modelling Age 3 BAS II attainment across GORs

	Government Office Region									
	All	**North East**	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**London**	**South East**	**South West**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Birth weight	1.03**	2.00	1.43	0.64	0.37	0.57	1.02	0.87	1.04	1.24
	-0.25	-1.15	-0.79	-0.69	-0.77	-0.74	-0.80	-0.65	-0.54	-0.84
Mother's education *Ref: NVQ 5/4*										
NVQ3	-0.97*	-5.74*	1.59	-3.02	-1.28	-0.95	-1.71	-2.66	0.66	-1.18
	-0.49	-2.53	-1.53	-1.55	-1.72	-1.53	-1.25	-1.38	-1.01	-1.75
NVQ2/1	-1.70**	-3.89	-0.20	-4.77**	-0.71	-0.60	-0.04	-2.21	-1.41	-2.80*
	-0.42	-2.28	-1.18	-1.36	-1.33	-1.30	-1.09	-1.34	-0.90	-1.26
Overseas	-2.71	-3.86	-10.02**	-11.17**	-6.75**	1.66	-1.84	-2.50	2.28	1.39
	-1.44	-3.40	-2.27	-4.08	-2.52	-4.44	-3.69	-3.62	-2.67	-5.78
None	-3.89**	-6.92*	2.09	-6.04**	-3.80*	-1.97	-5.32**	-5.11**	-3.66	-5.23
	-0.71	-3.18	-2.31	-2.06	-1.81	-1.83	-1.97	-1.87	-1.93	-2.69
Mother's NSSEC *Ref: Managerial and professional*										
Intermediate	0.06	3.04	-0.50	2.80	2.23	-2.00	0.12	-0.22	0.14	-0.28
	-0.43	-2.58	-1.28	-1.46	-1.33	-1.38	-1.13	-1.19	-0.90	-1.37
Lower	-1.99**	-1.23	-2.25	0.09	-1.29	-5.25**	-2.90*	-0.68	-1.19	-1.32
	-0.44	-2.52	-1.24	-1.38	-1.54	-1.24	-1.20	-1.40	-0.98	-1.32
Household work status *Ref: two parents working*										
One parent working, one not	0.08	-2.35	0.69	-1.67	0.12	1.15	-1.45	-0.01	0.37	1.11

	-0.36	-1.91	-1.17	-1.29	-1.17	-1.26	-0.95	-1.04	-0.71	-1.18
Two parents not working	-2.46*	-2.43	-4.39*	-3.20	0.06	-4.31*	1.53	1.08	-3.27	-8.52**
	-0.96	-3.81	-2.00	-1.92	-2.81	-1.95	-4.16	-2.40	-2.10	-2.34
Single parent, working	-1.11	-0.18	-5.05**	3.81	-5.96**	2.18	-1.75	1.53	-0.96	6.80*
	-0.88	-2.84	-1.26	-2.57	-2.02	-3.19	-2.82	-2.41	-2.34	-3.20
Single parent, not working	-1.85*	-5.43*	0.28	0.58	-6.77*	0.05	-7.98*	-2.51	0.46	-5.31*
	-0.75	-2.50	-1.96	-2.28	-3.03	-2.05	-3.40	-1.83	-1.77	-2.40
Disadvantage index	-0.46**	-0.20	-0.79	-0.69	-0.34	-0.12	-0.67	-1.34**	-0.35	0.33
	-0.15	-0.69	-0.42	-0.46	-0.47	-0.47	-0.40	-0.51	-0.35	-0.48
Mother's generational status *Ref: UK born*										
Foreign born	-1.31*	3.33	-2.43	3.92	-2.92	-1.93	-2.20	-2.83*	-3.03**	1.83
	-0.66	-3.55	-2.09	-2.23	-3.15	-2.39	-2.08	-1.30	-1.15	-2.57
Ethnicity *Ref: Non-white*										
White	4.45**	-0.80	5.02**	9.82**	2.03	4.60*	0.77	3.94**	3.08*	2.63
	-0.60	-4.02	-1.65	-1.65	-2.22	-1.92	-2.26	-1.09	-1.30	-5.98
Pianta scale	0.12**	0.24*	0.11	0.20**	0.09	0.12	-0.03	0.10	0.15**	0.22**
	-0.02	-0.12	-0.06	-0.07	-0.07	-0.07	-0.07	-0.06	-0.05	-0.08
Home learning environment	0.37**	0.44	0.18	0.47**	0.74**	0.24	0.42**	0.38**	0.28**	0.27
	-0.05	-0.23	-0.15	-0.18	-0.17	-0.15	-0.14	-0.13	-0.10	-0.16
Regular bedtime and meals	0.56	0.03	1.75	-0.14	-0.81	0.74	1.67	-0.67	1.40*	0.21
	-0.32	-1.53	-0.94	-1.02	-1.08	-1.01	-0.92	-0.96	-0.68	-1.03
Theil Ethnicity Index	4.21**	-37.40	5.65	6.19	12.71*	6.59	3.23	6.79	5.75	-3.35
	-1.32	-31.32	-9.42	-10.77	-5.07	-9.87	-5.78	-3.54	-3.95	-13.76
Theil FSM Index	-3.23*	-51.51*	-15.82*	-11.31	-9.59	5.82	-0.26	-6.05	0.34	18.29*
	-1.44	-19.84	-7.23	-10.43	-6.18	-14.00	-8.90	-3.71	-3.10	-8.71

Percent white in LAD	0.07**	1.39**	0.31	-0.01	0.15	-0.09	0.02	0.08	0.04	-0.08
	-0.03	-0.50	-0.16	-0.23	-0.13	-0.17	-0.12	-0.06	-0.06	-0.18
Constant	28.75**	51.84	26.69**	21.90*	24.24**	31.45**	42.84**	33.37**	25.70**	24.79
	-2.21	-30.19	-9.66	-10.62	-7.07	-7.85	-7.16	-5.68	-4.72	-16.05
R^2	0.12	0.20	0.14	0.20	0.15	0.14	0.09	0.15	0.09	0.10
N	4704	209	588	513	412	475	523	714	812	458

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-2 Modelling Age 3 BAS II attainment across ONS Clusters

	ONS Cluster						
	English Countryside	**London Cosmopolitan**	**Suburban traits**	**Bus. and educ. Centre**	**Coastal & Heritage**	**Prosperous England**	**Mining and Manuf.**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Birth weight	0.37	0.72	0.37	0.09	1.45	1.50*	1.82**
	-0.60	-1.07	-0.60	-0.69	-1.06	-0.63	-0.46
Mother's education *Ref: NVQ 5/4*							
NVQ3	-0.66	-2.25	-2.20	-1.27	-1.40	-1.55	-0.46
	-1.02	-1.71	-1.32	-1.49	-1.90	-1.19	-0.98
NVQ2/1	0.03	-0.38	-1.85	-2.00	-3.57*	-2.74*	-2.07*
	-0.87	-1.74	-1.29	-1.16	-1.48	-1.07	-0.86
Overseas	-4.16	-2.92	-0.27	-6.32*	-1.68	0.55	-3.26
	-3.78	-3.72	-6.85	-2.84	-4.33	-3.42	-2.82
None	-3.20	-5.01*	-4.07*	-1.99	-5.03*	-5.76**	-3.67**
	-1.72	-2.25	-1.91	-1.98	-2.45	-2.09	-1.35
Mother's NSSEC *Ref: Managerial and professional*							
Intermediate	-0.77	-0.76	0.72	2.00	-1.27	0.47	0.12
	-0.91	-1.52	-1.26	-1.27	-1.59	-1.02	-0.89
Lower	-2.73**	-2.04	-2.40	-0.41	-0.90	-0.56	-2.90**
	-0.94	-1.88	-1.30	-1.27	-1.53	-1.12	-0.91
Household work status *Ref: two parents working*							
One parent working, one not	-0.34	-2.06	1.05	-0.68	1.35	0.36	0.72
	-0.80	-1.42	-1.02	-0.99	-1.41	-0.85	-0.75
Two parents not working	-6.81**	2.58	2.82	-5.38*	-6.35	-0.77	-1.25
	-1.75	-3.08	-3.05	-2.33	-3.60	-3.49	-1.53
Single parent, working	-2.41	1.30	-0.29	-0.83	1.77	0.43	-3.41*
	-1.74	-2.86	-2.47	-1.96	-3.05	-3.19	-1.68

Single parent, not working	-2.66	0.40	-3.65*	0.11	-1.95	-4.38	-0.34
	-2.77	-2.35	-1.82	-1.77	-2.46	-2.96	-1.24
Disadvantage index	-0.17	-2.18**	-0.81	-1.04**	0.35	0.15	-0.46
	-0.31	-0.53	-0.50	-0.39	-0.54	-0.44	-0.28
Mother's generational status *Ref: UK born*							
Foreign born	0.36	-2.92	-3.19*	-1.99	-2.83	-1.71	-0.05
	-1.89	-1.62	-1.61	-1.78	-3.07	-1.47	-1.54
Ethnicity *Ref: Non-white*							
White	2.35	5.14**	2.71*	0.85	0.08	4.61*	8.13**
	-2.91	-1.40	-1.34	-1.26	-2.69	-1.91	-1.15
Pianta scale	0.17**	0.13	0.06	0.03	0.26*	0.11	0.13**
	-0.05	-0.08	-0.06	-0.07	-0.10	-0.06	-0.04
Home learning environment	0.44**	0.39*	0.39**	0.27	0.33	0.41**	0.30**
	-0.12	-0.17	-0.13	-0.14	-0.19	-0.12	-0.10
Regular bedtime and meals	0.13	-0.03	-0.78	1.70*	0.37	1.41	0.62
	-0.70	-1.31	-0.94	-0.84	-1.20	-0.79	-0.64
Theil Ethnicity Index	9.41	1.95	0.13	13.65**	-5.03	-6.20	3.71
	-7.76	-6.07	-4.75	-4.57	-15.40	-8.08	-5.24
Theil FSM Index	-2.09	-8.86	8.60	-4.498	18.704	3.309	-5.348
	-5.87	-4.57	-6.00	-5.15	-13.06	-5.88	-5.62
Percent white in LAD	0.03	0.02	0.01	0.12	0.02	-0.08	0.05
	-0.10	-0.09	-0.11	-0.08	-0.20	-0.08	-0.10
Constant	25.87**	37.22**	36.09**	34.64**	22.04	35.11**	24.83**
	-8.25	-7.14	-6.60	-6.25	-14.95	-9.00	-5.69
R^2	0.07	0.24	0.12	0.10	0.08	0.07	0.16
N	850	441	605	672	323	661	1152

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-3 Modelling Age 3 SDQ attainment across GORs

		Government Office Region									
		All	**North East**	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**London**	**South East**	**South West**
		b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Sex	*Ref: Male*										
	Female	-0.72**	-0.93	-0.70*	-0.87*	-0.35	-0.46	-0.34	-0.81**	-0.77**	-0.99**
		-0.11	-0.54	-0.30	-0.36	-0.41	-0.35	-0.32	-0.29	-0.26	-0.35
Mother's age at birth		-0.05**	0.06	-0.06	-0.03	-0.08*	-0.03	-0.09*	-0.06	-0.03	-0.06
		-0.01	-0.06	-0.03	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.04
Birth weight		-0.26**	-0.71	-0.39	-0.11	-0.14	-0.62*	-0.24	-0.35	-0.05	-0.44
		-0.09	-0.53	-0.28	-0.30	-0.37	-0.31	-0.23	-0.27	-0.20	-0.29
Mother's education	*Ref: NVQ 5/4*										
	NVQ3	0.29	-0.23	0.56	0.31	1.05	-0.32	0.24	0.83	-0.00	0.09
		-0.17	-0.93	-0.44	-0.48	-0.59	-0.54	-0.48	-0.56	-0.39	-0.57
	NVQ2/1	0.75**	1.05	0.81*	0.94*	0.87	0.08	0.60	1.05*	0.84*	0.25
		-0.15	-0.87	-0.40	-0.45	-0.51	-0.49	-0.40	-0.44	-0.34	-0.48
	Overseas	0.63	0.79	1.992	-1.14	1.59	-0.30	1.61	2.15**	-0.45	-1.44
		-0.51	-2.43	-1.04	-3.02	-1.88	-0.94	-1.86	-0.81	-1.03	-2.01
	None	1.54**	1.70	2.66**	1.30	1.32	1.82*	1.07	1.39	0.63	1.49
		-0.30	-1.34	-0.82	-0.78	-0.99	-0.79	-0.95	-0.80	-0.73	-1.15
Mother's NSSEC	*Ref: Managerial and professional*										
	Intermediate	0.21	-0.03	-0.48	0.55	-0.38	1.01*	0.53	0.58	-0.14	0.41
		-0.14	-0.86	-0.39	-0.48	-0.54	-0.49	-0.40	-0.38	-0.32	-0.43
	Lower	0.63**	1.42	0.22	0.38	0.33	1.84**	-0.25	0.64	0.45	1.28*
		-0.16	-0.86	-0.44	-0.48	-0.56	-0.54	-0.45	-0.48	-0.36	-0.54
Disadvantage index		0.19**	0.09	0.25	0.37*	0.04	0.44**	-0.05	0.30*	0.11	0.31*
		-0.05	-0.28	-0.14	-0.15	-0.18	-0.16	-0.13	-0.13	-0.11	-0.15

Mother's generational status *Ref: UK born*										
Foreign born	-0.33	0.92	0.02	-0.13	0.90	-0.57	-0.56	-0.20	-0.51	-1.14*
	-0.21	-0.85	-0.61	-0.73	-0.57	-1.09	-0.76	-0.37	-0.49	-0.57
Ethnicity *Ref: Non-white*										
White	-0.81**	-0.27	-0.93	-1.03	0.58	-0.86	-0.43	-0.61	-1.72**	-0.71
	-0.20	-0.84	-0.54	-0.72	-0.63	-0.63	-0.77	-0.37	-0.65	-1.64
Breastfed *Ref: Yes*										
No	0.57**	0.46	0.34	0.82*	0.51	0.60	-0.20	0.36	0.84*	0.59
	-0.15	-0.67	-0.37	-0.41	-0.47	-0.44	-0.44	-0.46	-0.36	-0.51
Mother's perceived parental competence	-0.38**	0.06	-0.42*	-0.30	-0.39	-0.51*	-0.50**	-0.48**	-0.44**	-0.39
	-0.07	-0.34	-0.17	-0.20	-0.25	-0.21	-0.19	-0.18	-0.17	-0.20
Kessler scale	0.12**	0.07	0.01	0.10	0.12	0.08	0.12*	0.11*	0.16**	0.13
	-0.02	-0.10	-0.06	-0.05	-0.07	-0.05	-0.06	-0.05	-0.04	-0.07
Pianta Scale	-0.37**	-0.41**	-0.37**	-0.37**	-0.35**	-0.37**	-0.42**	-0.35**	-0.39**	-0.34**
	-0.01	-0.05	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.03
Home Learning Environment	-0.05**	-0.16	-0.05	-0.02	-0.10	-0.03	-0.07	-0.04	-0.04	-0.05
	-0.02	-0.10	-0.05	-0.06	-0.06	-0.06	-0.05	-0.05	-0.04	-0.06
Regular bedtime and meals	-0.55**	-0.42	-1.13**	-0.48	-0.48	-0.18	-1.30**	-0.36	-0.18	-0.20
	-0.11	-0.61	-0.31	-0.34	-0.38	-0.36	-0.31	-0.31	-0.26	-0.34
Percent white in LAD	-0.03**	-0.25	-0.05	-0.03	-0.04	-0.01	-0.02	-0.03*	-0.06**	0.09*
	-0.01	-0.14	-0.03	-0.04	-0.04	-0.03	-0.02	-0.02	-0.02	-0.04
Constant	38.32**	43.27**	40.31**	36.30**	36.90**	38.55**	42.85**	37.21**	39.84**	33.72**
	-0.85	-5.03	-2.53	-2.61	-2.98	-2.58	-2.54	-2.50	-1.95	-3.25
R^2	0.45	0.45	0.47	0.43	0.45	0.49	0.46	0.44	0.44	0.43
N	5039	220	634	543	446	517	560	758	879	482

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-4 Modelling Age 3 SDQ attainment across ONS Clusters

