The use of free school meal status as a proxy for socio-economic status: Evidence from matching the Longitudinal Study of Young People in England to the National Pupil Database

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Introduction

In 2006, 13.6 per cent of pupils in government maintained secondary schools in England were known to be eligible for free school meals (FSM). FSM eligibility is means tested. The proportion of pupils eligible for FSM has been steadily decreasing over the past few years. Pupils who are eligible for FSM on average do less well at each key stage than non-FSM pupils. For example, at General Certificate of Secondary Education (GCSE) and equivalent level in 2006, 33 per cent of FSM pupils achieved the expected standard of the equivalent of 5 or more GCSEs at grades A* to C. This compares to 61 per cent of non-FSM pupils. Furthermore, the progress made between key stages is on average less for FSM pupils than non-FSM. FSM status is the only individual level administrative measure we have of a pupil's family's financial circumstances. FSM is used interchangeably as a proxy for financial hardship or for lower socio-economic status.

In this paper, we explore the characteristics of FSM pupils. We first look at the evidence from the National Pupil Database (NPD), before looking at we what can be learnt from matching NPD data to data collected through sample surveys. The main part of the paper concentrates on evidence from the Longitudinal Study of Young People in England (LSYPE) matched to NPD. We look at how closely FSM status is associated with survey measures of socio-economic status, as well as looking at the extent to which the attitudes and aspirations of young people and parents differ according to FSM status.

The Department for Children Schools and Families (DCSF), formerly Department for Education and Skills (DfES), has published performance indicators for schools since 1992 in the form of average results in public examinations. In 2001, the Department piloted value added measures and rolled these out to all secondary schools in 2002. The value added measures take into account pupil attainment at age 11 (key stage 2). Value added was seen as a fairer method of measuring school effectiveness as it allows comparison of schools with different intakes. The best predictor of attainment at age 16 is prior attainment. However, prior attainment is not the only explanatory factor. A school with a high proportion of pupils eligible for free school meals can quite reasonably claim that its overall performance, or its value added performance, is adversely impacted by the make up of its pupil cohort. The difference in the progress and attainment between different groups, and in particular FSM and non-FSM pupils, led to the development of the contextual value added (CVA) model and performance tables. The CVA model attempts to control for both prior attainment and pupil characteristics in order to allow schools to be compared on a like for like basis. In the final part of the paper, we replace FSM status in the CVA model with a survey measure of socio-economic status.

Evidence from the NPD

The national pupil data base is a matched longitudinal database of administrative records. It contains information on pupil characteristics from the pupil level annual school census (PLASC) and attainment data for the key stage 1 (age 6/7), key stage 2 (age 10/11), key stage 3 (age 13/14) and key stage 4/GCSE (age 15/16). FSM eligibility is collected through PLASC. It is used as a proxy measure for socio-economic status as it is not feasible to collect detailed information about family background through an administrative data collection. Using the NPD, FSM status and neighbourhood indicators such as the Income Deprivation Affecting Children Index (IDACI) are the only measures we have to assess the relative socio-economic status of school pupils.

FSM eligibility is means tested. Currently, in order to be eligible, a child's parent(s) must be in receipt of one of the following:

- Income Support (IS)
- Income Based Job Seeker's Allowance (IBJSA)
- Support under part VI of the Immigration and Asylum Act 1999
- Child Tax Credit, provided that their annual income is less than £14,155 (as assessed by Her Majesty's Revenue and Customs) and they are not in receipt of Working Tax Credit.
- The Guarantee element of State Pension Credit

However, not all parents with children who would be eligible for free school meals claim eligibility. One of the main reasons take up of free school meals is low is the perceived stigma attached to it. Storey and Chamberlain (DfES, 2001) found that a third of the pupils they surveyed and over two fifths of parents identified embarrassment or fear of being teased as a key factor which put people off taking their free meal. They also found that some parents were not aware of their eligibility. So while FSM eligibility should indicate some level of economic deprivation, some non-FSM pupils will also experience similar levels of economic deprivation. The non take up of FSM also raises the possibility that an FSM variable might have explanatory power over and above other indicators of economic deprivation. There may be a substantive difference between the characteristics of those who would be eligible, but do not apply, and those who do apply.

