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# The school-to-work transition in England and Wales: Evidence from a pooled cross-sectional analysis

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# The school-to-work transition in England and Wales: Evidence from a pooled cross-sectional analysis*[1]

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ABSTRACT

In this paper we estimate a multinomial logit model of the choice of first destination. The data used is the Youth Cohort Studies for England and Wales, covering the period from 1985 to 1992. We find that whilst prior attainment has the strongest influence on the selection of academic education, participation rates into post-compulsory education have also increased for young people of average ability. The most able young people who attend a secondary modern school are likely to select education, but choosing vocational rather than academic courses. Non-whites are more likely than whites to continue in education. Interaction effects clearly show that for even the most able, the socio-economic status of parents is an important influence on the choice of destination.

JEL Codes I21
Key words: Human capital, post-compulsory education, vocational courses

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# I. INTRODUCTION

The UK has been said to be an economy with low skills and low wages (Chapman 1993), especially in comparison with our major industrialised European competitors (Prais 1995). It has been claimed that the standard of general vocational training in the UK is low compared to other countries, such as Germany (Oulton and Steedman 1992; Chapman 1993). Britain has always placed a high value on academic education. Raffe (1993) notes that Britain's lower participation rate in full-time education may be due to the low status of vocational study and the fact that A levels carry a high risk of failure. Improving the level and quality of skills in the workforce, and the quality of the match between peoples' education level and employment roles, are widely seen as a key to improving national economic performance.

The British government has responded to the need for recognised vocational on-the-job training, by increasing the provision of its government-sponsored training. The expansion of post-compulsory education occurred throughout the 1980s with the introduction of the New Training Initiative (1983). The introduction of pre-vocational and foundation courses such as the Certificate in Pre-Vocational Education (CPVE) which require no academic entry requirements and 'General National Vocational Qualifications' (GNVQs) in 1991 have reduced supply side constraints. Also during this period the Social Security regulations (April 1988) ended 16 year-olds entitlement to supplementary benefit. The introduction of the General Certificate of Secondary Education (GCSE) qualification in 1988 encouraged young people to remain in education. In England in 1988 the percentage of 16 year-old males who gained 5+ A-C grades at GCSE was 10.5%, by 1992 this figure had increased to 13.6% (Regional Trends, 1994)[2]. In 1999 the government piloted the Educational Maintenance Allowance scheme (EMA). Early evaluation of EMA has been positive[3] and the scheme has now been extended to 41 LEAs.

When the unemployment rate is high it has been found that young people who have made the decision to leave their school are more likely to enter into further education to take vocational courses (Clarke 2002). The proportion of young people who entered

[2] In 2000 this proportion had increased to 44.9% (Regional Trends, 2001).

post-compulsory education increased from 41.7% in the academic year 1979/80 to 72.7% in the academic year 1993/94 (DFES Statistical Bulletin 1994). However, the growth rate of participation in post-compulsory education appears now to be at a standstill.[4] The rapid increase in the growth of participation in post compulsory education that occurred between 1988 and 1994 has been attributed to the introduction of the GCSE, the increased supply of higher education courses, the high unemployment rates, greater returns to more education and role model effects (McVicar and Rice 2001).

In this paper we investigate the determinants of the initial choice faced by sixteen year-olds. We pool cross-sectional data from the first sweep of cohort 2 through to cohort 6 of the Youth Cohort Survey[5]. The data refer to the period 1985-92, which was the period of most rapid change in the proportion of young people selecting to enter post-compulsory education and so enables us to examine how post-school destinations have changed through time. We use a multinomial logit model to reflect the fact that youths are faced with a greater choice at age sixteen than simply staying on in post-compulsory education or entering the labour market. Our framework of analysis is similar to that of Andrews and Bradley (1997). However, Andrews and Bradley (1997) analyse data from a single point in time and from Lancashire only whereas we analyse pooled panel data for England and Wales. A further novel feature of the research reported here is that by exploring interaction effects between covariates, we are able to investigate the main transmission mechanisms that determine choice at sixteen. In particular, we aim to investigate whether family background is more important than schooling.

The paper is structured as follows. In the next section we review the existing literature. In section III we discuss the data in more detail and specify the multinomial logit model of the choice at sixteen. In section IV we present and discuss our main findings. Section V then explores the main transmission mechanisms through which the decision at age sixteen is made. In section VI we conclude.