	ONS Cluster						
	English Countryside b/se	**London Cosmopolitan** b/se	**Suburban traits** b/se	**Bus. and educ. Centre** b/se	**Coastal & Heritage** b/se	**Prosperous England** b/se	**Mining and Manuf.** b/se
Sex *Ref: Male*							
Female	-0.71**	-1.08**	-0.54	-0.97**	-1.55**	-0.47	-0.50*
	-0.25	-0.40	-0.31	-0.33	-0.42	-0.27	-0.22
Mother's age at birth	-0.09**	-0.04	-0.06	-0.07*	0.02	-0.04	-0.02
	-0.03	-0.04	-0.03	-0.03	-0.05	-0.03	-0.02
Birth weight	-0.22	-0.51	-0.12	-0.29	-0.59	-0.25	-0.33
	-0.22	-0.39	-0.24	-0.28	-0.31	-0.23	-0.21
Mother's education *Ref: NVQ 5/4*							
NVQ3	0.24	0.81	0.57	0.90*	-0.88	-0.18	0.59
	-0.37	-0.84	-0.50	-0.45	-0.61	-0.41	-0.35
NVQ2/1	0.86*	1.17	0.80	1.30**	-0.33	0.59	0.84**
	-0.34	-0.64	-0.43	-0.42	-0.54	-0.36	-0.30
Overseas	1.06	1.04	4.38**	-1.57	-0.35	-0.23	1.67
	-1.28	-0.87	-1.30	-1.39	-1.34	-1.38	-0.88
None	1.51*	-0.26	2.78**	0.66	0.66	0.00	2.23**
	-0.69	-0.95	-0.78	-0.77	-0.96	-1.01	-0.54
Mother's NSSEC *Ref: Managerial and professional*							
Intermediate	-0.00	1.17*	0.31	0.48	0.04	-0.06	0.12
	-0.32	-0.56	-0.42	-0.44	-0.52	-0.32	-0.32
Lower	0.51	0.70	0.51	0.05	1.05	0.66	0.90**
	-0.37	-0.69	-0.46	-0.47	-0.60	-0.39	-0.32
Disadvantage index	0.23*	0.25	0.14	0.25	0.39*	-0.03	0.17
	-0.11	-0.18	-0.13	-0.13	-0.16	-0.13	-0.10

Mother's generational status *Ref: UK born*							
Foreign born	0.27	-0.37	-0.38	0.03	-0.39	-1.10*	0.22
	-0.50	-0.43	-0.51	-0.71	-1.22	-0.50	-0.49
Ethnicity *Ref: Non-white*							
White	-0.47	-1.19*	-0.41	-0.21	-1.07	-1.46	-1.08*
	-0.79	-0.50	-0.42	-0.60	-1.19	-1.04	-0.46
Breastfed *Ref: Yes*							
No	0.15	1.71	0.16	0.93*	1.01*	0.64	0.41
	-0.34	-0.93	-0.40	-0.39	-0.48	-0.48	-0.25
Mother's perceived parental competence	-0.39*	-0.42	-0.52**	-0.05	-0.16	-0.72**	-0.27*
	-0.16	-0.24	-0.19	-0.17	-0.26	-0.18	-0.13
Kessler scale	0.08	0.14*	0.09*	0.25**	0.01	0.16**	0.09*
	-0.05	-0.06	-0.05	-0.05	-0.07	-0.05	-0.04
Pianta Scale	-0.37**	-0.32**	-0.39**	-0.35**	-0.39**	-0.38**	-0.37**
	-0.02	-0.04	-0.03	-0.03	-0.04	-0.03	-0.02
Home Learning Environment	-0.03	-0.05	0.01	-0.07	0.00	-0.09*	-0.08*
	-0.04	-0.06	-0.05	-0.06	-0.06	-0.04	-0.04
Regular bedtime and meals	-0.55*	-0.05	-0.49	-0.45	-0.02	-0.72**	-0.66**
	-0.24	-0.41	-0.33	-0.31	-0.44	-0.27	-0.23
Percent white in LAD	0.01	-0.00	-0.01	-0.04	0.09*	-0.05*	-0.6*
	-0.02	-0.03	-0.03	-0.03	-0.04	-0.02	-0.03
Constant	37.94**	33.91**	38.21**	35.44**	35.35**	41.86**	38.30**
	-2.16	-3.37	-2.25	-2.51	-3.08	-2.45	-1.69
R^2	0.46	0.43	0.47	0.43	0.35	0.46	0.48
N	897	469	651	732	350	700	1240

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-5 Modelling Age 5 BAS II attainment across GORs

	Government Office Region									
	All	**North East**	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**London**	**South East**	**South West**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Mother's age at birth	0.07**	0.06	0.03	0.08	0.01	-0.02	0.08	0.03	0.15**	0.15*
	-0.02	-0.09	-0.06	-0.06	-0.06	-0.07	-0.07	-0.06	-0.05	-0.07
Mother's education *Ref: NVQ 5/4*										
NVQ3	-1.50**	-1.49	-0.82	-1.44	-1.72	-1.80	-3.11**	-1.15	-1.04	-0.90
	-0.35	-1.90	-0.88	-1.06	-1.16	-1.15	-1.16	-1.15	-0.77	-0.96
NVQ2/1	-1.68**	-1.52	-1.90*	-1.63	-1.65*	-1.59	-2.11*	-0.52	-1.92**	-2.17*
	-0.28	-1.41	-0.75	-0.86	-0.84	-0.95	-0.84	-0.89	-0.66	-0.86
Overseas	-2.04*	1.50	-0.01	-5.63**	1.05	-1.62	-4.74*	-2.03	-2.65	1.19
	-0.84	-4.05	-2.47	-1.58	-3.64	-2.27	-2.23	-2.03	-1.66	-1.22
None	-3.76**	-5.98**	-2.91	-3.61*	-0.69	-2.50	-6.91**	-2.80	-4.50**	-4.35
	-0.53	-2.15	-1.50	-1.56	-1.35	-1.40	-1.96	-1.48	-1.19	-2.56
Mother's NSSEC *Ref: Managerial and professional*										
Intermediate	-0.64*	0.14	-0.63	-0.06	-0.82	-1.54	0.07	-1.13	-0.25	-1.48
	-0.29	-1.48	-0.86	-0.92	-0.90	-0.96	-0.87	-0.85	-0.64	-0.85
Lower	-1.54**	-1.00	-1.27	-1.77	-1.80	-2.71*	-1.22	-2.49*	-0.79	-0.80
	-0.32	-1.55	-0.84	-0.98	-0.94	-1.08	-0.96	-1.00	-0.72	-0.95
Disadvantage index	-0.33**	-0.22	-0.54*	-0.21	0.16	-0.13	-0.09	-0.46	-0.41	-0.63*
	-0.10	-0.48	-0.24	-0.30	-0.32	-0.30	-0.31	-0.31	-0.22	-0.29
Mother's generational status *Ref: UK born*										
Foreign born	-1.09*	0.91	-0.05	-2.38	-0.91	-2.64	-0.32	-1.34	-0.27	-0.64
	-0.44	-1.89	-1.19	-1.53	-1.51	-1.51	-1.59	-0.86	-0.98	-1.38

Ethnicity *Ref: Non-white*										
White	1.55**	1.27	0.91	2.92*	-0.27	2.80*	0.89	0.55	1.85	3.28
	-0.42	-3.96	-1.33	-1.15	-1.22	-1.21	-1.61	-0.78	-1.07	-2.43
Home Learning Environment	0.14**	0.01	0.05	0.29*	-0.17	0.12	0.14	0.35*	0.24*	0.00
	-0.05	-0.20	-0.12	-0.12	-0.16	-0.14	-0.15	-0.14	-0.11	-0.16
Theil Ethnicity Index	2.71**	1.00	9.58	-9.60	0.38	-8.92	14.38**	8.34**	6.29	-12.12
	-1.02	-19.97	-5.78	-10.57	-3.72	-8.07	-4.38	-2.92	-3.84	-9.42
Theil FSM Index	4.70**	25.49*	-7.15	23.68	6.29	8.58	-10.66	13.12*	0.31	6.48
	-1.44	-11.61	-6.69	-16.85	-8.06	-9.68	-8.35	-5.67	-2.78	-6.88
Percent in LAD with NVQ4+	0.08**	0.02	0.15	0.02	0.10	-0.02	0.37**	0.17*	0.10	0.12
	-0.02	-0.36	-0.11	-0.15	-0.10	-0.15	-0.09	-0.07	-0.08	-0.13
Percent unemployed in LAD	0.34*	1.59	-0.99	1.60	0.64	-0.39	0.35	0.94	0.54	1.06
	-0.17	-0.81	-0.76	-0.96	-0.92	-0.62	-0.77	-0.73	-0.77	-1.20
Age 3 BAS II	0.42**	0.33**	0.38**	0.40**	0.49**	0.38**	0.40**	0.51**	0.43**	0.41**
	-0.01	-0.05	-0.03	-0.03	-0.04	-0.04	-0.03	-0.03	-0.03	-0.03
Constant	24.32**	17.41	32.83**	18.43*	27.49**	41.39**	17.71*	8.61	17.57*	30.90*
	-2.21	-21.50	-7.84	-8.34	-9.66	-10.80	-7.43	-8.75	-8.00	-14.41
R^2	0.31	0.26	0.29	0.37	0.30	0.30	0.29	0.39	0.29	0.30
N	6869	313	876	733	621	703	785	962	1215	661

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-6 Modelling Age 5 BAS II attainment across ONS Clusters

	ONS Cluster						
	English Countryside	**London Cosmopolitan**	**Suburban traits**	**Bus. and educ. Centre**	**Coastal & Heritage**	**Prosperous England**	**Mining and Manuf.**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Mother's age at birth	0.08	-0.04	0.08	0.11	0.03	0.08	0.09*
	-0.05	-0.09	-0.07	-0.06	-0.08	-0.06	-0.04
Mother's education *Ref: NVQ 5/4*							
NVQ3	-1.37*	-0.80	-2.14	-1.74	-0.04	-3.16**	-0.41
	-0.69	-1.39	-1.23	-0.99	-1.19	-0.87	-0.73
NVQ2/1	-1.83**	0.24	-1.06	-2.15*	-0.49	-2.01**	-1.72**
	-0.59	-1.17	-0.91	-0.86	-1.04	-0.69	-0.56
Overseas	1.98	0.13	-2.54	-5.99**	-4.24	-4.73*	0.17
	-1.82	-3.69	-1.84	-1.53	-2.61	-2.03	-2.10
None	-4.29**	-1.39	-4.68**	-5.52**	-0.43	-4.38*	-2.81**
	-1.30	-2.02	-1.56	-1.38	-2.32	-2.01	-0.87
Mother's NSSEC *Ref: Managerial and professional*							
Intermediate	-0.82	0.53	-2.45**	0.54	-2.34*	0.26	-0.28
	-0.61	-1.24	-0.92	-0.93	-1.01	-0.64	-0.61
Lower	-1.84**	-1.65	-2.57**	-0.49	-2.24*	-1.14	-1.23*
	-0.65	-1.29	-0.98	-0.97	-1.07	-0.83	-0.62
Disadvantage index	-0.23	-0.56	0.09	-0.25	-0.64*	-0.77**	-0.36
	-0.22	-0.38	-0.31	-0.25	-0.32	-0.25	-0.19
Mother's generational status *Ref: UK born*							
Foreign born	-1.48	-2.48*	0.149	0.23	-3.87*	1.07	-1.02
	-0.99	-1.01	-1.16	-1.41	-1.58	-1.05	-1.01

Ethnicity	*Ref: Non-white*							
	White	-0.55	0.18	1.92*	3.29**	2.26	1.31	2.65**
		-1.34	-1.04	-0.97	-1.13	-1.88	-1.28	-0.94
Home Learning Environment		0.10	0.30	0.21	0.21	0.15	0.00	0.17*
		-0.11	-0.18	-0.15	-0.12	-0.17	-0.12	-0.09
Theil Ethnicity Index		-1.29	8.96	3.68	-8.86*	-21.04	0.31	4.41
		-4.93	-5.15	-3.60	-3.72	-12.07	-6.66	-3.85
Theil FSM Index		6.53	5.91	10.00	2.83	-8.19	-0.67	0.97
		-4.94	-7.75	-8.04	-4.92	-8.65	-4.36	-4.26
Percent in LAD with NVQ4+		0.13	0.00	0.16*	0.14	0.12	0.14	0.05
		-0.07	-0.14	-0.08	-0.10	-0.19	-0.09	-0.07
Percent unemployed in LAD		1.11	-0.20	1.37*	0.70	-0.05	1.43	-0.03
		-0.64	-1.15	-0.59	-0.44	-0.96	-1.35	-0.35
Age 3 BAS II		0.45**	0.54**	0.49**	0.38**	0.43**	0.41**	0.36**
		-0.03	-0.04	-0.04	-0.03	-0.04	-0.03	-0.02
Constant		24.08**	23.68	9.34	28.25**	50.87**	26.85*	27.57**
		-6.95	-12.81	-7.00	-6.34	-15.47	-12.10	-5.16
R^2		0.30	0.44	0.32	0.27	0.27	0.28	0.26
N		1296	572	880	990	477	967	1687

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-7 Modelling Age 5 SDQ attainment across GORs

	Government Office Region									
	All	**North East**	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**London**	**South East**	**South West**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Sex *Ref: Male*										
Female	-0.33**	-0.55	-0.45	-0.05	0.03	-0.26	-0.06	-0.31	-0.62**	-0.48
	-0.10	-0.43	-0.26	-0.32	-0.27	-0.32	-0.28	-0.27	-0.23	-0.28
Mother's age at birth	-0.03**	0.01	-0.03	-0.04	-0.05	-0.00	-0.06	-0.05	-0.02	-0.03
	-0.01	-0.05	-0.03	-0.03	-0.03	-0.03	-0.04	-0.03	-0.02	-0.03
Mother's education *Ref: NVQ 5/4*										
NVQ3	0.12	0.68	-0.59	0.84	0.04	0.68	0.58	0.12	-0.18	-0.02
	-0.15	-0.64	-0.38	-0.51	-0.42	-0.52	-0.48	-0.46	-0.36	-0.46
NVQ2/1	0.20	-0.12	0.22	0.28	0.65	0.37	-0.12	0.42	0.14	0.16
	-0.12	-0.51	-0.32	-0.40	-0.38	-0.46	-0.37	-0.36	-0.28	-0.37
Overseas	0.37	2.14*	-0.43	2.61**	2.74	-0.40	-2.45	-0.05	0.11	1.47
	-0.40	-0.91	-0.70	-0.73	-1.43	-2.01	-1.62	-0.80	-0.83	-1.23
None	1.04**	1.52	0.79	0.98	-0.04	1.01	1.42	2.14*	1.22	2.02*
	-0.29	-1.25	-0.69	-0.76	-0.64	-0.87	-0.92	-0.90	-0.77	-0.83
Mother's NSSEC *Ref: Managerial and professional*										
Intermediate	0.28*	0.24	0.02	0.44	0.41	-0.32	0.33	0.36	0.31	0.40
	-0.12	-0.51	-0.34	-0.45	-0.33	-0.44	-0.38	-0.34	-0.26	-0.38
Lower	0.13	0.52	0.55	0.40	-0.24	0.03	0.18	0.15	0.01	0.03
	-0.14	-0.61	-0.38	-0.48	-0.38	-0.50	-0.44	-0.46	-0.33	-0.39
Household work status *Ref: two parents working*										
One parent working, one not	0.01	-1.16*	0.11	0.53	0.48	-0.33	-0.43	0.25	0.25	-0.12
	-0.11	-0.55	-0.33	-0.41	-0.32	-0.45	-0.31	-0.32	-0.25	-0.34
Two parents not working	0.04	-2.26*	-0.17	-0.20	0.20	-0.33	1.28	-0.53	0.77	-0.27