Apart from doing less well at school, we know relatively little about the characteristics of pupils eligible for free school meals. We do know from the administrative data that FSM pupils are:

- More likely than non-FSM pupils to move schools mid year
- More likely to live in urban areas
- More greatly represented among Black African, Bangladeshi and Pakistani ethnic groups.
- More likely to have a language other than English as their first language

The Department's contextual value added models also bring out some interesting points. For example, the FSM effect is much smaller on pupils from all ethnic minority backgrounds.

Linking the NPD to survey data

By matching administrative data to data collected through social surveys, we can find out a lot more about the ways in which FSM pupils and their families differ from non-FSM in their material backgrounds and their attitudes. Vignoles and Hobbs (2007) looked at the use of FSM as a proxy for socio-economic status using data the Avon Longitudinal Study of Parents and Children (ALSPAC) linked to NPD. They found that FSM status was an imperfect proxy for low income or workless families or lone-parenthood. Furthermore, they concluded that when FSM status was used as a control in an ordinary regression, it sometimes biased the results when compared to a survey measure of socio-economic status. The weaknesses of their analysis, which the authors admit, is that socio-economic status and FSM status were measured at different times (SES typically when the child was 4, FSM at age 10/11), and that the ALSPAC sample is not nationally representative.

Evidence from linking the Youth Cohort Study (YCS) to NPD showed that in a simple model of GCSE attainment, FSM explained less of the variation in attainment than the survey measure of parental socio-economic classification (DfES 2006a, pp 50-51). DCSF internal analysis of the YCS linked to the NPD showed that although FSM pupils were less likely than non-FSM to be participating in full time education in the spring following the completion of compulsory education, when other factors were controlled for (e.g. region, ethnic group, sex, GCSE attainment), FSM pupils were more likely to be participating.

We have linked NPD data to data from wave 1 of the Longitudinal Study of Young People in England (LSYPE) at individual level. The LSYPE is a new longitudinal study funded by the DCSF similar to the American National Longitudinal Study of Youth (NLSY). Wave 1 data were collected through interviews with over 15,000 young people in year 9 (aged 13/14) and their parents in the Spring/Summer of 2004[1]. We aim to follow these young people through until they are aged 25. The

[1] For more information about the LSYPE sample design, see appendix

richness of information collected through LSYPE gives us the best opportunity to date to better understand what the FSM proxy stands for. In the LSYPE wave 1 weighted sample linked to NPD, 15 per cent of young people are FSM eligible.

Comparing FSM to other socio-economic indicators on LSYPE

Looking first at the FSM eligibility criteria, the matched data shows that FSM pupils came from households with much lower incomes than non-FSM pupils. Three quarters of FSM pupils come from households with an income of £13,000 a year or less, and half come from households with total annual income of £9,485 or less. Conversely, three quarters of non-FSM pupils came from households with an income of more than £13,000 a year.

The majority (69 per cent) of FSM pupils come from households in receipt of income support. All those on income support should be eligible for FSM. However 17 per cent of pupils from families on income support are not registered as FSM eligible. This discrepancy could be due to non-take up of FSM, or due to timing differences. If a family only recently became dependent on income support, they may not yet have claimed for free school meals.

Single parent status and household composition

Low income families are often single parent families. Around a quarter of the young people in LSYPE live in single parent households. Of these, 36 per cent are FSM pupils. Looked at another way, 58 per cent of FSM pupils come from single parent households. Despite this, the average size of household is larger for FSM pupils (4.5 persons) compared to non-FSM (4.3 persons). FSM pupils have more siblings – an average of 2.2 other brothers and sisters living with them compared to 1.5 for non FSM pupils.

Socio-Economic Classification (NS-SEC)

Politicians are concerned about the under achievement of "working class" pupils, especially boys. When they talk about working class, they often mean "FSM eligible". Defining "working class" is problematic. In the UK we use the National Statistics Socio-Economic Classification. This is an occupation based classification system with 8 classes: Higher professional; lower professional; intermediate; small employers and own account workers; lower supervisory; semi routine; routine; and never worked/long term unemployed.

FSM pupils are more likely to come from households where the head of household is either long term unemployed (31 per cent), or employed in a routine or semi routine occupation (23 per cent and 21 per cent respectively) (Figure 1). Looking at the proportion from each class who are FSM eligible, 76 per cent of pupils from families where the head of household is long term unemployed are claiming eligibility for free school meals, while around a quarter of those from routine backgrounds and a fifth from semi-routine back grounds are FSM eligible. It is clear from the linked LSYPE/NPD data, that FSM is not a particularly accurate proxy for NS-SEC. The majority of pupils from routine and semi-routine backgrounds are not claiming FSM eligibility. And although the majority of pupils from workless families are eligible for FSM, the majority of FSM pupils are not from workless families.