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[3] DfEE Research Report 257 (2001) Education Maintenance Allowance: The First Year.
[4] The proportion of youths entering post-compulsory education in the academic year 1999/2000 was 71% (DFES Statistical Bulletin 2001).

## II. A REVIEW OF THE LITERATURE

The theoretical framework we adopt in this study is that of the human capital model (Becker 1964). An individual will invest in more education when the discounted marginal return from doing so is positive. The return is positive if the costs of investing in continued education, such as forgone wages, are lower than the expected increase in lifetime earnings. The decision to stay on in education may not be quite so clear cut for some individuals who may be constrained in their choice by imperfect capital markets. Hence for individuals with a high level of academic ability but who are from low income families, the choice of further education may not be considered as the individual has no means of financing himself during the investment in further education.

The strongest influence on the decision to continue in education is educational attainment (Lazear 1980, Andrews & Bradley 1997, Rice 1999). It is considered that if the choice of entering post-compulsory education has already been made, this may reduce the level of effort applied by school leavers in their studies. However, against this it is argued that good examination results are required for 'good' jobs in the labour market, therefore young people leaving school have an incentive to do well in their studies. Lazear (1980) uses data from the National Longitudinal Survey to examine the probability of entering post-compulsory education and finds IQ test scores, a measure of academic ability, is found to be the strongest influence on the probability. Rice (1999) uses pooled data from cohorts 4 to 6 of the Youth Cohort Survey and estimates a binary logit model of the school leaving decision. Rice (1999) finds that obtaining GCSE qualifications has a strong positive influence on the decision to remain in full-time education, and as the number of GCSE qualifications obtained increases, so does the probability of staying-on. This result is consistent with the findings of Andrews & Bradley (1997) who include the young person's attained GCSE level in their multinomial logit model of the choice of first destination. Of those young people who entered the labour market, the most able are found to be the most likely to be in employment (Main and Raffe 1983; Main 1987;

[5] We are constrained to use of these cohorts, since this is part of a larger study of post-16 students in education, which requires information from all three sweeps of each cohort. This was not available for further cohorts at the start of our analysis.

Armstrong 1996). Main (1987) uses Scottish data to estimate a probit model of the probability of school leavers being in employment and finds the level of educational attainment to have the largest positive influence on the probability of being in employment. The improved educational attainment of young people is also identified as a major determinant in the increased participation in post-compulsory education (Damon Clarke 2002, McVicar and Rice 2001). Damon Clarke (2002) includes levels of GCSE attainment aggregated at the regional level in his weighted least squares model and finds attainment to increase the probability of staying-on at school, especially for boys.

The influence of the type of school attended during compulsory education on the probability of staying on is considered by a number of researchers (Micklewright, 1989, Cheng 1995, Rice 1999 and Andrews and Bradley 1997). Micklewright (1989) using National Child Development Survey data (NCDS) estimates a logit model of the probability of leaving school and finds that attendance at a grammar or independent school reduces the probability of leaving school at age sixteen. Rice (1999) finds strong positive effects on the probability of staying on where an individual attends an independent school and a reduced probability of staying on where an individual attends a comprehensive school. Andrews and Bradley (1997) in their multinomial logit regression include a large variation of schools which includes grant maintained schools, voluntary aided, special, and single sex schools. They find that non-vocational further education is most likely to be chosen by those attending a voluntary or grant-maintained school, a finding consistent with Cheng (1995) who finds that attending a voluntary-aided school increases the probability of staying on.

The positive relationship between being non-white and entering further education has been found in a number of studies (Lynch, 1987; Leslie and Drinkwater, 1998; Rice, 1999; Bradley and Taylor, 2000). Lynch (1987) analyses the earnings of youths using a binary logit model and finds that the effect of being non-white is to increase the probability of being unemployed. However, non-whites are not a homogenous group. Leslie and Drinkwater (1998) use a censored bivariate probit model to examine the probability of leaving school and the probability of entering employment after leaving school. They separate non-whites into ethnic groups and find that Chinese and Indian

youths have the highest probability of staying-on in education. Bradley and Taylor (2000) use pooled data from cohorts 6-9 of the Youth Cohort Survey in their multinomial logit model of the transition from school. They find that Afro-Caribbean, Bangladeshi and Pakistani youths, although relatively economically disadvantaged, are more likely than whites to continue their education and to take a vocational course. There are also gender differences in the propensity of different ethnic groups to continue in education. For instance, Rice (1999) in her logit model finds that Pakistani or Bangladeshi males have a higher probability of staying on than Pakistani or Bangladeshi females.