	-0.34	-1.03	-0.80	-0.93	-1.00	-1.34	-1.13	-1.27	-0.74	-1.02
Single parent, working	0.44	1.95	-0.35	0.37	-0.99	-0.49	0.70	1.96**	0.99	-0.18
	-0.29	-1.09	-0.56	-1.21	-0.64	-0.62	-0.70	-0.72	-0.93	-0.80
Single parent, not working	0.96**	-0.81	0.75	0.48	-1.41	1.62	1.61	0.83	0.95	1.36
	-0.31	-1.12	-0.73	-0.96	-1.11	-0.85	-1.18	-0.78	-0.76	-1.16
Mother's perceived parental competence	-0.49**	-0.67*	-0.58**	-0.80**	-0.59**	0.12	-0.49**	-0.46**	-0.51**	-0.41*
	-0.06	-0.30	-0.17	-0.19	-0.17	-0.20	-0.18	-0.18	-0.15	-0.20
Mother's life satisfaction *Ref: not highly satisfied*										
Highly satisfied	-0.23*	-0.04	-0.09	-0.29	-0.51	-0.38	0.50	-0.55	-0.39	0.09
	-0.10	-0.48	-0.28	-0.34	-0.30	-0.35	-0.32	-0.30	-0.23	-0.29
Kessler scale	0.19**	0.08	0.12**	0.22**	0.25**	0.25**	0.21**	0.17**	0.21**	0.22**
	-0.02	-0.08	-0.05	-0.07	-0.08	-0.06	-0.06	-0.06	-0.05	-0.06
Home Learning Environment	-0.02	0.03	-0.09	-0.06	0.05	-0.11	-0.09	0.03	0.06	-0.07
	-0.02	-0.11	-0.06	-0.07	-0.07	-0.08	-0.07	-0.06	-0.06	-0.07
Regular Breakfast *Ref: no*										
Yes	-0.68**	-0.42	-0.85	-0.91	-0.52	-0.86	-1.01	-0.55	0.35	-1.81
	-0.24	-0.97	-0.63	-0.73	-0.46	-0.71	-0.65	-0.87	-0.55	-0.97
Hours of childcare per week	0.01*	0.00	0.02	0.02	0.02	-0.00	0.00	0.01	-0.00	0.03*
	-0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Age 3 BAS II	-0.02**	-0.01	-0.03*	0.00	-0.03*	-0.02	-0.04*	-0.02	-0.03	-0.01
	-0.01	-0.02	-0.01	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Age 3 SDQ	0.46**	0.52**	0.52**	0.40**	0.45**	0.45**	0.44**	0.44**	0.48**	0.47**
	-0.01	-0.06	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03
Constant	6.52**	4.36	8.11**	7.02**	6.64**	4.37*	9.12**	6.39**	4.73**	6.98**
	-0.63	-2.99	-1.66	-1.95	-1.89	-2.06	-1.91	-1.82	-1.57	-1.92
R^2	0.41	0.44	0.47	0.36	0.47	0.40	0.38	0.39	0.42	0.43
N	5778	262	737	578	520	582	662	778	1035	557

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-8 Modelling Age 5 SDQ attainment across ONS Clusters

	ONS Cluster						
	English Countryside	**London Cosmopolitan**	**Suburban traits**	**Bus. and educ. Centre**	**Coastal & Heritage**	**Prosperous England**	**Mining and Manuf.**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Sex *Ref: Male*							
Female	-0.29	-0.40	-0.34	-0.15	-0.71*	-0.48*	-0.35
	-0.20	-0.37	-0.28	-0.31	-0.34	-0.23	-0.19
Mother's age at birth	-0.06*	-0.13**	-0.03	0.05	-0.01	-0.06*	-0.03
	-0.02	-0.04	-0.03	-0.03	-0.04	-0.03	-0.02
Mother's education *Ref: NVQ 5/4*							
NVQ3	0.08	-0.33	0.78	1.27*	0.59	-0.62	-0.39
	-0.32	-0.70	-0.46	-0.52	-0.54	-0.34	-0.29
NVQ2/1	0.37	0.10	0.23	0.97*	-0.01	0.04	-0.11
	-0.26	-0.54	-0.33	-0.38	-0.44	-0.31	-0.26
Overseas	-1.05	-0.05	0.04	2.88**	1.83	-1.13	0.60
	-0.9	-0.92	-0.87	-0.91	-1.37	-1.29	-0.99
None	1.83**	3.23*	0.46	1.32	0.65	1.78	0.49
	-0.56	-1.42	-0.67	-0.78	-0.85	-1.12	-0.52
Mother's NSSEC *Ref: Managerial and professional*							
Intermediate	0.33	0.17	0.49	-0.10	-0.14	0.28	0.45
	-0.26	-0.45	-0.36	-0.39	-0.46	-0.28	-0.26
Lower	-0.25	0.02	0.15	0.21	0.28	0.19	0.33
	-0.28	-0.72	-0.41	-0.44	-0.50	-0.37	-0.28
Household work status *Ref: two parents working*							
One parent working, one not	-0.12	0.55	0.06	-0.21	0.24	0.12	-0.02
	-0.24	-0.45	-0.32	-0.36	-0.43	-0.25	-0.25
Two parents not working	-0.23	1.39	1.29	-0.45	1.48	-0.70	-0.44
	-0.70	-1.58	-0.99	-1.11	-1.23	-1.05	-0.52

Single parent, working	0.34	2.63**	0.76	-0.08	-0.78	1.23	0.36
	-0.66	-1.01	-0.85	-0.81	-0.70	-1.08	-0.48
Single parent, not working	1.46	2.09*	0.07	0.68	1.86	1.17	0.60
	-1.14	-0.90	-0.98	-0.69	-1.07	-1.07	-0.53
Mother's perceived parental competence	-0.51**	-0.59*	-0.62**	-0.43*	-0.53*	-0.49**	-0.37**
	-0.13	-0.23	-0.18	-0.19	-0.22	-0.16	-0.12
Mother's life satisfaction *Ref: not highly satisfied*							
Highly satisfied	0.07	-0.21	-0.53	-0.78*	0.19	-0.23	-0.18
	-0.20	-0.48	-0.29	-0.32	-0.39	-0.25	-0.21
Kessler scale	0.29**	0.18*	0.16**	0.17**	0.13	0.18**	0.18**
	-0.05	-0.08	-0.06	-0.06	-0.07	-0.05	-0.04
Home Learning Environment	0.05	0.05	0.00	-0.03	-0.08	-0.09	-0.06
	-0.05	-0.08	-0.06	-0.07	-0.08	-0.06	-0.04
Regular Breakfast *Ref: no*							
Yes	-1.23*	1.09	-1.06	-0.48	-1.40	-0.15	-0.67
	-0.61	-1.02	-0.7	-0.60	-1.36	-0.60	-0.41
Hours of childcare per week	0.01	-0.00	0.01	-0.00	0.03*	0.01	0.01
	-0.01	-0.01	-0.01	-0.01	-0.02	-0.01	-0.01
Age 3 BAS II	-0.02*	-0.02	-0.05**	-0.02	-0.04*	-0.02	-0.00
	-0.01	-0.02	-0.01	-0.02	-0.02	-0.01	-0.01
Age 3 SDQ	0.48**	0.35**	0.48**	0.43**	0.41**	0.45**	0.50**
	-0.03	-0.05	-0.04	-0.04	-0.05	-0.03	-0.03
Constant	6.89**	7.97**	8.09**	3.94*	8.52**	8.09**	5.28**
	-1.41	-2.41	-1.61	-1.83	-2.36	-1.65	-1.25
R^2	0.47	0.39	0.43	0.35	0.32	0.39	0.43
N	1104	448	717	790	391	864	1397

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-9 Modelling Age 5 EYFSP attainment across GORs

	Government Office Region									
	All	**North East**	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**London**	**South East**	**South West**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Sex *Ref: Male*										
Female	0.28**	0.44**	0.36**	0.28**	0.28*	0.22	0.30**	0.06	0.32**	0.16
	-0.03	-0.15	-0.09	-0.11	-0.12	-0.12	-0.09	-0.10	-0.07	-0.10
Mother's education *Ref: NVQ 5/4*										
NVQ3	-0.13*	-0.18	-0.01	-0.06	0.17	-0.30	-0.38**	-0.11	-0.03	-0.34*
	-0.05	-0.21	-0.12	-0.19	-0.19	-0.17	-0.14	-0.16	-0.10	-0.16
NVQ2/1	-0.25**	-0.23	-0.25*	-0.28	-0.11	-0.50**	-0.23*	-0.31*	-0.15	-0.34*
	-0.04	-0.21	-0.11	-0.16	-0.16	-0.17	-0.11	-0.12	-0.09	-0.14
Overseas	-0.26	-0.35	-0.10	0.32	-0.20	-0.73	-0.64	-0.11	0.17	-1.00
	-0.16	-0.56	-0.34	-0.55	-0.54	-0.54	-0.50	-0.31	-0.25	-0.95
None	-0.43**	-1.00*	-0.43*	-0.27	0.05	-0.43	-0.86**	-0.44	-0.12	-1.11**
	-0.10	-0.46	-0.22	-0.26	-0.37	-0.26	-0.27	-0.25	-0.24	-0.37
Mother's NSSEC *Ref: Managerial and professional*										
Intermediate	-0.09*	0.16	-0.13	-0.04	-0.14	-0.21	-0.15	-0.17	-0.08	0.07
	-0.04	-0.21	-0.11	-0.15	-0.17	-0.15	-0.12	-0.11	-0.09	-0.14
Lower	-0.21**	-0.20	-0.29*	-0.29	-0.11	-0.28	-0.36*	-0.04	-0.31**	0.15
	-0.05	-0.25	-0.13	-0.16	-0.16	-0.19	-0.14	-0.15	-0.10	-0.15
Household work status *Ref: two parents working*										
One parent working, one not	-0.08	0.02	-0.10	-0.22	-0.21	-0.11	-0.04	-0.03	0.01	-0.15
	-0.04	-0.17	-0.11	-0.14	-0.15	-0.14	-0.10	-0.11	-0.08	-0.12
Two parents not working	-0.71**	-0.64	-0.32	-1.10**	-0.80*	-1.15**	-0.92*	-0.23	-0.65*	-0.34

	-0.12	-0.42	-0.23	-0.33	-0.33	-0.31	-0.39	-0.33	-0.31	-0.42
Single parent, working	-0.22*	-1.07*	-0.19	-0.37	0.36	0.23	-0.36	-0.42	-0.07	-0.39
	-0.09	-0.43	-0.20	-0.28	-0.34	-0.21	-0.32	-0.27	-0.19	-0.38
Single parent, not working	-0.51**	-0.56	-0.85**	-0.47	-0.03	-0.64*	-1.05**	-0.13	-0.34	0.03
	-0.10	-0.44	-0.20	-0.34	-0.37	-0.27	-0.41	-0.20	-0.23	-0.31
Breastfed *Ref: Yes*										
No	-0.15**	0.02	0.03	-0.19	-0.17	-0.11	-0.08	-0.47**	-0.09	-0.23
	-0.04	-0.19	-0.10	-0.13	-0.18	-0.14	-0.13	-0.14	-0.01	-0.14
Kessler scale	-0.02**	0.01	0.00	-0.06**	-0.03	0.00	-0.03*	-0.02	-0.01	-0.01
	-0.01	-0.02	-0.01	-0.02	-0.02	-0.02	-0.01	-0.02	-0.01	-0.02
Regular Breakfast *Ref: no*										
Yes	0.27**	-0.07	0.19	0.30	0.76**	0.04	-0.06	0.57*	0.36*	0.48
	-0.08	-0.29	-0.21	-0.29	-0.24	-0.21	-0.14	-0.25	-0.16	-0.38
Hours of childcare per week	-0.00*	-0.01	-0.00	-0.01	-0.00	-0.01	-0.00	-0.00	0.00	0.00
	-0.00	-0.00	-0.00	-0.00	-0.01	-0.01	-0.00	-0.00	-0.00	-0.01
Childcare at reception *Ref: full-time*										
Part-time	-0.07*	0.10	-0.13	0.13	0.10	-0.05	-0.16	-0.16	-0.31**	-0.01
	-0.04	-0.15	-0.10	-0.14	-0.14	-0.16	-0.11	-0.11	-0.07	-0.13
Theil Ethnicity Index	0.23	-7.32	-0.58	-3.91**	0.61	1.59	2.67**	0.23	-0.29	-1.24
	-0.13	-4.19	-0.77	-1.02	-0.71	-1.02	-0.70	-0.49	-0.44	-1.68
Theil FSM Index	0.38*	4.91**	1.35*	3.32**	-0.52	1.24	-0.63	1.30	0.57	-0.44
	-0.16	-1.68	-0.54	-1.13	-0.66	-1.00	-0.46	-0.67	-0.31	-0.63
Percent EY facilities rated Outstanding	-0.02**	-0.02	-0.02	0.05	0.03	-0.01	-0.07**	-0.04*	0.00	-0.06*
	-0.00	-0.04	-0.02	-0.04	-0.06	-0.01	-0.02	-0.02	-0.01	-0.03
LA budget per capita	0.00*	0.00	0.00*	0.00**	0.00	0.00*	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	-0.00	0.00	-0.00	0.00	0.00	0.00	0.00
Age 3 BAS II	0.03**	0.03**	0.03**	0.03**	0.02**	0.03**	0.03**	0.03**	0.03**	0.03**
	-0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.00	-0.01
Age 3 SDQ	-0.02**	0.00	-0.04**	-0.02	-0.03	-0.01	-0.01	-0.03**	-0.02*	-0.02

	-0.00	-0.02	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01
Constant	4.81**	8.37	3.74**	-5.13*	7.01**	-1.07	1.48	4.95**	3.54**	8.89**
	-0.41	-4.98	-1.42	-2.56	-1.72	-3.40	-2.71	-0.92	-1.14	-3.03
R^2	0.21	0.27	0.28	0.33	0.13	0.21	0.27	0.23	0.22	0.19
N	5194	252	664	552	480	537	583	670	943	513

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-10 Modelling Age 5 EYFSP attainment across ONS Clusters

	ONS Cluster						
	English Countryside b/se	**London Cosmopolitan** b/se	**Suburban traits** b/se	**Bus. and educ. Centre** b/se	**Coastal & Heritage** b/se	**Prosperous England** b/se	**Mining and Manuf.** b/se
Sex *Ref: Male*							
Female	0.30**	0.15	0.17	0.32**	0.26*	0.23**	0.32**
	-0.08	-0.14	-0.10	-0.09	-0.13	-0.08	-0.07
Mother's education *Ref: NVQ 5/4*							
NVQ3	-0.03	-0.25	-0.08	-0.20	-0.13	-0.18	-0.17
	-0.11	-0.22	-0.14	-0.14	-0.17	-0.13	-0.10
NVQ2/1	-0.19	-0.23	-0.15	-0.25*	-0.37*	-0.19	-0.40**
	-0.10	-0.21	-0.12	-0.12	-0.15	-0.10	-0.09
Overseas	-0.19	-0.04	-0.05	-0.55	-0.51	-0.49	-0.02
	-0.45	-0.38	-0.34	-0.38	-0.78	-0.37	-0.31
None	-0.65*	-0.50	-0.08	-0.48*	-0.13	-0.21	-0.53**
	-0.28	-0.38	-0.28	-0.24	-0.26	-0.30	-0.17
Mother's NSSEC *Ref: Managerial and professional*							
Intermediate	-0.09	-0.29	-0.04	-0.13	-0.17	-0.05	-0.07
	-0.10	-0.20	-0.12	-0.12	-0.16	-0.10	-0.09
Lower	-0.15	-0.06	-0.07	-0.22	-0.37*	-0.26*	-0.19
	-0.11	-0.22	-0.14	-0.14	-0.18	-0.11	-0.10
Household work status *Ref: two parents working*							
One parent working, one not	-0.06	0.20	-0.17	-0.08	-0.23	0.06	-0.17*
	-0.09	-0.17	-0.11	-0.11	-0.15	-0.09	-0.08
Two parents not working	-0.17	-0.24	-0.71	-0.51	-1.01*	-1.06**	-1.04**

	-0.27	-0.37	-0.40	-0.29	-0.47	-0.34	-0.21
Single parent, working	0.00	-0.60	0.16	-0.30	-0.32	-0.11	-0.36*
	-0.24	-0.38	-0.22	-0.23	-0.33	-0.26	-0.16
Single parent, not working	-0.73*	-0.32	-0.38	-0.44*	-0.06	-0.34	-0.83**
	-0.33	-0.26	-0.42	-0.21	-0.41	-0.23	-0.17
Breastfed *Ref: Yes*							
No	-0.31**	-0.00	-0.37**	-0.16	-0.12	0.05	0.00
	-0.11	-0.28	-0.12	-0.11	-0.17	-0.12	-0.08
Kessler scale	-0.03*	0.00	-0.02	-0.02	-0.02	-0.03	-0.00
	-0.01	-0.02	-0.02	-0.01	-0.02	-0.01	-0.01
Regular Breakfast *Ref: no*							
Yes	0.32	0.57	0.16	0.40*	0.70	0.17	0.25
	-0.19	-0.33	-0.18	-0.18	-0.49	-0.19	-0.14
Hours of childcare per week	-0.00	-0.00	0.00	-0.00	-0.00	-0.00	-0.01*
	-0.00	-0.00	-0.00	-0.00	-0.01	-0.00	-0.00
Childcare at reception *Ref: full-time*							
Part-time	0.09	0.15	-0.22*	-0.03	-0.21	-0.12	0.01
	-0.08	-0.17	-0.11	-0.12	-0.14	-0.08	-0.08
Theil Ethnicity Index	0.28	2.24*	0.18	0.24	1.51	-0.77	0.11
	-0.95	-0.98	-0.45	-0.49	-1.61	-0.64	-0.55
Theil FSM Index	0.13	0.39	2.45**	0.32	-0.67	0.81	1.07
	-0.42	-0.75	-0.91	-1.02	-0.86	-0.51	-0.57
Percent EY facilities rated Outstanding	-0.06**	0.03	-0.07**	0.00	-0.05	-0.02	-0.00
	-0.01	-0.04	-0.02	-0.01	-0.03	-0.02	-0.01
LA budget per capita	0.00	0.00	0.00	0.00	-0.00	0.00**	0.00*
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age 3 BAS II	0.03**	0.03**	0.04**	0.02**	0.04**	0.03**	0.03**
	-0.00	-0.01	-0.01	-0.00	-0.01	-0.00	-0.00
Age 3 SDQ	-0.02*	-0.02	-0.03*	-0.03**	-0.02	-0.02	-0.02**