FSM status and housing tenure, vehicle ownership and consumer durables

Across a range of other indicators of material deprivation, FSM pupils are worse off. They are more likely to live in rented accommodation as compared non-FSM (81 per cent compared to 19 per cent). They live in households that are less likely to have access to car and less likely to have a home computer. When parents were asked how well their households were managing on their income at the moment, the parents of FSM pupils were much more likely to say they were getting into difficulties (Figure 2).

FSM and parental education

Mothers of FSM pupils are less well qualified than those of non-FSM pupils. Only 2 per cent have a degree, and more than half have no qualifications at all. Similarly, fathers of FSM pupils are less well qualified.

Attitudes and aspirations of FSM pupils and their parents

Young people in LSYPE were asked about what they would like to do after they finished compulsory education at age 16. 78 per cent of 13/14 year olds from maintained schools said they would like to continue in full time education. When split by FSM status, a much lower percentage said they wanted to remain in full time education (70 per cent as compared to 79 per cent for non-FSM). We know from the Youth Cohort Studies that attainment is the best predictor of post-16 participation. When we control for attainment, FSM pupils were slightly more likely to say they wanted to stay in full time education. This is not surprising. Minority ethnic groups tend to have higher staying on rates, and some of these groups are over represented among FSM pupils. When we control for ethnic group and attainment at age 14, FSM is no longer a significant predictor (table 1a). Replacing FSM in the model with NS-SEC of head of household sheds some light on why FSM is not a good predictor of intentions towards staying in education at age 16. Children from households in the lower supervisory, routine and semi-routine groups are less likely to want to stay in education than those from professional households. However, those from households where the head of household is long term unemployed are no less likely to want to stay in education than those from professional households (table 1b).

At wave 1 of the LSYPE a series of questions were asked aimed at eliciting a school attitude score. When the responses to these questions were compared for the FSM and the non-FSM groups, there was a small but significant difference. Non-FSM pupils were slightly more pro school than non-FSM.

In the study, interviews were conducted with the main parent. In two parent households, the main parent was defined as the parent most involved in the young person's education. Main parents were asked questions about how satisfied they were with various aspects of their child's school. These can be combined to create a parental school satisfaction score. Parents of FSM children were slightly less satisfied with their child's school. Parents of FSM children were also less likely to find it easy to deal with people at their child's school. However, in terms of how personally involved parents felt in their child's school life, there was no difference between the FSM and non-FSM groups.

FSM status and risk factors

The LSYPE contains a number of questions about various risk factors such as whether the young person has tried cannabis, whether s/he has ever shoplifted or played truant or been involved in a public disturbance. 9 such risk factors were added together to create a summated score ranging from 1 to 9. The prevalence of risk was much greater for the FSM group, with over half having experienced at least 1 factor compared to just over a third of non-FSM pupils.

Measuring academic progress between ages 11 and 16

The Department for Children Schools and Families publish annually the School and College Achievement and Attainment Tables (SCAAT). These tables show for every secondary school in England, the proportion of pupils gaining 5 or more GCSEs at grades A* to C. This is the expected standard. GCSE grades can be converted into points. The tables also give the average GCSE points score per pupil for each school. These measures of attainment do not tell the public what value the school has added. Schools with a high proportion of pupils gaining 5 or more A* to C will probably be located in affluent areas, and their intake will have been high achievers in primary school. To evaluate what impact schools had on their pupils' attainment at age 16, a value added score was calculated based on the pupils' attainment at age 11. This still seemed unfair as factors other than attainment at 11 and schools affect attainment at 16. This led to the development of contextual value added (CVA) scores. CVA is designed to account for the prior attainment and social characteristics of the pupil cohort. FSM is used as a proxy for socio-economic status in the CVA calculation. Controlling for other factors, pupils who are FSM eligible score 25 few GCSE points than non-FSM pupils. 6 GCSE points equates to one grade – so the FSM effect is the equivalent of dropping a grade in 4 subjects. The

coefficients from the Department's CVA model are shown in table 2.

Using just the NPD data for the LSYPE sample gives similar coefficients. Because the LSYPE sample is only 15,000, some independent variables that are significant in the full NPD model (based on approx 600,000 cases) are not significant in the LSYPE sample. For example, there was no significant interaction between FSM status and ethnicity in the LSYPE model. Furthermore, some categories had to be combined in the LSYPE model (e.g. ethnic groups) (table 3a).