Family background variables also affect the school leaving decision. Micklewright (1989) in his logit model of the probability of leaving school uses several measures to capture family effects, including three classifications of socio-economic status, the family income level, whether there are older or younger siblings present and whether either mother or father stayed on in education. His main finding from these measures is that the probability of entering the labour market is reduced where the young person's father is in a professional occupation. This finding is consistent for both genders. Some studies have included a term for mother's occupation as well as for father's occupation (Bradley and Taylor 2000, Rice 1999). The mother's occupation is shown to have a stronger effect on the probability of entering post-compulsory education than the effect of father's occupation for females. Raffe and Willms (1989) use data from the Scottish young people's survey and estimate a hierarchical linear regression model of participation in post-compulsory education. Their model includes father's occupation, father and mother's education level, whether both parents are present and the number of siblings present. If both parents are in work the probability of a child being in employment is increased, whereas this is reduced if neither parent works. Rice (1999) finds a small increase in the probability of staying on where the young person lives with their mother only. However, Bradley and Taylor (2000) find a small increase in the probability of continuing onto academic further education for girls living with their mother, whereas their male counterparts are more likely to proceed onto vocational further education. For individuals who live with neither parent, there is a strong negative effect on the probability of further education. Some researchers have found that the larger the number of siblings the lower the probability of continuing in education (Micklewright 1989, Raffe and Willms 1989),

whereas others do not (Rice 1999, Bradley and Taylor 2000). A further household effect on the school leaving decision is that young people who live in social housing are less likely to continue their education, either because of peer pressure or because of a low family income (Bradley and Taylor 2000).

If the local unemployment rate is high young people are more likely to continue their education, perhaps reflecting a discouraged worker effect. Evidence of this effect is provided by Rice (1999) who uses the local adult unemployment rate in her model and finds that the effect of the unemployment rate on the probability of continued education is positive and significant but only for less able males. Raffe and Willms (1989) also use the local adult unemployment rate as their measure of the demand for labour and find evidence to support the discouraged worker effect hypothesis, which is strongest for young people with average educational attainment levels. Riphahn (2002) uses German data in a multinomial logit model of the school to work transition and finds that the unemployment rate has a positive effect only on youth unemployment in areas of high unemployment. Damon Clarke (2002) uses a calculated[6] unemployment rate for 18-19 year olds and finds a positive relationship on the participation in post-compulsory education, especially for boys. McVicar and Rice (2001) also use a calculated unemployment rate for 18-19 year-olds and find that the sharp rise in unemployment in the 1990s contributed to the growth in the participation in post-compulsory education, especially for males.

## III. DATA AND METHODS

The data used in this analysis are the Youth Cohort Studies (YCS) for England and Wales, cohorts 2 to 6, which are pooled. There have been further YCS collections since cohort 6, however, because this paper is part of a larger study, which requires information from three all sweeps, the latest cohort for which we had complete information when we began our analysis was cohort 6.

[6] There is no consistent set of data, which measures youth unemployment.

The Youth Cohort Survey (YCS) of England and Wales is a programme of longitudinal research designed to monitor the behaviour and decisions of young people as they make the transition from compulsory education at age sixteen[7]. There are three sweeps for each cohort.[8] The first questionnaire (or sweep) of each cohort is posted in the spring following the end of the young person's fifth year in secondary school, that is, nine months after their compulsory schooling had ended. The same sample of young people, are contacted on two subsequent occasions at intervals of one year. Thus the respondents in each sweep provide information on what they have been doing for the past twelve months. Table 1 shows that the response rate is around 70% for most cohorts, which is known to be greater amongst those who entered post-compulsory education at sixteen.[9] In this study we use the response given by individuals who indicate their labour market status in the March after the completion of compulsory schooling. The possible responses are classified into one of the five outcome categories described below.