	-0.01	-0.02	-0.01	-0.01	-0.02	-0.01	-0.01
Constant	5.04**	5.11**	4.10*	3.58*	7.18*	2.80*	2.89*
	-1.37	-1.13	-1.66	-1.58	-3.06	-1.34	-1.25
R^2	0.18	0.21	0.20	0.20	0.29	0.19	0.25
N	991	389	636	737	365	751	1325

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-11 Modelling Age 7 BAS II attainment across GORs

	Government Office Region									
	All	**North East**	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**London**	**South East**	**South West**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Mother's NSSEC *Ref: Managerial and professional*										
Intermediate	-1.37*	-2.42	-0.02	1.18	-0.77	0.65	-2.95	-2.72	-2.00	-2.10
	-0.67	-3.30	-2.11	-1.93	-1.98	-2.02	-2.16	-1.92	-1.42	-2.02
Lower	-2.99**	-1.47	-2.63	-1.82	-2.29	-1.72	-4.86*	-0.99	-5.23**	1.33
	-0.70	-4.00	-2.13	-2.05	-2.03	-2.28	-2.12	-2.04	-1.53	-2.24
Disadvantage index	-0.62*	-1.57	-0.97	-1.88**	-0.31	-0.66	-0.72	-2.28**	0.76	0.07
	-0.26	-1.55	-0.89	-0.69	-0.69	-0.80	-0.73	-0.65	-0.56	-0.91
Mother's generational status *Ref: UK born*										
Foreign born	2.77**	-11.31**	0.79	7.91*	-3.9	-4.75	8.03**	1.88	4.41*	-1.13
	-1.02	-4.25	-3.43	-3.40	-2.93	-3.68	-2.86	-1.76	-2.15	-3.50
Ethnicity *Ref: Non-white*										
White	-3.58**	-10.75	-7.46**	-5.94*	-0.32	-3.69	-1.32	-2.01	1.49	-3.13
	-0.89	-9.31	-2.19	-2.65	-2.35	-2.32	-3.06	-1.66	-2.77	-5.21
Mother's perceived parental competence	0.93**	3.45*	0.76	-0.31	2.01*	0.20	-0.64	1.97*	1.58*	-0.27
	-0.32	-1.57	-0.97	-0.90	-0.97	-0.99	-0.97	-0.84	-0.72	-1.08
Parent ever depressed *Ref: Yes*										
No	2.86**	3.19	0.91	0.69	2.70	2.72	4.08	-3.97	5.59**	3.95
	-0.88	-4.27	-2.82	-2.49	-2.25	-2.19	-3.05	-3.06	-1.92	-2.42
Home learning environment	-0.29*	-1.03	-0.43	0.32	-0.36	-1.01**	0.48	-0.73*	-0.51	0.14
	-0.13	-0.69	-0.41	-0.31	-0.36	-0.39	-0.31	-0.36	-0.31	-0.44

Parent wants CM to attend Uni *Ref: Yes*										
No	-7.26**	-18.05**	-7.02*	-16.58**	-5.16	34.79**	6.74	-13.95**	-11.70**	-10.22
	-2.42	-4.31	-3.12	-5.41	-2.98	-1.76	-5.17	-5.31	-3.96	-5.23
Age 5 BAS II	0.32**	-0.08	0.34**	0.35**	0.29**	0.35**	0.25**	0.30**	0.33**	0.42**
	-0.03	-0.15	-0.09	-0.09	-0.09	-0.09	-0.09	-0.08	-0.06	-0.10
Age 5 EYFSP	4.65**	5.79**	4.91**	4.09**	4.28**	5.04**	4.52**	4.44**	5.15**	4.13**
	-0.25	-1.53	-0.91	-0.63	-0.66	-0.72	-0.81	-0.66	-0.58	-0.79
Constant	65.84**	86.11**	69.73**	70.33**	60.51**	69.69**	68.50**	77.59**	53.64**	61.23**
	-2.87	-17.37	-10.42	-7.38	-8.93	-7.86	-8.64	-7.09	-6.07	-11.01
R^2	0.28	0.28	0.28	0.34	0.23	0.32	0.267	0.31	0.32	0.21
N	2961	113	342	330	295	317	332	427	514	286

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-12 Modelling Age 7 BAS II attainment across ONS Clusters

	ONS Cluster						
	English Countryside b/se	**London Cosmopolitan** b/se	**Suburban traits** b/se	**Bus. and educ. Centre** b/se	**Coastal & Heritage** b/se	**Prosperous England** b/se	**Mining and Manuf.** b/se
Mother's NSSEC *Ref: Managerial and professional*							
Intermediate	-2.00	1.01	-2.09	-3.63	1.92	-1.15	0.07
	-1.41	-3.07	-1.95	-1.95	-2.62	-1.47	-1.45
Lower	-3.53*	0.60	-0.91	-4.14*	3.10	-4.09*	-2.90
	-1.51	-2.91	-2.11	-1.78	-2.52	-1.72	-1.54
Disadvantage index	-0.20	-2.27*	-1.33	-1.12	-0.76	1.09	-1.21*
	-0.57	-0.89	-0.72	-0.65	-1.00	-0.70	-0.53
Mother's generational status *Ref: UK born*							
Foreign born	-0.70	0.28	2.39	4.07	5.71	4.35	-1.43
	-2.82	-2.43	-2.30	-2.08	-4.53	-2.22	-2.80
Ethnicity *Ref: Non-white*							
White	-0.96	1.98	-1.42	-3.05	2.20	-3.27	-5.934**
	-2.51	-2.31	-2.01	-2.03	-3.00	-3.85	-1.99
Mother's perceived parental competence	0.12	0.57	2.79**	1.41	0.25	-0.30	1.08
	-0.72	-1.20	-0.86	-0.83	-1.29	-0.79	-0.65
Parent ever depressed *Ref: Yes*							
No	5.47**	3.48	-4.61	-1.10	8.69**	3.82	3.07
	-1.75	-4.31	-2.55	-1.99	-3.30	-2.26	-1.81
Home learning environment	0.08	-1.55**	-0.18	-0.19	0.17	-0.47	-0.32
	-0.28	-0.52	-0.32	-0.29	-0.53	-0.29	-0.26

Parent wants CM to attend Uni *Ref: Yes*							
No	-4.50	-	-7.29	-12.30*	-	1.85	-11.41**
	-5.01	-	-6.77	-5.35	-	-6.85	-3.97
Age 5 BAS II	0.30**	0.31**	0.31**	0.38**	0.43**	0.33**	0.35**
	-0.07	-0.11	-0.08	-0.08	-0.11	-0.06	-0.06
Age 5 EYFSP	4.89**	3.48**	5.03**	5.09**	3.94**	5.08**	4.76**
	-0.57	-1.02	-0.62	-0.64	-0.86	-0.65	-0.54
Constant	58.74**	87.30**	63.83**	60.75**	49.28**	66.08**	64.80**
	-7.13	-9.86	-6.97	-7.46	-11.96	-7.01	-6.42
R^2	0.26	0.28	0.30	0.34	0.25	0.24	0.31
N	557	248	404	414	210	453	670

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-13 Modelling Age 7 SDQ attainment across GORs

	Government Office Region									
	All	**North East**	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**London**	**South East**	**South West**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Sex *Ref: Male*										
Female	-0.48**	0.19	-0.28	-0.70*	-0.68*	-0.36	-0.59*	-0.47	-0.28	-0.84**
	-0.10	-0.42	-0.25	-0.30	-0.32	-0.30	-0.30	-0.29	-0.23	-0.27
Mother's age at birth	-0.05**	-0.05	-0.08**	-0.03	-0.08**	-0.04	-0.001	-0.04	-0.05*	-0.04
	-0.01	-0.04	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.03
Mother's education *Ref: NVQ 5/4*										
NVQ3	-0.16	-0.46	-0.14	-0.20	0.11	0.24	-0.33	-0.71	0.00	-0.45
	-0.14	-0.69	-0.37	-0.41	-0.50	-0.45	-0.42	-0.43	-0.37	-0.39
NVQ2/1	-0.09	0.07	0.02	0.11	0.16	0.21	-0.46	-0.22	-0.08	-0.70*
	-0.11	-0.49	-0.34	-0.37	-0.38	-0.34	-0.34	-0.37	-0.25	-0.29
Overseas	0.63	-1.60	-0.91	-0.02	0.54	0.18	-0.25	1.77*	2.63**	-1.20
	-0.39	-1.85	-0.89	-1.30	-0.76	-1.14	-1.16	-0.80	-0.91	-1.20
None	-0.39	1.06	-0.53	1.10	0.33	-0.79	-1.23	-0.34	-0.75	-0.60
	-0.25	-1.10	-0.64	-0.72	-0.87	-0.64	-0.75	-0.73	-0.70	-0.81
Disadvantage index	0.15**	0.08	-0.14	-0.07	0.04	0.13	0.26*	0.23	0.20	0.48**
	-0.04	-0.18	-0.12	-0.14	-0.15	-0.13	-0.12	-0.13	-0.11	-0.14
Kessler scale	0.17**	0.20**	0.21**	0.15**	0.22**	0.13*	0.07	0.14**	0.22**	0.12*
	-0.02	-0.06	-0.05	-0.05	-0.06	-0.05	-0.06	-0.05	-0.05	-0.05
Mother's perceived parental competence	-0.41**	-0.26	-0.14	-0.36*	-0.59**	-0.43*	-0.49**	-0.39*	-0.36*	-0.48**
	-0.06	-0.24	-0.15	-0.18	-0.19	-0.18	-0.19	-0.17	-0.15	-0.16
Mother's life satisfaction *Ref: not highly satisfied*										

	Highly satisfied	-0.28**	-0.92*	-0.42	-0.65*	-0.17	-0.39	-0.25	-0.46	0.01	0.08
		-0.10	-0.44	-0.28	-0.32	-0.34	-0.34	-0.31	-0.31	-0.25	-0.30
Regular Breakfast	*Ref: no*										
	Yes	-0.54*	-0.96	-0.95	1.13	-0.23	-1.32	-0.02	-0.93	-1.14	-1.16
		-0.25	-0.80	-0.56	-0.69	-0.76	-1.01	-0.69	-0.65	-0.62	-0.80
Age 5 SDQ		0.66**	0.59**	0.72**	0.61**	0.69**	0.67**	0.73**	0.58**	0.68**	0.68**
		-0.01	-0.05	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.04
Age 5 EYFSP		-0.36**	-0.43*	-0.34*	-0.37**	-0.26	-0.35*	-0.34**	-0.35**	-0.49**	-0.32*
		-0.04	-0.17	-0.13	-0.13	-0.14	-0.14	-0.12	-0.12	-0.12	-0.132
Constant		8.28**	8.95**	8.05**	6.83**	8.60**	8.81**	7.00**	8.72**	9.01**	8.73**
		-0.59	-2.18	-1.62	-1.70	-1.86	-1.65	-1.94	-1.84	-1.504	-1.86
R^2		0.54	0.50	0.58	0.52	0.56	0.60	0.51	0.47	0.55	0.56
N		6162	326	791	667	552	670	698	786	1051	606

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-14 Modelling Age 7 SDQ attainment across ONS Clusters

	ONS Cluster						
	English Countryside	**London Cosmopolitan**	**Suburban traits**	**Bus. and educ. Centre**	**Coastal & Heritage**	**Prosperous England**	**Mining and Manuf.**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Sex *Ref: Male*							
Female	-0.74**	-0.22	-0.84**	-0.62*	-0.13	-0.01	-0.47*
	-0.19	-0.39	-0.29	-0.29	-0.37	-0.24	-0.19
Mother's age at birth	-0.03	-0.03	-0.03	-0.04	-0.04	-0.05	-0.07**
	-0.02	-0.04	-0.03	-0.02	-0.03	-0.03	-0.02
Mother's education *Ref: NVQ 5/4*							
NVQ3	-0.11	0.22	-0.27	0.43	-0.81	-0.47	-0.21
	-0.29	-0.64	-0.44	-0.41	-0.54	-0.38	-0.28
NVQ2/1	-0.32	1.03	-0.25	-0.01	-0.44	0.07	0.02
	-0.23	-0.60	-0.32	-0.35	-0.39	-0.30	-0.22
Overseas	1.04	1.38	1.81*	0.27	-3.53**	2.20	-0.40
	-0.67	-0.89	-0.78	-0.92	-1.26	-1.49	-0.88
None	-1.13	-0.42	-0.29	0.39	-0.80	-0.52	-0.01
	-0.69	-0.94	-0.64	-0.55	-0.73	-1.03	-0.49
Disadvantage index	0.32**	-0.02	0.39**	0.12	0.36*	-0.02	-0.03
	-0.10	-0.17	-0.13	-0.12	-0.16	-0.12	-0.09
Kessler scale	0.11**	0.09	0.20**	0.19**	0.15*	0.19**	0.18**
	-0.04	-0.07	-0.05	-0.04	-0.06	-0.06	-0.04
Mother's perceived parental competence	-0.75**	-0.17	-0.44**	-0.33*	-0.22	-0.21	-0.27*
	-0.12	-0.22	-0.17	-0.15	-0.26	-0.16	-0.12
Mother's life satisfaction *Ref: not highly satisfied*							

	Highly satisfied	0.28	-0.57	-0.57	-0.58	-0.60	0.15	-0.68**
		-0.21	-0.41	-0.30	-0.30	-0.38	-0.26	-0.20
Regular Breakfast	*Ref: no*							
	Yes	0.23	-1.20	-0.52	-0.63	-4.79**	-2.79**	0.08
		-0.49	-0.86	-0.66	-0.54	-1.38	-1.05	-0.41
Age 5 SDQ		0.69**	0.55**	0.63**	0.66**	0.67**	0.74**	0.65**
		-0.03	-0.05	-0.04	-0.03	-0.05	-0.04	-0.03
Age 5 EYFSP		-0.49**	-0.28	-0.26*	-0.46**	-0.24	-0.38**	-0.29**
		-0.09	-0.15	-0.12	-0.13	-0.16	-0.13	-0.08
Constant		9.15**	7.35**	7.15**	8.44**	10.98**	9.30**	7.51**
		-1.34	-2.24	-1.85	-1.39	-2.40	-1.85	-1.05
R^2		0.58	0.41	0.55	0.55	0.50	0.54	0.55
N		1143	460	796	932	464	820	1532

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-15 Modelling Age 7 KS1 attainment across GORs