In order to test how useful FSM is as a proxy for socio economic status, we replaced FSM in the model with a number of survey measures of socio-economic status and family background: family socio-economic classification; single parent status; receipt of income support; tenure; whether the family had access to a car; how well the family was managing on income; size of household; and highest qualification of the parent most involved in the young person's education (i.e. the "main parent"). Unfortunately it was not possible to include income in the regression as income data was missing in the majority of cases for some minority ethnic groups. The coefficients from the new model are presented in table 3b.

The most noticeable difference between the two models is the size of the Income Deprivation Affecting Children Index (IDACI) coefficient. IDACI is a neighbourhood based index of deprivation. Replacing FSM with a survey measure of socio economic status halves the size of the IDACI coefficient. However, neighbourhood deprivation is still significant, even after controlling for family background. There are small, but non significant changes to other coefficients in the model. The largest of these changes is to the quadratic of prior attainment, the size of which reduces by 1.55 standard errors. Replacing FSM with the survey measure of socio-economic status increases the amount of variance explained by the model by 2 percentage points.[2] If we run the model again, but include FSM status along with the survey measures of socio-economic status, FSM is not significant[3].

In terms of the survey measures, those from workless families, or families where the head of household is employed in a routine job make the least progress between ages 11 and 16. As we saw earlier, half of FSM pupils fall into these groups. However, the model also shows that on average, anyone not from a professional or intermediate background is likely to make less progress between key stages. The simple dichotomous measure of FSM status does not capture this.

We also saw how for over half of FSM respondents, the parent most involved in their education had no qualifications. The model gives a coefficient of -24 for the main parent having no qualifications compared to a parent with a degree. Around a third of FSM pupils come from households where the main parent has no qualifications and the head of household is either in a routine job or unemployed. The FSM coefficient from the NPD model understates the disadvantage experienced by many FSM pupils who experience multiple factors associated with low attainment.

A further noticeable finding from the new model is the negative effect on attainment of single parent status, even after controlling for economic circumstances. Ledger (2006) found that there was no effect of lone parent status on pupil attainment at age 14 after controlling for FSM status. Hobbes and Vignoles (2007) give a helpful review of the literature and suggest the evidence on lone parent family status, conditional on economic circumstances, is mixed. One of the ways in which children from single parent families may be disadvantaged is through a lack of parental involvement. Desforges and Abouchaar concluded that parental involvement was positively associated with higher pupil attainment after controlling for other factors. They also found that the degree of parental involvement was diminished by (among other things) "material deprivation, maternal psychosocial ill health, and single parent status" (Desforges and Abouchaar, 2003, pp 85-86).

Conclusions and further work

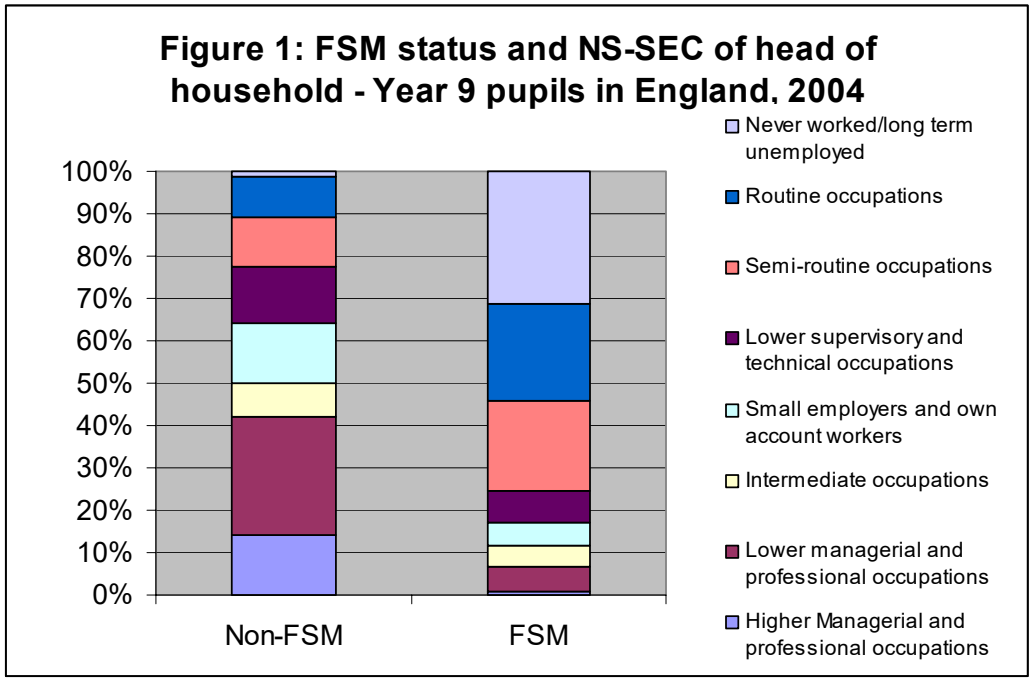
FSM, along with IDACI, is a reasonable control measure in the CVA model. When FSM is replaced with the survey measure of socio-economic status, there are only minor changes to the other coefficients in the model. However, FSM status is a poor proxy for the effects of socio-economic status on attainment. It does not capture the multiple factors associated with low attainment experienced by some FSM pupils, nor does it capture the factors associated with low attainment experienced by non-