The Youth Cohort Studies contain personal and demographic information, which we have used in our analysis (see the appendix for a description of the variables).

At the end of compulsory schooling we consider young people to be faced with the following, $J + 1 = 5$, choices:

unemployment ( $y = 0$)
employment ( $y = 1$)
government-sponsored training ( $y = 2$)
full-time education on academic courses ( $y = 3$)
full-time education on vocational courses ( $y = 4$)

These categories make up our dependent variables, $y = j$; $j = 0,...,J$. We do not model those who leave school but do not participate because they account for less than one

[7] The YCS samples are selected systematically. The current sponsors are the Department of Employment and the Department for Education. The initial surveys were conducted by the Social and Community Planning Research (SCPR) and the Division of Education at the University of Sheffield. Now the National Centre for Social Research (NCSR)
[8] There has been a fourth sweep of cohorts 3 and 6.
[9] See Lynn, Purdon , Hedges and McAleese (SCPR) DoE YCS cohort series No 30

percent of our data and we have missing data for many of these individuals[10]. The sample is split by gender to identify any differences between the sexes. For each gender we estimate a multinomial logit model, which is estimated by maximum likelihood methods. The probability that an individual with given characteristics $\boldsymbol{x}_i$ will choose alternative $j$ from $J + 1$ choices can be written as:

$$\log P_{ij} / P_{i0} = \boldsymbol{x}_i ( \boldsymbol{\beta_j} - \boldsymbol{\beta_0} ) \qquad (1)$$

where $i$ refers to 1,.., N individuals and $j$ refers to the 0,..,$J$ choices. To compute probabilities for each alternative a normalization is required so it is assumed that $J_0 = 0$. Thus

$$\text{Prob } (Y = 0) = 1/ [1 + \sum_{k=1}^{J} e^{\boldsymbol{\beta'_k} \mathbf{X_i}} ] \qquad (2)$$

The estimated coefficients from the multinomial logit are difficult to interpret therefore we report the marginal effects. These are computed as:

$$\partial P_j / \partial \boldsymbol{x}_i = P_{ij} [ \boldsymbol{\beta_j} - \sum_{k=0}^{J} P_k \boldsymbol{\beta_k} ] \qquad (3)$$

where $P_{ij}$ is the sample proportion making choice $j$.

There are 34306 females and 31096 males in our data, excluding those not in the labour force. Tables 2 and 3 show cross-tabulations of the covariates used in the models with the dependent variable. A full definition of variables is given in the appendix. In our data set the majority of males and females stayed on in full-time education (58.5% and 65.5%, respectively), however, these figures conceal variation over time. There was a large increase in the staying-on rate for both males and females during the time period analysed.

*Collapsing categories in the Multinomial logit model*

There is an issue of whether behaviourally we can distinguish between the outcome categories. We are aware that the employment category will be heterogeneous as

[10] A model using the sweep one weights was estimated along with an unweighted model. The resulting

there will be different types of job a young person might enter, i.e. those with on the job training, those with off the job training and those providing no training. However, for our purpose we group these young people in the employment category. To ensure that our model specification is correct with respect to the selected outcome categories, we follow Bradley and Taylor (1997) and use the likelihood ratio-based test developed by Cramer and Ridder (1991). This involves pooling outcomes to determine whether or not two or more categories can be collapsed into one.

Table 4 gives the results of the Cramer and Ridder (1991) test for males and females separately. We have considered restricted models which pool i) unemployment and government training; ii) employment and training; iii) academic and vocational education; vi) all labour market states; and v) all labour market states versus academic and vocational education, which we term a staying on model. We can see by the results of the log likelihood ratio tests that all restricted models are rejected and hence categories cannot be pooled. The test results show a huge rejection of the staying on model, which implies that the choice of destination is more involved than a simple binary decision. This is consistent with the results obtained by Andrews and Bradley (1997). We also find a huge rejection of the pooling of academic and vocational education, which suggests that these are indeed two very different choices.[11]

## IV. EMPIRICAL RESULTS

*The multinomial logit estimates*

Tables 5 and 6 give the marginal effects for males and females, for the multinomial logit of first destination after the end of compulsory schooling. The marginal effects are computed at the sample mean of the independent variables.

*Prior Attainment*

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estimates showed no significant difference, therefore the unweighted models are reported.