	Government Office Region									
	All	**North East**	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**London**	**South East**	**South West**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Mother's age at birth	0.02	-0.11	0.06	0.04	0.05	-0.08	0.03	0.07	0.03	-0.06
	-0.02	-0.08	-0.04	-0.05	-0.04	-0.05	-0.05	-0.05	-0.04	-0.05
Mother's education *Ref: NVQ 5/4*										
NVQ3	-0.20	0.67	-0.23	0.28	0.68	0.00	-0.51	-0.21	-0.48	-0.30
	-0.24	-0.92	-0.66	-0.73	-0.84	-0.71	-0.71	-0.75	-0.59	-0.60
NVQ2/1	-0.67**	0.28	-0.63	-0.53	-1.82**	-0.86	-0.69	-0.51	-0.42	-0.65
	-0.19	-0.95	-0.59	-0.60	-0.56	-0.63	-0.53	-0.53	-0.43	-0.54
Overseas	0.28	0.69	2.13	1.90	0.87	-0.49	-0.67	-1.01	-0.64	-1.69
	-0.59	-2.23	-1.36	-1.80	-1.86	-2.02	-1.23	-1.47	-1.24	-0.97
None	-1.23**	-0.49	-0.85	-0.46	-3.21*	-1.53	-2.37*	-0.30	-0.79	-1.23
	-0.39	-1.40	-1.31	-1.01	-1.39	-1.19	-0.99	-0.91	-1.04	-1.13
Disadvantage index	-0.21**	-0.69*	-0.03	-0.37	-0.06	-0.29	0.05	-0.24	-0.11	-0.48*
	-0.07	-0.32	-0.21	-0.25	-0.21	-0.25	-0.23	-0.22	-0.17	-0.22
Home Learning Environment	-0.15**	-0.02	-0.31**	-0.09	-0.08	-0.27**	-0.07	-0.13	-0.16	-0.16
	-0.04	-0.13	-0.11	-0.11	-0.11	-0.10	-0.10	-0.11	-0.09	-0.10
Parents' night attendance Ref: Yes										
No	-1.03	-0.57	0.28	-1.92	-2.58	-3.75	1.65	-0.35	-0.10	-2.05
	-0.60	-1.89	-1.60	-1.66	-1.44	-1.95	-2.86	-1.07	-0.88	-1.89
Not taken place yet	-1.53	2.69	-2.67*	-2.50	0.25	-1.67	1.52	-1.44	-3.57	-3.14
	-0.80	-2.48	-1.29	-2.15	-1.79	-2.09	-2.54	-1.30	-2.80	-1.89
Parental involvement in school *Ref: None*										
1 activity	0.00	1.42	-0.96	-0.43	0.48	0.11	0.25	-1.14	0.84	-0.67

	-0.21	-0.89	-0.61	-0.62	-0.69	-0.59	-0.66	-0.59	-0.50	-0.68
2 activities	0.62**	-0.56	0.30	1.01	0.33	0.81	1.44*	-1.02	0.76	1.15
	-0.22	-1.21	-0.57	-0.68	-0.67	-0.62	-0.65	-0.67	-0.51	-0.69
3 or more activities	0.53*	0.87	-0.45	-0.72	1.61*	1.96**	0.40	-0.59	0.92	0.91
	-0.22	-1.20	-0.66	-0.71	-0.70	-0.75	-0.64	-0.62	-0.53	-0.69
Parent wants CM to attend Uni *Ref: Yes*										
No	-1.43*	3.83	-1.70	-1.41	-0.48	-0.11	0.12	2.28	-1.58	-6.56**
	-0.57	-2.59	-2.88	-1.45	-1.53	-1.03	-1.14	-1.92	-0.91	-1.93
Age 5 BAS II	0.10**	0.15**	0.08**	0.10**	0.12**	0.13**	0.10**	0.09**	0.07**	0.13**
	-0.01	-0.05	-0.02	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.03
Age 5 SDQ	-0.13**	-0.05	-0.13*	-0.08	-0.19**	-0.11	-0.10*	-0.18**	-0.16**	-0.11
	-0.02	-0.08	-0.05	-0.06	-0.06	-0.06	-0.05	-0.05	-0.04	-0.06
Age 5 EYFSP	2.76**	2.64**	3.37**	2.45**	2.50**	2.76**	3.06**	2.82**	2.82**	2.53**
	-0.07	-0.30	-0.28	-0.24	-0.18	-0.21	-0.21	-0.22	-0.18	-0.20
Constant	9.71**	9.69*	6.36*	10.09**	9.21**	11.93**	6.05*	9.87**	10.96**	12.07**
	-0.89	-4.70	-2.91	-2.86	-2.63	-2.75	-2.62	-2.60	-2.06	-2.84
R^2	0.48	0.51	0.53	0.45	0.53	0.55	0.48	0.53	0.42	0.45
N	4717	217	580	518	420	529	583	597	813	460

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Table F-16 Modelling Age 7 KS1 attainment across ONS Clusters

	ONS Cluster						
	English Countryside	**London Cosmopolitan**	**Suburban traits**	**Bus. and educ. Centre**	**Coastal & Heritage**	**Prosperous England**	**Mining and Manuf.**
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Mother's age at birth	0.04	0.19**	0.01	-0.04	-0.07	0.05	-0.01
	-0.03	-0.05	-0.04	-0.04	-0.06	-0.04	-0.03
Mother's education *Ref: NVQ 5/4*							
NVQ3	-0.65	1.52*	-0.86	-0.90	1.18	0.13	0.21
	-0.47	-0.77	-0.72	-0.76	-0.85	-0.62	-0.47
NVQ2/1	-1.51**	0.13	-0.08	-0.98	-0.15	-0.57	-0.36
	-0.39	-0.77	-0.49	-0.51	-0.67	-0.45	-0.42
Overseas	-0.34	0.93	-0.74	1.24	2.10	-1.72	0.81
	-1.64	-1.24	-1.44	-1.34	-1.72	-1.76	-1.04
None	-1.81	0.96	-0.02	-2.06*	-1.34	-1.58	-1.69*
	-0.98	-1.00	-1.01	-0.82	-1.65	-1.21	-0.79
Disadvantage index	-0.06	-0.37	-0.04	-0.25	-0.16	-0.21	-0.46**
	-0.16	-0.23	-0.20	-0.17	-0.27	-0.21	-0.16
Home Learning Environment	-0.07	-0.24	-0.12	-0.32**	-0.01	-0.08	-0.16*
	-0.08	-0.13	-0.10	-0.08	-0.15	-0.09	-0.07
Parents' night attendance Ref: Yes							
No	-0.32	-0.09	-0.83	-4.06*	-3.63*	-1.45	-0.15
	-1.43	-1.32	-1.60	-1.81	-1.51	-1.07	-0.99
Not taken place yet	0.10	0.46	-0.48	-2.01	-3.06	-1.17	-1.87
	-3.14	-1.55	-1.48	-2.21	-2.43	-1.40	-1.30
Parental involvement in school *Ref: None*							
1 activity	-0.55	-2.38**	0.61	-0.38	0.05	0.80	0.12

	-0.48	-0.64	-0.56	-0.57	-0.76	-0.58	-0.41
2 activities	0.58	-1.76	0.45	0.00	1.77*	1.16*	0.70
	-0.47	-0.90	-0.61	-0.62	-0.78	-0.53	-0.45
3 or more activities	0.58	-1.29	0.49	0.12	2.67**	0.52	0.65
	-0.47	-0.77	-0.67	-0.58	-0.84	-0.56	-0.49
Parent wants CM to attend Uni *Ref: Yes*							
No	-1.09	-	0.38	-1.58	-	-0.51	-2.54*
	-1.38	-	-1.06	-1.10	-	-1.26	-1.10
Age 5 BAS II	0.10**	0.09**	0.11**	0.10**	0.07	0.08**	0.14**
	-0.02	-0.03	-0.02	-0.02	-0.04	-0.02	-0.02
Age 5 SDQ	-0.13**	-0.20**	-0.12*	-0.20**	0.01	-0.10*	-0.09**
	-0.04	-0.06	-0.05	-0.05	-0.07	-0.05	-0.04
Age 5 EYFSP	2.96**	2.61**	3.06**	2.69**	3.00**	2.81**	2.58**
	-0.15	-0.23	-0.21	-0.19	-0.27	-0.19	-0.16
Constant	7.06**	8.818**	7.717**	14.115**	9.363**	8.884**	9.460**
	-1.99	-2.51	-2.40	-2.20	-3.15	-2.51	-1.95
R^2	0.50	0.57	0.51	0.51	0.48	0.42	0.49
N	878	330	681	691	347	660	1130

Note that * and ** indicates significance at the 5% and 1% levels respectively. Please be advised that R^2 should not be compared between models due to differing sample sizes. Constants refer to the mean BAS II score a child with characteristics defined as the “reference group”.

Appendix G Decomposition Analysis

Table G-1 Variables included in decomposition summary categories

	Age 3	Age 5	Age 7
Socio-demographic	Mother's age at birth	Mother's age at birth	Mother's age at birth
	Birth weight	Birth weight	Birth weight
	Mother's education	Mother's education	Mother's education
	Mother's NSSEC	Mother's NSSEC	Mother's NSSEC
	Household work status	Household work status	Household work status
	Household deprivation score	Household deprivation score	Household deprivation score
	Mother's generational status	Mother's generational status	Mother's generational status
Ethnicity	Ethnicity	Ethnicity	Ethnicity
Home Learning	Ever breastfed	Ever breastfed	Ever breastfed
	Mother's life satisfaction	Mother's life satisfaction	Mother's life satisfaction
	Home Learning Environment	Home Learning Environment	Home Learning Environment
			Attendance at parents night
			Parental involvement in school
			Parental uni aspirations
Childcare	Age started childcare	Age started childcare	Age started childcare
	Hrs childcare per week	Hrs childcare per week	Hrs childcare per week
		Full time or part-time childcare at reception	Full time or part-time childcare at reception
Neighborhood characteristics	Ethnicity Theil index	Ethnicity Theil index	Ethnicity Theil index
	Percent white	Percent white	Percent white
	FSM Theil index	FSM Theil index	FSM Theil index
	Percent outstanding	Percent outstanding	Percent outstanding
	Percent NVQ 4+	Percent NVQ 4+	Percent NVQ 4+
	Percent unemployed	Percent unemployed	Percent unemployed
	Budget per capita	Budget per capita	Budget per capita

Age 3	Age 5	Age 7
Prior attainment	Age 3 BAS II score Age 3 SDQ score	Age 5 BAS II score Age 5 SDQ score Age 5 EYFSP score

Table G-2 Decomposing regional gaps (GOR) in Age 3 BAS II attainment - detailed

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	1.17	0.11	-0.84	0.78	1.01	1.24*	0.74	3.63**
SE	0.78	0.55	0.58	0.58	0.58	0.55	0.49	0.60
Maternal age at birth (%)						<0		<0
SE						0.06		0.07
Birth weight (%)						<0		0.82
SE						0.02		0.03
Maternal education (%)						<0		<0
SE						0.11		0.10
Maternal NSSEC (%)						<0*		<0
SE						0.08		0.07
Household work status (%)						6.96		<0
SE						0.08		0.05
Household deprivation score (%)						0.71		<0
SE						0.07		0.09
Maternal generation (%)						29.23*		9.81*
SE						0.17		0.18
Ethnicity (%)						71.03**		31.18**
SE						0.22		0.29
Ever breastfed (%)						<0		<0
SE						0.04		0.03

Maternal life satisfaction (%)						<0		<0
SE						0.04		0.03
Home learning environment (%)						<0**		0.99
SE						0.08		0.08
Age started childcare (%)						<0		<0
SE						0.06		0.08
Hrs/week in childcare (%)						10.77*		1.51
SE						0.07		0.07
Ethnicity Theil index (%)						<0		53.93
SE						1.57		1.97
Percent white (%)						>100*		4.28
SE						1.29		1.46
FSM Theil index (%)						<0		38.09
SE						0.74		0.88
Percent outstanding (%)						<0		<0
SE						0.17		0.46
Percent NVQ 4+ (%)						<0		<0
SE						0.60		0.44
Percent unemployed (%)						<0		30.10
SE						0.62		1.35
Budget per capita (%)						2.01		<0*
SE						0.88		0.91
N	1297	1840	1720	1562	1668	1731	2125	1619

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-3 Decomposing regional gaps (GOR) in Age 3 SDQ attainment - detailed

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	1.02**	0.65**	1.31**	0.76**	1.09**	0.27	0.35	0.37
SE	0.34	0.24	0.25	0.28	0.27	0.24	0.22	0.25
Maternal age at birth (%)	19.94**	31.87**	15.63**	27.85**	12.02**			
SE	0.08	0.06	0.06	0.06	0.05			
Birth weight (%)	<0**	3.02**	0.37**	0.69**	0.52**			
SE	0.01	0.02	0.01	0.02	0.01			
Maternal education (%)	15.80	11.64	11.58*	13.93	3.53			
SE	0.09	0.05	0.06	0.05	0.04			
Maternal NSSEC (%)	22.87**	14.48*	8.30	9.73	11.56**			
SE	0.09	0.05	0.06	0.05	0.05			
Household work status (%)	<0	<0	<0	<0	<0			
SE	0.03	0.03	0.03	0.04	0.02			
Household deprivation score (%)	18.56*	19.09**	3.29	<0	4.27			
SE	0.08	0.05	0.04	0.05	0.05			
Maternal generation (%)	5.78	9.67	3.00	0.21	4.12			
SE	0.08	0.07	0.07	0.07	0.08			
Ethnicity (%)	<0	<0	<0	13.59	<0			
SE	0.11	0.08	0.09	0.09	0.09			
Ever breastfed (%)	13.78	15.77*	5.13	10.08	3.25			
SE	0.09	0.05	0.04	0.05	0.04			
Maternal life satisfaction (%)	<0	<0	<0	<0**	<0*			
SE	0.05	0.04	0.03	0.05	0.04			

Home learning environment (%)	<0	<0**	<0*	<0*	1.79			
SE	0.03	0.03	0.03	0.04	0.03			
Age started childcare (%)	5.40	1.85	3.15	4.10	5.07			
SE	0.05	0.03	0.04	0.03	0.04			
Hrs/week in childcare (%)	<0	<0	<0	<0	0.11			
SE	0.03	0.01	0.01	0.02	0.01			
Ethnicity Theil index (%)	>100	53.42	74.10	65.20	56.40			
SE	1.16	0.98	0.91	0.94	0.77			
Percent white (%)	<0	<0*	<0*	<0	<0			
SE	0.80	0.62	0.48	0.62	0.54			
FSM Theil index (%)	<0	<0	<0	<0	<0			
SE	0.05	0.19	0.17	0.32	0.18			
Percent outstanding (%)	9.05	<0	15.43	22.24	<0			
SE	0.22	0.06	0.14	0.11	0.13			
Percent NVQ 4+ (%)	21.68	50.10	43.07	97.18	16.45			
SE	0.50	0.27	0.42	0.41	0.35			
Percent unemployed (%)	<0	11.98	<0	46.02	<0			
SE	0.28	0.14	0.11	0.27	0.07			
Budget per capita (%)	18.19	<0	<0	<0	18.66			
SE	0.31	0.29	0.29	0.40	0.35			
N	1323	1876	1746	1599	1718	1770	2166	1655

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-4 Decomposing regional gaps (GOR) in Age 5 BAS II attainment - Summary

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	-0.16	1.06	-0.28	1.62**	0.43	1.46**	0.77	1.93**
SE	0.77	0.59	0.63	0.64	0.65	0.63	0.56	0.62
Socio-demographic (%)				2.41		<0		1.24
SE				0.25		0.24		0.23
Ethnicity (%)				<0		7.31		5.11
SE				0.19		0.21		0.26
Home learning (%)				3.82		<0		1.59
SE				0.08		0.06		0.04
Childcare (%)				<0		<0		<0
SE				0.10		0.15		0.25
Neighbourhood characteristics (%)				87.59		>100**		>100*
SE				1.35		0.90		1.53
Prior attainment (%)				20.84		35.07		85.00
SE				4.37		4.38		4.50
N	986	1446	1301	1244	1293	1386	1751	1276

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-5 Decomposing regional gaps (GOR) in Age 5 BAS II attainment - detailed

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	-0.16	1.06	-0.28	1.62**	0.43	1.46*	0.77	1.93**
SE	0.77	0.59	0.63	0.64	0.65	0.63	0.56	0.62
Maternal age at birth (%)				0.71		<0		<0
SE				0.08		0.04		0.06
Birth weight (%)				<0		<0		1.25
SE				0.02		0.02		0.03
Maternal education (%)				<0		<0		<0
SE				0.09		0.12		0.08
Maternal NSSEC (%)				<0*		<0		<0
SE				0.11		0.10		0.08
Household work status (%)				1.17		<0		<0
SE				0.07		0.07		0.07
Household deprivation score (%)				6.65		1.65		-0.03
SE				0.07		0.05		0.05
Maternal generation (%)				17.61		18.43		15.46
SE				0.18		0.17		0.17
Ethnicity (%)				<0		7.31		5.11
SE				0.19		0.21		0.26
Ever breastfed (%)				1.68		<0		0.83
SE				0.06		0.03		0.03

Maternal life satisfaction (%)				-0.81		<0		<0
SE				0.02		0.01		0.01
Home learning environment (%)				2.95		<0		0.97
SE				0.04		0.06		0.03
Age started childcare (%)				<0		<0		<0
SE				0.07		0.07		0.05
Hrs/week in childcare (%)				<0		0.69		<0
SE				0.06		0.07		0.07
Fulltime/part-time childcare (%)				<0		<0		<0
SE				0.03		0.12		0.23
Ethnicity Theil index (%)				>100		>100*		69.99
SE				1.75		1.56		2.14
Percent white (%)				<0		22.91		>100
SE				1.15		1.25		1.50
FSM Theil index (%)				82.47*		67.93		72.11
SE				0.65		0.70		0.84
Percent outstanding (%)				<0		<0		<0
SE				0.27		0.14		0.46
Percent NVQ 4+ (%)				<0**		<0**		<0**
SE				0.81		0.55		0.38
Percent unemployed (%)				<0*		<0*		<0
SE				0.58		0.60		1.34