[2] R-squared for NPD only model is 0.60. R-squared for model with survey measure of socio-economic status is 0.62.
[3] P = 0.574

FSM pupils. For example, 63 percent of pupils from single parent families are not FSM eligible. The CVA model demonstrates that there is a social class/financial hardship gap in attainment and progression. It does not adequately demonstrate the magnitude of that gap. The success or failure of policy interventions to reduce the socio-economic status attainment gap needs to be evaluated on more than just FSM status.

Further work should be undertaken to understand the mechanisms through which pupils from more deprived backgrounds make less progress in secondary school. Is it just an issue of material deprivation, or does it have more to do with inherited characteristics? For instance, we could look at the impact of adding attitudes to school, measures of parental involvement and engagement, and risk factors to the model. The problem is that many factors associated with higher attainment are also associated with higher socio-economic status, and also higher prior attainment. For example, if we add the "positive attitude to school" score to the model, we see a positive association with attainment. However, this might be because doing well at school leads to pupils having a more positive attitude to school. Dealing with these problems will be no small task.

Tables and charts



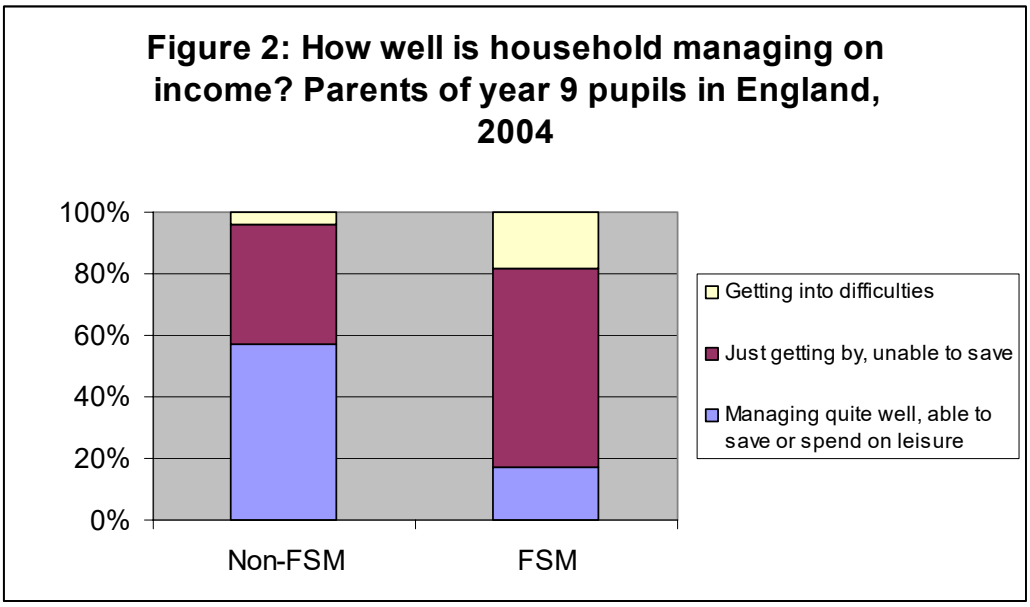


Table 1a: Effect of FSM status on the odds of planning to remain in full time education at age 16