[11] The choice of a nested logit was considered as academic and vocational education may be considered close substitutes. However, we have no choice-based characteristics in our data to implement this model.

The variables measuring attainment in the final year of compulsory schooling clearly have the largest effect on the choice of first destination. As we would expect, individuals with five or more GCSE grades A-C are those most likely to be in full-time academic education. The marginal effects are 1.05 for males and 0.98 for females. Young people in the highest educational attainment group are also least likely to be on a government scheme, in employment or in vocational education. This result corresponds with the findings from Andrews and Bradley (1997). As we descend the attainment categories, the positive effect on the choice of academic education decreases. The most dramatic decrease is between gaining 5+ grades A-C and gaining between one and four grades A-C, which indicates the importance of gaining 5+ grades A-C. Conversely, the effects on the choice of vocational education change from negative to positive as we descend the attainment categories. This suggests that either, weaker students prefer vocational courses or that the availability of vocational courses to these weaker students is greater than the availability of academic courses.

Our sample is taken over a period when the supply of education courses was increasing, especially non-advanced further education courses. Therefore, we examine the probability of entering academic post-compulsory education for young people in each cohort allowing for attainment levels. Table 7 shows the actual percentage of young people in our sample falling into each of the attainment categories in each cohort. The proportion of both males and females gaining 5 or more A-C grades increased dramatically up to cohort 4 (those eligible to leave school in 1988 and who were the first cohort to sit the GCSE examination). Since cohort 4 the increase in the proportion of young people in the top attainment category has leveled, with a slight increase for females. The proportion of young people in the mid-range of attainment, 5+ D-G grades, has increased over all cohorts and the proportion of young people gaining no grades has decreased.

We calculate the predicted probabilities for each level of attainment in each cohort, which are calculated by changing the attainment dummy variables so that all individuals fall in one GCSE category and then predicting the probability of being in each outcome category. Table 8 shows the predicted probabilities of being in academic education in each cohort given that all individuals have the same level of educational

attainment. From this information we can calculate if there are differences in the probability of entering academic education across the cohorts, which are not due to the known improvement in educational attainment. The improved GCSE results are considered to have played a key role in influencing the decision to stay in education at age 16. We find that for both genders, at every level of GCSE attainment there is an increase in the probability of entering academic post-compulsory education from cohort 2 (young people eligible to leave school in 1985) to cohort 6 (those eligible to leave school in 1991). There is a larger increase over time in staying on rates for females than for males at all attainment levels. For example, between cohort 2 and cohort 6 there is an increase of six percentage points in the probability of entering academic education for males with 5+ A-C grades. The equivalent examination for females finds an increase of ten percentage points. Therefore we conclude that after allowing for improved educational performance at 16, there is still an upward trend of entry to academic post-compulsory education. This may be caused by the increase in the supply of post-compulsory educational opportunities or by a perceived need to gain further qualifications as a greater number of young people with post 16 qualifications, indicates tougher competition in the labour market. The larger effect picked up for females may be indicative of the role model effects found by McVicar and Rice (2001).

In Table 9 we present predicted probabilities of being in education, employment and government training for the mid-ranges of educational attainment[12]. It is in the mid-range of educational attainment, GCSE grades D-G, where we most clearly see the shift over time, away from entering the labour market or government training to entering academic or vocational post-compulsory education. Therefore, after allowing for the improvement in GCSE results over time, young people in the mid-range of educational attainment at age 16 account for a large proportion of the increased participation in post-compulsory education. This may be due to the increase in the supply of educational courses, such as foundation modules, which lead to higher level courses but which themselves require little in the way of educational entry requirements.

[12] Full set of predicted probabilities available upon request.

*School type*

For both genders attendance at a grammar or independent school has a strong positive influence on the probability of staying on at age 16 to take academic courses. The marginal effects are 0.33 for males and 0.29 for females. Thus an increase of three percentage points in the proportion of males attending a grammar or independent school is associated with an increase of one percentage point in the proportion choosing to stay on in academic full-time education. These young people are also the least likely to take up government-sponsored training. Young people who attend a secondary modern school are found to be the least likely to stay on in academic education.