Budget per capita (%)				>100*		>100		64.52
SE				0.84		0.90		0.92
Sweep 2 BAS II (%)				21.43		35.54		84.39**
SE				0.33		0.28		0.31
Sweep 2 SDQ (%)				<0		<0		0.62
SE				0.02		0.02		0.02
N	986	1446	1301	1244	1293	1386	1751	1276

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-6 Decomposing regional gaps (GOR) in Age 5 SDQ attainment - Summary

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	0.21	0.48	0.31	-0.02	0.64*	0.29	0.09	0.10
SE	0.34	0.26	0.27	0.26	0.28	0.26	0.23	0.26
Socio-demographic (%)					20.07			
SE					0.10			
Ethnicity (%)					2.30			
SE					0.07			
Home learning (%)					<0			
SE					0.04			
Childcare (%)					5.61			
SE					0.03			
Neighbourhood characteristics (%)					<0			
SE					0.42			
Prior attainment (%)					63.21			
SE					2.19			
N	994	1452	1300	1247	1302	1387	1755	1283

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-7 Decomposing regional gaps (GOR) in Age 5 SDQ attainment - Detailed

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	0.21	0.48	0.31	-0.02	0.64*	0.29	0.09	0.10
SE	0.34	0.26	0.27	0.26	0.28	0.26	0.23	0.26
Maternal age at birth (%)					0.59			
SE					0.04			
Birth weight (%)					1.77*			
SE					0.01			
Maternal education (%)					5.97			
SE					0.03			
Maternal NSSEC (%)					3.07			
SE					0.04			
Household work status (%)					<0			
SE					0.02			
Household deprivation score (%)					0.66			
SE					0.02			
Maternal generation (%)					9.71			
SE					0.07			
Ethnicity (%)					2.30			
SE					0.07			
Ever breastfed (%)					<0			

	SE					0.03			
Maternal life satisfaction (%)						<0			
	SE					0.02			
Home learning environment (%)						<0			
	SE					0.01			
Age started childcare (%)						3.64			
	SE					0.03			
Hrs/week in childcare (%)						2.06			
	SE					0.02			
Fulltime/part-time childcare (%)						<0			
	SE					0.00			
Ethnicity Theil index (%)						<0			
	SE					0.70			
Percent white (%)						<0			
	SE					0.48			
FSM Theil index (%)						<0			
	SE					0.16			
Percent outstanding (%)						<0			
	SE					0.10			
Percent NVQ 4+ (%)						92.52			
	SE					0.35			

Percent unemployed (%)					<0			
SE					0.08			
Budget per capita (%)					<0			
SE					0.33			
Sweep 2 BAS II (%)					<0*			
SE					0.02			
Sweep 2 SDQ (%)					69.40**			
SE					0.15			
N	994	1452	1300	1247	1302	1387	1755	1283

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-8 Decomposing regional gaps (GOR) in Age 5 EYFSP attainment - Summary

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	0.25**	0.04	-0.04	0.07	-0.12	0.01	-0.03	0.08
SE	0.10	0.08	0.08	0.09	0.08	0.08	0.07	0.08
Socio-demographic (%)	<0							
SE	0.05							
Ethnicity (%)	<0							
SE	0.04							
Home learning (%)	<0							
SE	0.03							
Childcare (%)	12.67							
SE	0.02							
Neighbourhood characteristics (%)	<0							
SE	0.30							
Prior attainment (%)	17.40							
SE	0.89							
N	886	1283	1169	1109	1155	1212	1566	1148

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-9 Decomposing regional gaps (GOR) in Age 5 EYFSP attainment - Detailed

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	0.25**	0.04	-0.04	0.07	-0.12	0.01	-0.03	0.08
SE	0.10	0.08	0.08	0.09	0.08	0.08	0.07	0.08
Maternal age at birth (%)	2.96							
SE	0.02							
Birth weight (%)	0.73							
SE	0.00							
Maternal education (%)	<0							
SE	0.02							
Maternal NSSEC (%)	<0							
SE	0.03							
Household work status (%)	<0							
SE	0.01							
Household deprivation score (%)	<0							
SE	0.02							
Maternal generation (%)	<0							
SE	0.03							
Ethnicity (%)	<0							
SE	0.04							
Ever breastfed (%)	<0							
SE	0.02							

Maternal life satisfaction (%)	0.06								
SE	0.00								
Home learning environment (%)	0.25								
SE	0.00								
Age started childcare (%)	12.49								
SE	0.02								
Hrs/week in childcare (%)	3.23								
SE	0.01								
Fulltime/part-time childcare (%)	<0								
SE	0.01								
Ethnicity Theil index (%)	<0								
SE	0.30								
Percent white (%)	8.37								
SE	0.21								
FSM Theil index (%)	0.67								
SE	0.02								
Percent outstanding (%)	49.36								
SE	0.07								
Percent NVQ 4+ (%)	<0								
SE	0.13								
Percent unemployed (%)	<0								

SE	0.08							
Budget per capita (%)	<0*							
SE	0.07							
Sweep 2 BAS II (%)	23.52*							
SE	0.03							
Sweep 2 SDQ (%)	<0							
SE	0.01							
N	886	1283	1169	1109	1155	1212	1566	1148

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-10 Decomposing regional gaps (GOR) in Age 7 BAS II attainment - Summary

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	-4.46**	-5.21**	-6.23**	-6.68**	-5.09**	-6.43**	-4.92**	-5.22**
SE	1.50	1.15	1.18	1.17	1.18	1.13	1.00	1.12
Socio-demographic (%)	35.21*	18.70*	15.84*	8.04	10.69	23.27**	18.84**	6.30
SE	0.65	0.44	0.48	0.45	0.45	0.44	0.31	0.37
Ethnicity (%)	12.78	19.41**	13.69*	9.23	6.84	9.13	15.56*	18.02
SE	0.51	0.38	0.41	0.38	0.35	0.41	0.36	0.51
Home learning (%)	<0	<0	1.81	2.53	2.92	2.72	3.59	1.75
SE	0.43	0.26	0.23	0.20	0.25	0.21	0.14	0.16
Childcare (%)	<0	4.01	<0	<0	<0	<0	<0	7.77
SE	0.28	0.16	0.21	0.18	0.19	0.27	0.35	0.44
Neighborhood characteristics (%)	<0	51.17	73.20	54.91	<0	23.87	<0	<0*
SE	4.61	2.70	2.62	2.52	1.75	1.53	1.37	2.62
Prior attainment (%)	<0	<0	<0	<0	7.96	<0	<0	<0
SE	11.58	8.78	8.17	9.15	9.20	9.48	7.46	8.29
N	707	1017	937	914	959	1034	1299	944

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-11 Decomposing regional gaps (GOR) in Age 7 BAS II attainment - Detail

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	-4.46**	-5.21**	-6.23**	-6.68**	-5.09**	-6.43**	-4.92**	-5.22**
SE	1.50	1.15	1.18	1.17	1.18	1.13	1.00	1.12
Maternal age at birth (%)	6.90	6.86	0.01	1.45	<0	1.89	6.48	2.71
SE	0.25	0.23	0.19	0.19	0.17	0.12	0.14	0.13
Birth weight (%)	0.87	0.90	0.56	0.94	0.41	0.38	<0*	<0
SE	0.06	0.07	0.07	0.08	0.04	0.04	0.04	0.02
Maternal education (%)	5.21	3.95	5.77*	2.54	2.72	6.56*	<0	3.24
SE	0.24	0.15	0.19	0.15	0.13	0.22	0.12	0.12
Maternal NSSEC (%)	<0	1.74	<0	1.57	0.71	3.59	0.35	<0
SE	0.32	0.16	0.18	0.19	0.15	0.22	0.12	0.13
Household work status (%)	6.24	<0	1.95	<0	0.55	<0	0.36	2.40
SE	0.25	0.09	0.11	0.06	0.08	0.10	0.05	0.11
Household deprivation score (%)	11.34	1.16	<0	<0	<0	0.98	1.29	1.60
SE	0.30	0.14	0.22	0.14	0.20	0.11	0.11	0.14
Maternal generation (%)	5.46	4.88	10.42*	4.14	8.41	9.98*	10.73*	<0
SE	0.35	0.32	0.32	0.35	0.34	0.32	0.25	0.27
Ethnicity (%)	12.78	19.41**	13.69*	9.23	6.84	9.13	15.56*	18.02
SE	0.51	0.38	0.41	0.38	0.35	0.41	0.36	0.51
Ever breastfed (%)	5.16	3.20	0.80	0.85	1.20	2.07	<0	0.08
SE	0.28	0.16	0.14	0.12	0.14	0.10	0.06	0.02
Maternal life satisfaction (%)	0.46	0.32	<0	0.54	0.56	<0	<0	0.00
SE	0.07	0.03	0.01	0.05	0.05	0.02	0.02	0.01
Home learning environment (%)	0.28	1.54	0.98	1.84	2.38	<0	3.24	0.24
SE	0.04	0.07	0.08	0.09	0.11	0.03	0.10	0.06

Attendance at parent's evening (%)	0.15	<0	0.42	<0	<0	<0	<0	<0
SE	0.05	0.06	0.05	0.08	0.07	0.09	0.02	0.05
Parental involvement at school (%)	<0	<0*	<0	<0	0.07	3.31	<0	0.38
SE	0.31	0.17	0.12	0.07	0.15	0.13	0.05	0.10
Parental uni aspirations (%)	<0	<0	2.43	0.26	<0	<0	1.53	1.46
SE	0.03	0.05	0.11	0.04	0.06	0.06	0.06	0.08
Age started childcare (%)	<0	3.39	1.21	<0	<0	<0	2.99	<0
SE	0.24	0.14	0.18	0.11	0.16	0.12	0.09	0.10
Hrs/week in childcare (%)	<0	0.62	<0	<0	<0	<0	<0	1.22
SE	0.13	0.06	0.07	0.14	0.07	0.21	0.08	0.13
Fulltime/part-time childcare (%)	0.09	0.00	<0	<0	0.86	<0	<0*	8.49
SE	0.10	0.01	0.09	0.04	0.06	0.17	0.33	0.42
Ethnicity Theil index (%)	<0	31.44	0.45	<0	7.88	6.54	55.24	<0
SE	4.32	3.56	3.42	3.56	2.89	3.05	2.65	4.10
Percent white (%)	20.74	4.09	39.20	89.88**	<0	49.73	<0	18.72
SE	3.26	2.51	2.06	2.32	2.15	2.43	2.36	2.98
FSM Theil index (%)	<0	4.28	12.16	2.34	<0	<0	<0	20.02
SE	0.09	0.65	0.50	1.16	0.66	1.06	1.04	1.44
Percent outstanding (%)	3.85	17.30**	36.24**	22.29**	<0	<0**	8.12	0.27
SE	1.13	0.35	0.72	0.52	0.46	0.33	0.57	0.87
Percent NVQ 4+ (%)	35.31	1.79	<0	4.76	49.78**	<0	<0	13.53
SE	1.68	0.75	1.21	1.25	1.04	0.77	0.28	0.43
Percent unemployed (%)	9.64	2.60	7.77	<0	<0	<0	<0	3.07
SE	1.08	0.67	0.43	1.23	0.37	1.09	1.55	2.40
Budget per capita (%)	<0	<0	<0	13.79	<0	22.00	20.42	<0
SE	1.06	1.09	1.04	1.50	1.26	1.50	1.18	1.59
Age 5 BAS II (%)	<0	<0	<0	<0*	<0	<0*	<0*	<0**
SE	0.20	0.21	0.22	0.23	0.22	0.25	0.20	0.24
Age 5 SDQ (%)	1.26	3.46	1.47	1.20	3.93	0.99	<0	<0

	SE	0.14	0.12	0.08	0.11	0.14	0.07	0.08	0.10
Age 5 EYFSP (%)		<0**	<0	<0	<0	9.85	<0	0.11	<0
	SE	0.58	0.46	0.42	0.43	0.42	0.39	0.37	0.40
N		707	1017	937	914	959	1034	1299	944

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-12 Decomposing regional gaps (GOR) in Age 7 SDQ attainment – Summary

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	0.20	0.34	0.63	0.16	0.83*	0.74*	0.07	0.21
SE	0.42	0.34	0.34	0.35	0.36	0.33	0.30	0.32
Socio-demographic (%)					<0	<0		
SE					0.12	0.11		
Ethnicity (%)					12.88	16.43		
SE					0.09	0.10		
Home learning (%)					0.30	0.86		
SE					0.07	0.06		
Childcare (%)					<0	<0		
SE					0.04	0.07		
Neighbourhood characteristics (%)					<0	69.68		
SE					0.42	0.37		
Prior attainment (%)					44.31	20.87		
SE					2.61	2.19		
N	711	1019	939	920	959	1035	1300	948

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-13 Decomposing regional gaps (GOR) in Age 7 SDQ attainment – Detailed

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	0.20	0.34	0.63	0.16	0.83*	0.74*	0.07	0.21
SE	0.42	0.34	0.34	0.35	0.36	0.33	0.30	0.32
Maternal age at birth (%)					3.15	0.76		
SE					0.05	0.03		
Birth weight (%)					<0	0.03		
SE					0.01	0.01		
Maternal education (%)					<0	<0		
SE					0.04	0.06		
Maternal NSSEC (%)					0.52	<0		
SE					0.04	0.05		
Household work status (%)					<0	3.08		
SE					0.03	0.02		
Household deprivation score (%)					<0	0.12		
SE					0.05	0.04		
Maternal generation (%)					<0	3.65		
SE					0.09	0.09		
Ethnicity (%)					12.88	16.43		
SE					0.09	0.10		
Ever breastfed (%)					1.48	0.82		

	SE					0.04	0.02		
Maternal life satisfaction (%)						<0	<0		
	SE					0.03	0.03		
Home learning environment (%)						1.01	0.56		
	SE					0.01	0.01		
Attendance at parent's evening (%)						<0	<0		
	SE					0.02	0.02		
Parental involvement at school (%)						3.83	6.23		
	SE					0.04	0.03		
Parental uni aspirations (%)						<0	<0		
	SE					0.02	0.02		
Age started childcare (%)						<0	5.10		
	SE					0.04	0.04		
Hrs/week in childcare (%)						<0	<0*		
	SE					0.02	0.04		
Fulltime/part-time childcare (%)						<0	<0		
	SE					0.02	0.04		
Ethnicity Theil index (%)						61.93	>100		
	SE					0.71	0.75		
Percent white (%)						<0	<0		
	SE					0.57	0.64		

FSM Theil index (%)					3.03	<0		
SE					0.16	0.26		
Percent outstanding (%)					15.10	<0		
SE					0.11	0.07		
Percent NVQ 4+ (%)					<0	<0		
SE					0.29	0.21		
Percent unemployed (%)					1.57	13.61		
SE					0.04	0.27		
Budget per capita (%)					13.08	70.06		
SE					0.32	0.39		
Age 5 BAS II (%)					<0	0.01		
SE					0.02	0.03		
Age 5 SDQ (%)					43.39	23.71		
SE					0.24	0.20		
Age 5 EYFSP (%)					2.99	<0		
SE					0.02	0.04		
N	711	1019	939	920	959	1035	1300	948

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-14 Decomposing regional gaps (GOR) in Age 7 KS1 attainment – Summary

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	-0.18	-1.13*	-1.40**	-0.39	-1.35*	-0.76	-0.19	-0.59
SE	0.60	0.49	0.49	0.50	0.50	0.47	0.42	0.45
Socio-demographic (%)		46.23**	46.48**		35.11**			
SE		0.16	0.18		0.16			
Ethnicity (%)		<0	11.26		<0			
SE		0.14	0.16		0.13			
Home learning (%)		6.76	2.03		2.59			
SE		0.11	0.08		0.09			
Childcare (%)		2.31	9.85		1.77			
SE		0.07	0.08		0.07			
Neighbourhood characteristics (%)		0.28	<0		<0			
SE		0.94	0.92		0.62			
Prior attainment (%)		<0	<0		19.39			
SE		3.17	3.08		3.37			
		0.29	0.00		0.32			
N	606	894	816	798	842	913	1125	828

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-15 Decomposing regional gaps (GOR) in Age 7 KS1 attainment – Detail