		Odds ratio (upper 95% CI, lower 95% CI)
FSM status	Non-FSM	
	FSM	1.06 (0.89, 1.27)
Ethnic group	- white	
	- mixed	1.55 (1.09, 2.2)
	- Indian	4.58 (3.12, 6.71)
	- Pakistani	5.15 (3.57, 7.42)
	- Bangladeshi	5.27 (3.43, 8.09)
	- Black Caribbean	2.93 (2.05, 4.18)
	- Black African	28.09 (10.7, 73.77)
	- other ethnic group	3.49 (1.97, 6.21)
Attainment at age 14	KS3 average points score	1.15 (1.13, 1.16)

Table 1b: Effects of family NS-SEC on the odds of planning to remain in full time education at age 16

		Odds ratio (upper 95% CI, lower 95% CI)
NS-SEC	- professional	
	- intermediate	0.74 (0.63, 0.87)
	- lower supervisory/routine	0.7 (0.6, 0.81)
	- never worked/long term unemployed	1.01 (0.76, 1.35)
Ethnic group	- white	
	- mixed	1.53 (1.08, 2.17)
	- Indian	4.65 (3.17, 6.84)
	- Pakistani	4.97 (3.45, 7.14)
	- Bangladeshi	5.11 (3.33, 7.84)
	- Black Caribbean	2.85 (2, 4.06)
	- Black African	25.57 (9.65, 67.79)
	- other ethnic group	3.34 (1.9, 5.85)
Attainment at age 14	KS3 average points score	1.14 (1.13, 1.15)

Table 2: KS2-4 Contextual Value Added model 2006
National Pupil Database

	Average capped GCSE point score
(Constant)	132.315
Quadratic of KS2 Average Point Score	0.3876
KS2 fine grade average points score	-5.523
KS2english -KS2 average point score fine grades	2.330
KS2maths -KS2 average point score fine grades	0.376
Does student have FSM? (no)	0
Does student have FSM? (yes)	-25.122
Deprivation indicator - IDACI score	-65.191
Does student have SEN - Action Plus?	-63.563
Does student have SEN - school action?	-37.349
Pupil joined school after Sept Yr 10	-75.622
Pupil joined not in Jul/Aug/Sept yrs 7, 8, 9	-24.226
Male	0
Female	14.569
Age within academic year	-14.036
First language: English or believed to be English	0
First language: Other or believed to be other	-12.458
Is the student White British?	0
Is the student White Irish?	-1.402
Is the student a White Irish traveller?	-45.524
Is the student White Gypsy/Roma?	-58.762
Is the student White other?	11.061
Is the student Mixed White/Black Caribbean?	-2.348
Is the student Mixed White/Black African?	9.408
Is the student Mixed White/Asian?	9.266
Is the student any other Mixed ethnic group?	5.783
Is the student Indian?	24.419
Is the student Pakistani?	17.504
Is the student Bangladeshi?	23.814
Is the student any other Asian ethnic group?	27.163
Is the student Black Caribbean?	11.922
Is the student Black African?	28.622
Is the student any other Black ethnic group?	7.031
Is the student Chinese?	34.156
Is the student any other ethnic group?	22.169
Is the student in an unclassified ethnic group?	-9.373
FSM* White British	0
FSM*Irish	-3.9217
FSM*Traveller of Irish heritage	-32.9276
FSM*Gypsy/ Roma	27.8899
FSM*Any other white background	25.8494
FSM*White and Black Caribbean	11.3006
FSM*White and Black African	3.7395
FSM*White and Asian	13.2769
FSM*Any other mixed background	6.7990
FSM*Indian	18.8529
FSM*Pakistani	21.0732
FSM*Bangladeshi	22.2634
FSM*Any other Asian background	24.2656
FSM*Caribbean	20.3238
FSM*Black African	19.9224
FSM*Any other black background	25.8815
FSM*Chinese	27.7773
FSM*Any other ethnic group	30.6513
FSM*Unclassified ethnic group	4.5587

EAL*KS2APS	5.4708
EAL*Quadratic of KS2 APS	-0.1584
Has the student ever been in care at this school? (no)	0
Has the student ever been in care at this school? (yes)	-31.236
KS2 average point score of cohort	2.490
KS2 standard deviation in cohort	-5.526