*Ethnicity*

Being non-white has a strong positive effect on the probability of choosing academic post-compulsory education. This is consistent with findings from previous studies (Lynch 1987; Leslie and Drinkwater 1998; Rice 1999; Bradley and Taylor 2000). The largest marginal effects arise for males from the Pakistani (0.50) and Indian (0.49) groups. The effect of being non-white on the choice of academic education for females are also strong although not as strong as for males. The largest effects arise for females from the Bangladeshi (0.41) and Indian (0.39) groups. Another way of illustrating the strong preference for continued education amongst the Asian groups is to compare the marginal effects for labour market choices with those for academic and vocational education. For the Pakistani group, for instance, these sum to -0.60 for labour market outcomes and 0.60 for education. The ethnic groups vary in the strength of their preference for continued education. Bangladeshi males prefer academic education, which is almost exactly offset by their preference against government-sponsored training.

We also observe differences between the ethnic groups. For instance, Indian, Pakistani and Bangladeshi females have larger negative marginal effects for government-sponsored training than blacks. Cultural differences may play a part as females from these ethnic groups may be expected to marry and stay at home. The strong positive marginal effects found on continued education for Pakistani and Indian ethnic groups may reflect a reluctance to join the labour market, especially if they believe that there exists discrimination in the labour market for youths. They will have a higher marginal benefit

from investing in further education compared to whites. The cultural differences between ethnic groups may also mean that Pakistani and Indian parents have a more positive attitude toward education for their children compared to other ethnic groups.

The predicted probabilities given in Table 10 show that all non-white groups have a higher probability of entering academic education than whites. There is a marked difference in the predicted probability of selecting vocational education for the non-white groups compared to whites and also between the genders. Females are more likely to choose vocational education than white males, as are non-white males. The predicted probability of a white female entering vocational education is much higher than that of a white male. Therefore, it appears that white males do not consider the option of vocational education as seriously as do females. There is an increase in the probability of entering vocational education of around 7 percentage points for all non-white males compared to white males. This may indicate a lack of opportunities for non-white males in the labour market either because of perceived labour market discrimination or because the available employment does not offer adequate training for career advancement, assuming that there is a taste for education and a career.

*Socio-economic status*

The strongest effect of father's occupational status is found on the managerial or professional classification. The children of these parents are most likely to be in academic education. The marginal effects are 0.16 for males and 0.13 for females, which are offset by the negative marginal effects on employment and government-sponsored training. This result is consistent with the findings from previous studies (Whitfield and Wilson 1990; Rice 1987; Micklewright 1989; Bradley and Taylor 2000). Moving down the occupational scale the positive effect on the choice of academic education and negative effect on government-sponsored training is maintained but it's effect decreases until we reach the unskilled manual category, where we find employment or government-sponsored training is preferred to academic education. These effects may be due to different tastes for education. For instance, parents who are higher up the occupational scale are themselves more likely to be well educated and to place a high value on education for their children. There may also be an income effect in that parents in higher paid occupations will be

more able to finance their children's continued education. Similar to the results of father's occupation, the effect on selecting academic education is strongest where the mother is in a managerial or professional occupation. We find that for females only, mother's occupation has a greater influence than father's, on the probability of selecting academic education for females. For example, for the choice of academic education the marginal effects where the parent is in a managerial or professional occupation are 0.13 for father and 0.15 for mother. This finding is in contrast to Bradley and Taylor (2001) who find the occupation of mother to have a stronger effect on outcome than that of father for both genders.

*Labour market*

The unemployment rate is significant only for the employment, unemployment and government scheme outcomes, which suggests the absence of a discouraged worker effect.[13] As we would expect, when the unemployment rate increases individuals entering the labour market are less likely to be in employment. Marginal effects are (-0.06) for both sexes. The vacancy rate has only a small effect upon outcome.[14] However, the direction of the effects are as we would expect. For both sexes an increase in the demand for labour results in a small decrease in the probability of being unemployed.

## V. TRANSMISSION MECHANISMS

To analyse how some of our factors interact, for example, how socio-economic status and educational attainment jointly affect the decision making process, we investigate various interaction effects between family background, attainment, school type and cohort[15]. The marginal effect of the interaction term gives the joint effect of the variables included in the interaction term above the effect already calculated for each single variable. There are

[13] Likelihood ratio tests undertaken on both the unemployment rate and vacancy rate variables show these variables take a value equal to zero.