	London vs.							
	North East	**North West**	**Yorkshire & the Humber**	**East Midlands**	**West Midlands**	**East of England**	**South East**	**South West**
Raw difference	-0.18	-1.13*	-1.40**	-0.39	-1.35**	-0.76	-0.19	-0.59
SE	0.60	0.49	0.49	0.50	0.50	0.47	0.42	0.45
Maternal age at birth (%)		17.26*	8.25		<0			
SE		0.09	0.07		0.06			
Birth weight (%)		3.45*	1.75		1.28			
SE		0.03	0.03		0.02			
Maternal education (%)		6.47	3.30		2.56			
SE		0.07	0.07		0.06			
Maternal NSSEC (%)		1.31	2.63		3.71			
SE		0.06	0.06		0.06			
Household work status (%)		<0	3.23		3.31			
SE		0.03	0.05		0.04			
Household deprivation score (%)		<0	1.65		0.09			
SE		0.05	0.07		0.04			
Maternal generation (%)		19.19*	25.67**		24.89**			
SE		0.11	0.12		0.12			
Ethnicity (%)		<0	11.26		<0			
SE		0.14	0.16		0.13			
Ever breastfed (%)		4.43	1.99		<0			

SE		0.06	0.05		0.05				
Maternal life satisfaction (%)		1.48	<0		0.81				
SE		0.03	0.01		0.02				
Home learning environment (%)		5.64	1.85		3.21				
SE		0.04	0.03		0.04				
Attendance at parent's evening (%)		3.17	1.32		-0.46				
SE		0.03	0.02		0.03				
Parental involvement at school (%)		<0	<0		1.30				
SE		0.06	0.05		0.06				
Parental uni aspirations (%)		<0	1.60		<0				
SE		0.03	0.03		0.02				
Age started childcare (%)		4.12	8.99		<0				
SE		0.06	0.08		0.06				
Hrs/week in childcare (%)		<0	0.05		0.68				
SE		0.02	0.00		0.02				
Fulltime/part-time childcare (%)		<0	0.81		1.60				
SE		0.01	0.02		0.03				
Ethnicity Theil index (%)		<0	<0		<0				
SE		1.25	1.19		1.01				
Percent white (%)		38.76	1.61		75.41				
SE		0.98	0.77		0.81				

FSM Theil index (%)		4.99	26.98		<0			
SE		0.20	0.18		0.20			
Percent outstanding (%)		5.44	13.55		7.47			
SE		0.10	0.24		0.17			
Percent NVQ 4+ (%)		3.24	<0		20.41			
SE		0.23	0.43		0.34			
Percent unemployed (%)		3.09	7.73		<0			
SE		0.23	0.15		0.08			
Budget per capita (%)		<0	<0*		<0			
SE		0.36	0.35		0.42			
Age 5 BAS II (%)		<0	<0		<0			
SE		0.07	0.10		0.10			
Age 5 SDQ (%)		3.14	2.22		2.19			
SE		0.05	0.05		0.05			
Age 5 EYFSP (%)		<0	<0		29.39			
SE		0.29	0.24		0.28			
N	606	894	816	798	842	913	1125	828

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-16 Decomposing regional gaps (ONS) in Age 3 BAS II attainment - Summary

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business and Education Centres**	**Coastal and Heritage**	**Prosperous England**	**Mining and Manufac.**
Raw difference	2.03**	-0.76	-0.52	1.51*	1.74*	0.23
SE	0.65	0.68	0.68	0.77	0.66	0.63
Socio-demographic (%)	10.12			<0	61.57**	
SE	0.36			0.45	0.31	
Ethnicity (%)	70.05**			>100**	97.35**	
SE	0.42			0.40	0.35	
Home learning (%)	19.32			<0	1.78	
SE	0.15			0.19	0.10	
Childcare (%)	3.88			<0	7.05	
SE	0.09			0.13	0.08	
Neighbourhood characteristics (%)	>100			<0*	<0	
SE	3.59			4.23	2.91	
N	1770	1485	1553	1061	1504	2260

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-17 Decomposing regional gaps (ONS) in Age 3 BAS II attainment - detailed

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business & Education Centres**	**Coastal & Heritage**	**Prosperous England**	**Mining & Manufac.**
Raw difference	2.03**	-0.76	-0.52	1.51*	1.74*	0.23
SE	0.65	0.68	0.68	0.77	0.66	0.63
Maternal age at birth (%)	<0			1.34	<0	
SE	0.07			0.14	0.01	
Birth weight (%)	0.29			1.17	4.91	
SE	0.02			0.03	0.06	
Maternal education (%)	1.62			<0	<0	
SE	0.12			0.24	0.11	
Maternal NSSEC (%)	<0*			<0*	2.33	
SE	0.10			0.17	0.05	
Household work status (%)	3.21			6.05	0.90	
SE	0.13			0.13	0.17	
Household deprivation score (%)	8.36			<0	20.00*	
SE	0.10			0.13	0.16	
Maternal generation (%)	12.20			37.64*	34.57*	
SE	0.26			0.29	0.22	
Ethnicity (%)	70.05**			>100**	97.35**	
SE	0.42			0.40	0.35	
Ever breastfed (%)	1.76			<0	0.15	

SE	0.08			0.15	0.05	
Maternal life satisfaction (%)	1.11			<0	0.62	
SE	0.05			0.05	0.04	
Home learning environment (%)	16.44**			0.52	1.01	
SE	0.11			0.10	0.07	
Age started childcare (%)	0.95			<0	4.94	
SE	0.06			0.10	0.06	
Hrs/week in childcare (%)	2.93			2.21	2.11	
SE	0.06			0.08	0.05	
Ethnicity Theil index (%)	9.15			<0	<0	
SE	2.95			2.72	2.49	
Percent white (%)	>100			58.19	>100*	
SE	1.89			2.22	2.05	
FSM Theil index (%)	<0			>100*	>100	
SE	1.39			1.17	1.58	
Percent outstanding (%)	24.58*			<0	<0	
SE	0.21			0.59	0.37	
Percent NVQ 4+ (%)	27.22			<0*	<0	
SE	1.29			1.75	0.66	
Percent unemployed (%)	8.95			<0	<0	
SE	1.26			0.90	1.69	
Budget per capita (%)	22.22			<0*	<0	
SE	1.60			1.81	1.53	
N	1770	1485	1553	1061	1504	2260

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-18 Decomposing regional gaps (ONS) in Age 3 SDQ attainment - Summary

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business and Education Centres**	**Coastal and Heritage**	**Prosperous England**	**Mining and Manufac.**
Raw difference	0.27	0.63*	1.38**	0.75*	-0.36	1.13**
SE	0.27	0.28	0.29	0.31	0.27	0.26
Socio-demographic (%)		46.07	53.83**	30.00		61.32**
SE		0.15	0.19	0.19		0.16
Ethnicity (%)		1.74	<0	<0		<0*
SE		0.06	0.12	0.18		0.13
Home learning (%)		<0	15.15	<0		<0
SE		0.08	0.11	0.09		0.09
Childcare (%)		<0	0.02	<0		<0
SE		0.05	0.05	0.05		0.04
Neighbourhood characteristics (%)		>100	73.60	<0*		<0
SE		0.47	0.82	1.97		1.09
N	1801	1530	1595	1089	1523	2267

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-19 Decomposing regional gaps (ONS) in Age 3 SDQ attainment - Detail

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business & Education Centres**	**Coastal & Heritage**	**Prosperous England**	**Mining & Manufac.**
Raw difference	0.27	0.63*	1.38**	0.75*	-0.36	1.13**
SE	0.27	0.28	0.29	0.31	0.27	0.26
Maternal age at birth (%)		17.61*	26.18**	17.27*		16.90**
SE		0.04	0.08	0.07		0.06
Birth weight (%)		0.25*	0.66**	<0*		0.72**
SE		0.01	0.01	0.02		0.01
Maternal education (%)		22.69	25.36**	2.56		25.23**
SE		0.09	0.12	0.09		0.09
Maternal NSSEC (%)		17.78*	2.67	11.26		9.91
SE		0.06	0.09	0.07		0.06
Household work status (%)		3.08	<0	<0		0.39
SE		0.06	0.04	0.06		0.04
Household deprivation score (%)		<0	6.36	2.94		4.02
SE		0.06	0.06	0.07		0.04
Maternal generation (%)		3.66	<0	<0		4.14
SE		0.06	0.10	0.13		0.10
Ethnicity (%)		1.74	<0	<0		<0*
SE		0.06	0.12	0.18		0.13
Ever breastfed (%)		3.40	19.78**	7.88		16.68**
SE		0.07	0.09	0.06		0.07

Maternal life satisfaction (%)		<0	<0	<0		<0*
SE		0.04	0.04	0.05		0.03
Home learning environment (%)		<0	<0	1.40		<0**
SE		0.03	0.04	0.03		0.04
Age started childcare (%)		<0	<0	4.67		<0
SE		0.04	0.05	0.04		0.03
Hrs/week in childcare (%)		<0	0.73	-5.13		<0
SE		0.02	0.03	0.04		0.02
Ethnicity Theil index (%)		>100	69.76	6.52		<0
SE		0.47	0.87	1.57		1.31
Percent white (%)		<0*	<0*	<0**		<0
SE		0.25	0.47	0.97		0.67
FSM Theil index (%)		<0	<0	58.49		11.49
SE		0.37	0.20	0.53		0.23
Percent outstanding (%)		<0	<0	<0		0.11
SE		0.11	0.05	0.30		0.00
Percent NVQ 4+ (%)		27.37	59.68*	<0		79.99
SE		0.63	0.67	0.80		0.71
Percent unemployed (%)		0.21	<0	<0		5.92
SE		0.05	0.04	0.43		0.09
Budget per capita (%)		80.96	30.61	27.10		7.06
SE		0.58	0.59	0.84		0.59
N	1801	1530	1595	1089	1523	2267

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-20 Decomposing regional gaps (ONS) in Age 5 BAS II attainment - Summary

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business and Education Centres**	**Coastal and Heritage**	**Prosperous England**	**Mining and Manufac.**
Raw difference	2.70**	-1.21	-0.73	0.37	3.27**	0.30
SE	0.71	0.78	0.76	0.82	0.73	0.70
Socio-demographic (%)	15.06				6.75	
SE	0.31				0.29	
Ethnicity (%)	<0				2.71	
SE	0.31				0.29	
Home learning (%)	<0				<0	
SE	0.08				0.05	
Childcare (%)	4.82				0.23	
SE	0.22				0.27	
Neighbourhood characteristics (%)	>100				99.77	
SE	3.28				2.63	
Prior attainment (%)	35.83				25.62	
SE	4.79				4.90	
N	1490	1118	1178	794	1258	1782

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-21 Decomposing regional gaps (ONS) in Age 5 BAS II attainment - Detail

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business & Education Centres**	**Coastal & Heritage**	**Prosperous England**	**Mining & Manufac.**
Raw difference	2.70**	-1.21	-0.73	0.37	3.27**	0.30
SE	0.71	0.78	0.76	0.82	0.73	0.70
Maternal age at birth (%)	<0				<0	
SE	0.06				0.03	
Birth weight (%)	<0				0.55	
SE	0.02				0.03	
Maternal education (%)	<0*				<0	
SE	0.11				0.11	
Maternal NSSEC (%)	<0				<0	
SE	0.09				0.06	
Household work status (%)	3.37				<0	
SE	0.11				0.15	
Household deprivation score (%)	5.01				9.65*	
SE	0.10				0.13	
Maternal generation (%)	24.02**				7.05	
SE	0.23				0.20	
Ethnicity (%)	<0				2.71	
SE	0.31				0.29	

Ever breastfed (%)	<0				<0	
SE	0.07				0.04	
Maternal life satisfaction (%)	0.88				0.19	
SE	0.03				0.01	
Home learning environment (%)	<0				<0	
SE	0.02				0.03	
Age started childcare (%)	<0				4.09	
SE	0.07				0.08	
Hrs/week in childcare (%)	3.23				1.82	
SE	0.07				0.06	
Fulltime/part-time childcare (%)	2.74				<0	
SE	0.19				0.26	
Ethnicity Theil index (%)	>100				73.89	
SE	2.96				2.39	
Percent white (%)	26.06				<0	
SE	1.87				2.23	
FSM Theil index (%)	28.43				<0	
SE	1.32				1.44	
Percent outstanding (%)	<0				<0	
SE	0.20				0.41	
Percent NVQ 4+ (%)	<0*				<0*	
SE	1.13				0.64	

Percent unemployed (%)	<0				<0	
SE	1.16				1.70	
Budget per capita (%)	>100				>100	
SE	1.72				1.54	
Sweep 2 BAS II (%)	35.98**				25.85**	
SE	0.37				0.34	
Sweep 2 SDQ (%)	<0				<0	
SE	0.01				0.02	
N	1490	1118	1178	794	1258	1782

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-22 Decomposing regional gaps (ONS) in Age 5 SDQ attainment - Summary

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business and Education Centres**	**Coastal and Heritage**	**Prosperous England**	**Mining and Manufac.**
Raw difference	0.01	0.28	1.01**	0.27	-0.25	0.45
SE	0.29	0.31	0.32	0.33	0.29	0.28
Socio-demographic (%)			33.57*			
SE			0.17			
Ethnicity (%)			<0*			
SE			0.11			
Home learning (%)			10.02			
SE			0.09			
Childcare (%)			<0			
SE			0.10			
Neighbourhood characteristics (%)			99.76			
SE			0.73			
Prior attainment (%)			70.32			
SE			2.39			
N	1490	1117	1179	797	1262	1787

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-23 Decomposing regional gaps (ONS) in Age 5 SDQ attainment - Detail

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business & Education Centres**	**Coastal & Heritage**	**Prosperous England**	**Mining & Manufac.**
Raw difference	0.01	0.28	1.01**	0.27	-0.25	0.45
SE	0.29	0.31	0.32	0.33	0.29	0.28
Maternal age at birth (%)			<0			
SE			0.07			
Birth weight (%)			0.75			
SE			0.01			
Maternal education (%)			21.55			
SE			0.12			
Maternal NSSEC (%)			7.60			
SE			0.09			
Household work status (%)			<0			
SE			0.03			
Household deprivation score (%)			5.36			
SE			0.04			
Maternal generation (%)			1.50			
SE			0.10			
Ethnicity (%)			<0*			
SE			0.11			
Ever breastfed (%)			7.01			

			SE				0.08
			Maternal life satisfaction (%)				2.63
			SE				0.03
			Home learning environment (%)				0.39
			SE				0.01
			Age started childcare (%)				<0
			SE				0.05
			Hrs/week in childcare (%)				3.68
			SE				0.04
			Fulltime/part-time childcare (%)				<0
			SE				0.09
			Ethnicity Theil index (%)				<0
			SE				0.89
			Percent white (%)				44.00
			SE				0.51
			FSM Theil index (%)				<0
			SE				0.19
			Percent outstanding (%)				2.75
			SE				0.06
			Percent NVQ 4+ (%)				70.47
			SE				0.71
			Percent unemployed (%)				<0

SE			0.01			
Budget per capita (%)			<0			
SE			0.53			
Sweep 2 BAS II (%)			0.78			
SE			0.01			
Sweep 2 SDQ (%)			69.54**			
SE			0.16			
N	1490	1117	1179	797	1262	1787

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-24 Decomposing regional gaps (ONS) in Age 5 EYFSP attainment - Summary

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business and Education Centres**	**Coastal and Heritage**	**Prosperous England**	**Mining and Manufac.**
Raw difference	0.10	-0.30**	-0.25*	-0.21*	0.01	-0.11
SE	0.09	0.10	0.10	0.11	0.09	0.09
Socio-demographic (%)		13.59	62.14*	64.29*		
SE		0.04	0.06	0.06		
Ethnicity (%)		8.52	<0	<0		
SE		0.02	0.04	0.08		
Home learning (%)		15.90*	13.65	3.78		
SE		0.02	0.02	0.02		
Childcare (%)		16.15	9.89	35.17		
SE		0.04	0.03	0.06		
Neighbourhood characteristics (%)		36.51	<0	<0**		
SE		0.15	0.25	0.60		
Prior attainment (%)		3.59*	15.44	<0		
SE		0.77	0.76	0.95		
N	1336	988	1070	724	1098	1656

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-25 Decomposing regional gaps (ONS) in Age 5 EYFSP attainment - Detail