Table 3a: KS2-4 Contextual Value Added model 2006

LSYPE linked to NPD

	Average capped GCSE points score Coefficient (std. err.)
Constant	94.88 (31.96)**
Quadratic of KS2 Average Point Score	0.31 (0.04)***
KS2 fine grade average points score	-0.47 (2.36)
Pupil has FSM	-25.92 (3.59)***
IDACI	-75.04 (6.31)***
Pupil has special educational needs	-49.32 (3.69)***
Pupil joined school mid year	-34.03 (5.15)***
Pupil is female	18.29 (1.65)***
Age in months within year	-1.36 (0.22)***
First language is or is believed to be other than English	35.74 (4.96)***
Ethnic group - mixed	10.53 (4.22)*
Ethnic group - Indian	10.79 (5.09)*
Ethnic group - Pakistani	8.61 (6.11)
Ethnic group - Bangladeshi	17.3 (7.26)*
Ethnic group - Black Caribbean	24.46 (4.96)***
Ethnic group - Black African	39.63 (7.05)***
Ethnic group - Other	27 (8.15)***

*, ** and *** indicate 95%, 99% and 99.9% significance levels respectively

Table 3b: KS2-4 Contextual Value Added model 2006

LSYPE linked to NPD with survey measures of socio-economic status

	Average capped GCSE points score Coefficient (std. err.)
Constant	105.27 (32.26)***
Quadratic of KS2 Average Point Score	0.25 (0.04)***
KS2 fine grade average points score	1.74 (2.37)
IDACI	-35.65 (6.35)***
Pupil has special educational needs	-47.75 (3.61)***
Pupil joined school mid year	-31.08 (5.07)***
Pupil is female	18.85 (1.59)***
Age in months within year	-1.18 (0.21)***
First language is or is believed to be other than English	39.48 (4.81)***
Ethnic group - mixed	13.06 (4.09)***
Ethnic group - Indian	9 (5.04)
Ethnic group - Pakistani	4.98 (5.9)
Ethnic group - Bangladeshi	18.06 (7.56)*
Ethnic group - Black Caribbean	26.6 (4.82)***
Ethnic group - Black African	35.3 (6.72)***
Ethnic group - Other	31 (7.98)***

NS-SEC lower professional	-3 (1.93)
NS-SEC intermediate	0.3 (2.96)
NS-SEC small employers and own account workers	-7.64 (2.56)**
NS-SEC lower supervisory	-14.55 (2.65)***
NS-SEC semi routine	-11.33 (3.08)***
NS-SEC routine	-22.52 (3.48)***
NS-SEC never worked/long term unemployed	-21.05 (5.23)***
Main parent has higher education quals below degree level	-9.5 (2.47)***
Main parent has A levels or equivalent	-10.17 (2.39)***
Main parent has GCSEs grades A-C or equivalent	-14.97 (2.22)***
Main parent has other qualifications	-16.8 (3.2)***
Main parent has no qualifications	-23.96 (3.13)***
Single parent family	-18.05 (2.34)***
Family in receipt of income support	-3.85 (3.79)
Home is rented	-9.78 (2.38)***
Family has access to a car	10.16 (3.28)**
Family is getting by on income	-6.55 (1.73)***
Family is getting into difficulties on income	-16.14 (4.32)***
Size of household	-1.91 (0.77)*

*, ** and *** indicate 95%, 99% and 99.9% significance levels respectively

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Appendix

The Longitudinal Study of Young People in England

Overview

The *Longitudinal Study of Young People in England* (LSYPE), known to its participants as the *Next Steps Study*, is a major innovative panel study of young people which brings together data from a number of different sources, including both annual interviews with young people and their parents and administrative sources.

Its key role is to identify, and enable analysis and understanding of, the key factors affecting young people's progress in transition from the later years of compulsory education, through any subsequent education or training, to entry into the labour market or other outcomes. Data from the study will be used, among other things, to *monitor* the progress of the cohort group, *evaluate* the success or otherwise of policy aimed at this group and *provide an evidence base* for further policy development.

Beginning in spring 2004, when the young people sampled were in Year 9 (aged 13-14), sample members and their parents are interviewed annually. The first three Waves used face to face interviewing and this will be continued in Wave 4 but data collection at some subsequent Waves may be primarily by telephone. Current plans are to continue interviewing young people for up to 11 waves (age 25).

Fieldwork for waves 1 to 3 was carried out by a consortium of BMRB, GFK-NOP and Ipsos-MORI. Data collected through interviews are supplemented by linkage to administrative databases, such as the *National Pupil Database.*

Sample design

The original sample drawn for Wave 1 of the study was just over 21,000. The *target population* sampled was young people in Year 9 (or equivalent) in all schools in England in February 2004 and born between 1st September 1989 and 31st August 1990.