[14] To test the hypothesis that the influence of labour market variables may be affected by the inclusion of the regional dummies the models were estimated without regional dummies and then likelihood ratio tests applied. The exclusion of the regional variables is found not to significantly change the estimates.

[15] Problems of multicollinearity meant that we were unable to interact the ethnic variables with the other desired variables.

very few systematic findings[16]. However, they do lead to some modifications to previous findings.

*Attainment and Socio-economic status*

Educational attainment and parental occupation are by themselves both strong influences on the choice of first destination. We consider these factors taken together to see if there is an additional effect to a given level of attainment and being in a given socio-economic group. We find that the additional effect of gaining 5+ A-C grades at GCSE and having a professional, managerial or clerical father is to further increase the probability of selecting academic education and to reduce the probability of entering employment. The additional effect of 5+ A-C grades and a professional father on the choice of academic education is (0.11) for males and (0.07) for females. For females, we find an additional effect of having 5+ A-C grades and a father in sales is to reduce the probability of selecting academic education (Marginal effect is -0.07) and to increase the probability of employment (Marginal effect is 0.04). Similarly we find that for males with 5+ A-C grades and a father in a manual occupation, the additional effect is to reduce probability of selecting academic education (Marginal effect is -0.11). Therefore, we previously found that the probability of entering academic education is highest for the most able individuals. The joint effects with socio-economic status show an increase in this probability where father is in a managerial or professional occupation and a reduction in the probability where father is in the lower end of the occupational ladder. This joint effect then reveals the importance that parental socio-economic status plays in the decision to remain in academic education, for the most able. There may be two explanations for this; i) firstly, even the most able individuals need to be financed in their further education. Therefore, family income as proxied by socio-economic status plays its part in the choice of first destination for the most able by the decision of whether or not the family can finance the individual. ii) Secondly, the family's taste for education. Parents in high socio-economic status groups may be expected to have a high level of education and hence place a high value on the investment in education for their children,

[16] Results are available upon request

whereas parents in lower socio-economic status groups may place more value on entering the labour market.

Similar results are found for the joint effects of 5+ A-C grades and the socio-economic status of mother as those for father. The joint effect for females of 5+ A-C grades and a professional mother is to further increase the probability of selecting academic education and reduce the probability of both entering vocational education and employment. (Marginal effects are 0.18; -0.08; and -0.08, respectively). The joint effect of 5+ A-C grades and a mother in sales is a reduction in the probability of selecting academic education and for females the probability of entering employment is also increased.

*School Type and Attainment*

The interaction between school type and attainment provides some interesting results. We previously found that those young people with the highest educational attainment are most likely to enter academic education. The joint effect of 5+ A-C grades at GCSE and attendance at a comprehensive school with a sixth form, a grammar school or an independent school is a further increase in the probability of selecting academic education and a reduction in the probability of entering vocational education. However, this is reversed where a young person attended a secondary modern school. These findings appear to indicate differing attitudes toward academic and vocational education between schools. Grammar and independent schools may select their pupils on the grounds of academic ability and therefore may expect their brightest pupils to follow the traditional academic route of taking A levels to university entrance. Secondary modern schools however, may place more emphasis on the role of vocational courses for their pupils.

*Cohort and Attainment*

The additional effect of having 5+ A-C grades at GCSE and being in either cohort 2 or cohort 3 is an increase in the probability of entering employment. However, the joint effect with cohort 6 shows a reduction in the probability of entering employment. The marginal effect is (-0.05). Thus we find that even for those young people in our highest GCSE category the timing of the attainment has an influence on the final destination. This

may be due to a reduction of career opportunities in the labour market over this time or the need to undertake more education to remain competitive in relation to ones peers. The joint effect of 1-4 D-G grades and cohort 4 (those who finished compulsory schooling in 1988) is to increase the probability of being in employment. Marginal effects are (0.12) for males and (0.06) for females. It is interesting to note that this increase in the employment probability occurs in the year that unemployment benefit for school leavers was ended.

## VI. CONCLUDING COMMENTS

In this paper we model the first destination of young people after compulsory schooling has ended using a five way multinomial logit regression model. School leavers may enter into the labour market or stay-on in education. The choice of education can be for vocational or academic courses.