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business & Education Centres**	**Coastal & Heritage**	**Prosperous England**	**Mining & Manufac.**
Raw difference	0.10	-0.30**	-0.25**	-0.21*	0.01	-0.11
SE	0.09	0.10	0.10	0.11	0.09	0.09
Maternal age at birth (%)		<0	<0	<0		
SE		0.01	0.02	0.02		
Birth weight (%)		0.00	1.06	<0		
SE		0.00	0.00	0.01		
Maternal education (%)		10.65	29.26*	35.74**		
SE		0.03	0.03	0.03		
Maternal NSSEC (%)		6.71	22.57*	19.95*		
SE		0.02	0.03	0.02		
Household work status (%)		<0	<0	<0		
SE		0.03	0.01	0.02		
Household deprivation score (%)		1.22	1.79	2.00		
SE		0.02	0.01	0.01		
Maternal generation (%)		11.22	14.23	34.53		
SE		0.02	0.03	0.04		
Ethnicity (%)		8.52	<0	<0		
SE		0.02	0.04	0.08		
Ever breastfed (%)		14.06*	13.41	4.31		

SE		0.02	0.02	0.02		
Maternal life satisfaction (%)		0.00	0.27	0.61		
SE		0.00	0.00	0.00		
Home learning environment (%)		1.84	<0	<0		
SE		0.01	0.00	0.01		
Age started childcare (%)		1.14	10.49	<0		
SE		0.02	0.01	0.02		
Hrs/week in childcare (%)		<0	<0	<0		
SE		0.01	0.01	0.01		
Fulltime/part-time childcare (%)		17.84	2.68	41.68		
SE		0.03	0.03	0.06		
Ethnicity Theil index (%)		<0	<0*	<0**		
SE		0.13	0.24	0.40		
Percent white (%)		15.92	77.80	<0		
SE		0.09	0.15	0.36		
FSM Theil index (%)		<0**	38.88	76.92		
SE		0.11	0.06	0.15		
Percent outstanding (%)		53.87**	17.82	97.77		
SE		0.05	0.02	0.12		
Percent NVQ 4+ (%)		>100*	<0	<0		
SE		0.16	0.19	0.22		
Percent unemployed (%)		<0	<0	<0		

SE		0.01	0.02	0.13		
Budget per capita (%)		<0	<0	<0		
SE		0.16	0.15	0.24		
Sweep 2 BAS II (%)		<0	<0	<0		
SE		0.03	0.02	0.04		
Sweep 2 SDQ (%)		5.15	16.84	3.75		
SE		0.01	0.02	0.01		
N	1336	988	1070	724	1098	1656

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-26 Decomposing regional gaps (ONS) in Age 7 BAS II attainment – Summary

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business and Education Centres**	**Coastal and Heritage**	**Prosperous England**	**Mining and Manufac.**
Raw difference	-7.19**	-4.79**	-8.64**	-8.73**	-4.93**	-7.93**
SE	1.34	1.45	1.45	1.52	1.36	1.35
Socio-demographic (%)	13.68	15.92	14.91	7.10	21.19*	11.89
SE	0.62	0.59	0.82	0.81	0.48	0.65
Ethnicity (%)	6.81	9.39	15.52*	<0	23.62	16.45*
SE	0.65	0.30	0.50	0.75	0.63	0.56
Home learning (%)	<0	<0	<0	5.45	1.00	5.81
SE	0.22	0.37	0.47	0.38	0.23	0.37
Childcare (%)	<0*	2.30	3.25	12.33	<0	1.16
SE	0.40	0.40	0.38	0.77	0.56	0.24
Neighbourhood characteristics (%)	<0	<0	<0	<0	<0	69.69
SE	6.60	2.03	3.47	8.59	5.02	4.76
Prior attainment (%)	<0	45.22	20.50*	6.93	<0	6.86
SE	9.97	11.04	10.26	10.93	10.12	9.94
N	1110	817	834	573	914	1257

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-27 Decomposing regional gaps (ONS) in Age 7 BAS II attainment - Detail

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business & Education Centres**	**Coastal & Heritage**	**Prosperous England**	**Mining & Manufac.**
Raw difference	-7.19**	-4.79**	-8.64**	-8.73**	-4.93**	-7.93**
SE	1.34	1.45	1.45	1.52	1.36	1.35
Maternal age at birth (%)	2.59	3.42	<0	5.50	1.77	<0
SE	0.14	0.15	0.33	0.27	0.10	0.21
Birth weight (%)	<0	<0	0.83	<0	<0	0.64
SE	0.07	0.06	0.08	0.07	0.09	0.06
Maternal education (%)	5.06	2.68	5.40	3.06	4.47	2.46
SE	0.22	0.39	0.51	0.46	0.18	0.34
Maternal NSSEC (%)	3.41	2.77	3.20	<0	1.87	3.95
SE	0.25	0.35	0.55	0.37	0.15	0.30
Household work status (%)	<0	<0	<0	1.35	0.94	<0
SE	0.11	0.18	0.11	0.15	0.12	0.09
Household deprivation score (%)	<0	1.71	3.50	2.16	<0	2.43
SE	0.12	0.20	0.21	0.18	0.16	0.16
Maternal generation (%)	4.10	8.50	6.01	3.27	16.35*	4.39
SE	0.47	0.30	0.52	0.57	0.40	0.50
Ethnicity (%)	6.81	9.39	15.52**	<0	23.62	16.45*
SE	0.65	0.30	0.50	0.75	0.63	0.56
Ever breastfed (%)	<0	3.09	<0	1.78	0.55	3.05

SE	0.15	0.26	0.37	0.28	0.12	0.27
Maternal life satisfaction (%)	<0	<0	0.08	<0	<0	0.76
SE	0.03	0.08	0.11	0.04	0.01	0.07
Home learning environment (%)	<0	<0	<0	<0	<0	<0
SE	0.03	0.14	0.13	0.06	0.05	0.08
Attendance at parent's evening (%)	<0	<0	0.04	<0	<0	0.79
SE	0.04	0.05	0.06	0.10	0.08	0.06
Parental involvement at school (%)	<0	<0	<0	3.27	3.92	0.09
SE	0.12	0.23	0.23	0.24	0.16	0.23
Parental uni aspirations (%)	0.74	<0	1.30	1.30	<0	1.82
SE	0.09	0.07	0.11	0.11	0.09	0.08
Age started childcare (%)	<0	2.76	1.97	0.16	2.82	<0
SE	0.13	0.17	0.22	0.28	0.16	0.15
Hrs/week in childcare (%)	<0	<0	1.44	1.74	<0	-0.09
SE	0.16	0.13	0.16	0.18	0.14	0.08
Fulltime/part-time childcare (%)	<0*	1.59	<0	10.43	<0	2.79
SE	0.35	0.36	0.30	0.69	0.52	0.17
Ethnicity Theil index (%)	<0	<0	<0	<0	<0	24.53
SE	5.85	2.10	3.56	6.39	4.70	5.33
Percent white (%)	71.05	51.21	35.16	68.26	>100	31.75
SE	3.79	1.41	1.99	4.38	4.73	3.03

FSM Theil index (%)	35.72	<0	2.16	40.73	<0	10.89
SE	2.39	1.66	0.78	2.03	2.81	0.91
Percent outstanding (%)	8.89	<0**	7.26	10.83	<0	<0
SE	0.46	0.78	0.37	1.28	0.90	0.08
Percent NVQ 4+ (%)	35.70	76.52**	35.33	<0	<0	74.87*
SE	1.85	2.15	2.54	2.60	0.94	2.60
Percent unemployed (%)	<0	0.70	<0	<0**	<0	<0
SE	2.46	0.21	0.07	1.87	3.75	0.25
Budget per capita (%)	<0	8.25	<0	<0	27.13	<0*
SE	3.11	2.59	2.50	3.71	3.16	2.37
Age 5 BAS II (%)	<0**	7.95	<0	<0	<0**	<0
SE	0.28	0.29	0.31	0.31	0.28	0.31
Age 5 SDQ (%)	1.57	5.72	8.31**	1.05	0.50	2.42
SE	0.11	0.18	0.26	0.10	0.08	0.12
Age 5 EYFSP (%)	<0	31.55**	13.25	9.74	5.20	7.98
SE	0.49	0.55	0.56	0.50	0.44	0.45
N	1110	817	834	573	914	1257

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-28 Decomposing regional gaps (ONS) in Age 7 SDQ attainment - Summary

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business and Education Centres**	**Coastal and Heritage**	**Prosperous England**	**Mining and Manufac.**
Raw difference	0.56	1.03*	1.56**	1.08*	0.51	1.03**
SE	0.35	0.39	0.39	0.42	0.36	0.35
Socio-demographic (%)		<0	1.49	<0		7.54
SE		0.14	0.19	0.19		0.15
Ethnicity (%)		13.70	8.50	20.31		8.79
SE		0.07	0.12	0.19		0.14
Home learning (%)		11.31	9.02	3.24		14.94
SE		0.11	0.12	0.13		0.08
Childcare (%)		3.84	5.42	26.99		<0
SE		0.10	0.09	0.22		0.06
Neighbourhood characteristics (%)		20.41	<0	19.78		33.28
SE		0.50	0.83	2.10		1.06
Prior attainment (%)		59.62	72.76	37.19		63.46
SE		2.41	2.58	2.71		2.33
N	1116	814	834	576	917	1259

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-29 Decomposing regional gaps (ONS) in Age 7 SDQ attainment - Detail

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business & Education Centres**	**Coastal & Heritage**	**Prosperous England**	**Mining & Manufac.**
Raw difference	0.56	1.03**	1.56**	1.08**	0.51	1.03**
SE	0.35	0.39	0.39	0.42	0.36	0.35
Maternal age at birth (%)		3.64	3.35	4.60		5.59
SE		0.04	0.08	0.07		0.05
Birth weight (%)		0.18	0.41	0.28		<0
SE		0.01	0.01	0.01		0.01
Maternal education (%)		<0	<0	<0		<0
SE		0.10	0.14	0.13		0.08
Maternal NSSEC (%)		<0	4.43	<0		11.62
SE		0.09	0.13	0.10		0.07
Household work status (%)		4.69	1.33	<0		0.91
SE		0.04	0.05	0.04		0.03
Household deprivation score (%)		5.58	2.43	2.91		<0
SE		0.06	0.05	0.05		0.03
Maternal generation (%)		<0	<0	<0		<0
SE		0.08	0.12	0.14		0.11
Ethnicity (%)		13.70	8.50	20.31		8.79
SE		0.07	0.12	0.19		0.14
Ever breastfed (%)		<0	2.15	<0		11.60*

SE		0.07	0.09	0.08		0.06
Maternal life satisfaction (%)		7.64	4.92	3.42		2.74
SE		0.05	0.04	0.06		0.03
Home learning environment (%)		0.40	<0	<0		<0
SE		0.03	0.02	0.00		0.01
Attendance at parent's evening (%)		<0	<0	2.33		<0
SE		0.02	0.03	0.04		0.01
Parental involvement at school (%)		6.35	2.09	0.43		0.87
SE		0.06	0.06	0.08		0.05
Parental uni aspirations (%)		<0	0.95	<0		0.12
SE		0.02	0.02	0.02		0.02
Age started childcare (%)		<0	0.48	3.87		3.77
SE		0.04	0.05	0.10		0.03
Hrs/week in childcare (%)		<0	<0	1.57		<0
SE		0.03	0.04	0.04		0.02
Fulltime/part-time childcare (%)		6.78	6.07	21.54		<0
SE		0.08	0.07	0.18		0.04
Ethnicity Theil index (%)		>100*	22.03	13.09		>100
SE		0.56	0.90	1.56		1.22
Percent white (%)		<0	<0	<0		<0
SE		0.38	0.59	1.16		0.70

FSM Theil index (%)		<0	8.46	<0		<0
SE		0.41	0.19	0.43		0.21
Percent outstanding (%)		<0*	<0	>100**		2.41
SE		0.18	0.08	0.38		0.02
Percent NVQ 4+ (%)		<0	0.06	64.22		<0
SE		0.61	0.52	0.64		0.57
Percent unemployed (%)		<0	0.14	1.87		1.20
SE		0.01	0.01	0.47		0.05
Budget per capita (%)		87.95	<0	<0		<0
SE		0.58	0.59	0.84		0.51
Age 5 BAS II (%)		2.26	0.12	<0		0.44
SE		0.03	0.01	0.02		0.01
Age 5 SDQ (%)		46.37	63.96**	31.89		60.25**
SE		0.26	0.26	0.27		0.25
Age 5 EYFSP (%)		10.98*	8.67*	6.54		2.77
SE		0.05	0.07	0.05		0.02
N	1116	814	834	576	917	1259

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-30 Decomposing regional gaps (ONS) in Age 7 KS1 attainment - Summary

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business and Education Centres**	**Coastal and Heritage**	**Prosperous England**	**Mining and Manufac.**
Raw difference	-0.12	-0.20	-1.42*	-1.30*	0.38	-1.07*
SE	0.55	0.59	0.58	0.64	0.55	0.55
Socio-demographic (%)			32.88	26.47		45.02*
SE			0.27	0.31		0.24
Ethnicity (%)			17.66	<0		52.37*
SE			0.20	0.31		0.24
Home learning (%)			<0	6.43		14.58
SE			0.16	0.15		0.13
Childcare (%)			10.46	45.68		3.84
SE			0.17	0.32		0.10
Neighbourhood characteristics (%)			<0	>100		>100
SE			1.07	2.98		1.73
Prior attainment (%)			44.89**	25.97		19.57**
SE			3.11	3.75		3.08
N	981	708	739	497	791	1125

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

Table G-31 Decomposing regional gaps (ONS) in Age 7 KS1 attainment - Detail

	London Cosmopolitan vs.					
	English countryside	**Suburban traits**	**Business & Education Centres**	**Coastal & Heritage**	**Prosperous England**	**Mining & Manufac.**
Raw difference	-0.12	-0.20	-1.42*	-1.30*	0.38	-1.07*
SE	0.55	0.59	0.58	0.64	0.55	0.55
Maternal age at birth (%)			1.67	8.19		3.67
SE			0.10	0.09		0.07
Birth weight (%)			0.43	<0		1.14
SE			0.02	0.03		0.03
Maternal education (%)			14.78	3.59		5.52
SE			0.17	0.17		0.12
Maternal NSSEC (%)			<0	<0		4.22
SE			0.18	0.11		0.09
Household work status (%)			<0	3.60		<0
SE			0.04	0.06		0.03
Household deprivation score (%)			8.09	6.21		6.55
SE			0.07	0.07		0.07
Maternal generation (%)			13.75	19.38		25.44
SE			0.20	0.21		0.18
Ethnicity (%)			17.66	<0		52.37*
SE			0.20	0.31		0.24
Ever breastfed (%)			<0	<0		5.16

SE			0.11	0.10		0.09
Maternal life satisfaction (%)			<0	<0		1.13
SE			0.04	0.02		0.02
Home learning environment (%)			<0	<0		<0
SE			0.06	0.02		0.02
Attendance at parent's evening (%)			0.62	1.36		1.20
SE			0.05	0.04		0.02
Parental involvement at school (%)			<0	6.02		5.73
SE			0.09	0.12		0.08
Parental uni aspirations (%)			2.76	3.10		2.47
SE			0.02	0.03		0.03
Age started childcare (%)			2.82	4.51		<0
SE			0.10	0.13		0.08
Hrs/week in childcare (%)			1.31	0.81		0.20
SE			0.04	0.04		0.01
Fulltime/part-time childcare (%)			6.33	40.36*		3.89
SE			0.13	0.27		0.06
Ethnicity Theil index (%)			<0	76.04		>100
SE			1.26	2.43		1.97
Percent white (%)			45.17	>100*		<0
SE			0.75	1.71		1.20

FSM Theil index (%)			15.02	49.24		80.67**
SE			0.25	0.72		0.35
Percent outstanding (%)			<0**	<0		9.39*
SE			0.17	0.49		0.05
Percent NVQ 4+ (%)			<0	<0*		35.94
SE			0.81	0.93		0.87
Percent unemployed (%)			5.38	<0**		4.72
SE			0.08	0.78		0.07
Budget per capita (%)			<0	>100		<0**
SE			0.79	1.30		0.92
Age 5 BAS II (%)			<0	<0		<0
SE			0.12	0.13		0.15
Age 5 SDQ (%)			15.00*	<0		4.68
SE			0.10	0.03		0.05
Age 5 EYFSP (%)			35.80	37.04		29.50
SE			0.32	0.34		0.28
N	981	708	739	497	791	1125

*Columns are suppressed where the raw difference is not significant at the 5% level. Note that Oaxaca-Blinder decomposition operates poorly in the tails of distributions, and as such this study has difficulty with the Theil Ethnicity index as London Cosmopolitan and Coastal & Heritage operate in opposite ends of the ethnic diversity distribution. Also note that * and ** indicates significance at the 5% and 1% levels respectively.*

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