For various practical reasons certain *exclusions* were made. Among those excluded from the sample are: those educated solely at home (and therefore not present on a school roll); pupils in schools with fewer than 10 (maintained sector) or fewer than 6 (independent sector) Y9 pupils (less than 1% of the cohort); boarders and those in the UK solely for education purposes.

LSYPE used a *two stage sample*. At the first stage a sample of 892 *schools* was drawn with probability proportional to size (the size measure being a weighted sum of Y9 pupils) from a stratified frame, stratification factors included region, % gaining 5 or more A-C grades in 2003, gender and LEA. These schools were then approached for access to their pupil rolls. Of these 647 (73%) co-operated with the study. School level non-response was a specific problem however in London, especially Inner London (56%), and the independent sector (57%). At the second stage a *sample of pupils in Y9* was drawn from the school rolls along with their parental and address details (these details not being available from PLASC returns before 2006). The average number of pupils sampled per school was 32. In the maintained sector schools the number sampled per school varied, however, according to the ethnic group composition of the school population.

Sample boosts took place for *deprivation factors* and for *ethnicity*. Schools with 20% or more of pupils entitled to Free School Meals were over-sampled by 1.5 and over-sampling for ethnicity was implemented at pupil level sampling in the maintained sector. Pupil level boost samples were made in the following groups: Black African; Black Caribbean; Bangladeshi; Indian; Pakistani and Mixed. This was possible because there is an ethnic group indicator returned from 2003 onwards on the Pupil Level Annual School Census (PLASC). The boost method used means that these boosts are representative samples of the relevant sub-populations as a whole rather than e.g. drawn disproportionately from areas or schools with high numbers of ethnic minority pupils.

After cleaning to remove cases where e.g. a home address was incomplete or unidentifiable the issued sample at Wave 1 was 21,234.

Questionnaire

The young person is the primary focus of this survey. However, interviews were also sought with all parental figures that the young person lived with.

The questionnaire is split into the following sections.

- Household section
- Young person section
- Main adult section
- Young person history section
- Individual adult section

Where there were no parental figures in the household the main and individual adult sections were completed by the young person's guardian who had most involvement in their education.

The household section

This section is asked at the beginning of the interview, of a responsible parent or guardian of the young person. It establishes household information and the identity of the person/ people in the household who should complete the 'main adult' and 'second adult' questionnaires.

Young person section

This interview is asked of the young person and could only be completed once the household section has been completed. Topics include year 10 subject choices, attitudes towards current school, future plans, homework and use of leisure time. This section also included some 'self completion' questions covering experiences of truancy, bullying, smoking and drug taking, and attitudes towards school and relationship with parents/guardians).

Main adult section

This section is asked of the main adult respondent, who is identified at the end of the household section (if more than one parent/guardian is resident). Topics include attitudes towards young person's school, aspirations about young person's future and whether young person has any Special Educational Needs. This section also included 'self completion' questions covering a number of more sensitive issues such as relationship with young person and whether they have had any contact with services. The individual adult section (detailed below) was asked of the main adult prior to recording future contact details.

Young person history section

This section is asked of the 'history respondent'. This is defined as:

(i) the natural mother of the sampled young person if both natural parents are resident
(ii) the natural father if the natural mother is not resident
(iii) the main adult respondent if neither natural parent is resident.

Topics include details of the young person's birth, health and school history. It also includes the relationship history of the 'history respondent' and their history of living with the young person.

Individual adult section

This section is asked directly of any parents living in the household. Where there were no adults in the household in a parental relationship to the young person the section was answered by the guardian who was identified as the main adult. Topics include their education and qualifications, current employment, employment history and health.

Fieldwork

Interviews were conducted face-to-face using computer assisted personal interviewing (CAPI). The overall contracted average length of interviews if all sections were completed was 1 hour 30 minutes; 35 minutes for the Young Person interview, 55 minutes for all adult interviews (Household, Main Adult, Second Adult, Child History). All young people who completed an interview were given a £5 high street voucher as a token of thanks. These were given to the young person specifically, as the young person was the focus of the study.

Wave 1 fieldwork ran from 30th March 2004 to 19th October 2004 for all companies. Fieldwork was divided across the three companies in the following proportions:

- BMRB 45%
- GfK NOP 45%

- Ipsos MORI 10%.

Response

Wave 1 achieved 15,770 households (74%). This comprises 13,914 full interviews (66%) and 1,856 partial interviews (9%). A partial interview is where not all target members of the household were interviewed. In the majority of these cases, it is the second adult interview that is missing.