Our results show that the strongest influence on the choice of first destination from school is the number of GCSE exam grades gained in the final year of compulsory schooling. Young people gaining five or more GCSE grades A-C are the most likely to stay-on in academic education and the least likely to enter government-sponsored training or to enter employment. After allowing for the improved exam performance of young people during the study period our results show that there is still an upward trend of entry to post-compulsory education, especially for females, which supports the role model effects found by McVicar and Rice (2001). We also find evidence of a shift in choice over time for young people in the mid-range of educational attainment. In 1985 these young people were most likely to enter the labour market, whereas in 1992 they are most likely to enter post-compulsory education, especially for vocational courses.

We find a strong positive influence on the probability of choosing academic education where an individual attended a grammar or independent school. Moreover we find that for the most able individuals, attendance at a grammar or independent school reduces the probability of selecting vocational education whereas attendance at a secondary modern school increases the probability of selecting vocational education.

We find that non-whites are more likely than whites to enter academic education, and non-white males are more likely than white males to enter vocational education. This suggests the presence of discrimination in the labour market for non-white youths, with these young people preferring further education of either type rather than employment.

There is a strong positive influence on the probability of selecting academic education and a negative influence on the probability of entering government-sponsored training or employment where either parent in a managerial or professional occupation. The influence of mother's occupation is found to be greater than that of father's occupation for females only. For the most able we find that having a parent in a managerial or professional occupation increases the probability of selecting academic education, whilst having a parent in an unskilled occupation reduces the probability of entering academic education. The interaction effects between the prior attainment and parental occupation clearly show that for even the most able, the socio-economic status of parents is an important influence on the choice of destination. Whilst educational attainment plays a large part in the probability of staying-on in education, the socio-economic status can also reduce this probability. This effect could be due to a lack of taste for education within the family or due to financial constraints within the family, which restrict the young person from more education. The latter suggests that the present educational maintenance allowance, which means tests the family for eligibility should be continued.

The local unemployment rate affects the likelihood of being in employment, unemployed or in government-sponsored training. We find no significant effect of labour market variables on the choice of continuing education, suggesting the absence of discouraged worker effects.

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**Table 1 Response rates and sample sizes, sweep 1 cohorts 2-6**

| Cohort | sweep 1 | Males | Females | Total | Mailed by SCPR | Response Rate % |
|---|---|---|---|---|---|---|
| Cohort 2 | 1986 | 6810 | 7620 | 14430 | 19565 | 74 |
| Cohort 3 | 1987 | 8084 | 8124 | 16208 | 21032 | 77 |
| Cohort 4 | 1989 | 6973 | 7357 | 14116 | 20000 | 70 |
| Cohort 5 | 1991 | 6973 | 7538 | 14511 | 20060 | 72 |
| Cohort 6 | 1992 | 11589 | 13333 | 24922 | - | 69 |

**Table 2 The proportion of males in each destination state in March following the end of compulsory education.**

| | number in sample | out of work | FT/PT Job | Government scheme | Education Academic | Education Vocational | Column % |
|---|---|---|---|---|---|---|---|
| | | | *School Background* | | | | |
| Comprehensive 18 | 18159 | 5.2 | 17.6 | 19.1 | 43.4 | 14.7 | 58.4 |
| Secondary Modern | 965 | 6.3 | 26.5 | 27.4 | 24.4 | 15.4 | 3.1 |
| Grammar/ Independent | 3047 | 0.8 | 3.8 | 2.0 | 88.7 | 4.7 | 9.8 |
| Other School | 165 | 5.5 | 23.0 | 17.0 | 42.4 | 12.1 | 0.5 |
| Comprehensive 16/college | 8760 | 6.1 | 20.5 | 23.7 | 35.7 | 14.0 | 28.2 |
| | | | *Prior Attainment* | | | | |
| 5+ GCSE A-C | 12217 | 0.7 | 6.1 | 3.0 | 84.3 | 5.9 | 39.3 |
| 1-4 GCSE A-C | 9511 | 3.8 | 21.6 | 21.4 | 30.3 | 22.9 | 30.6 |
| 5+ GCSE D-G no A-C | 3177 | 5.8 | 24.4 | 31.4 | 14.9 | 23.5 | 10.2 |
| 1-4 GCSE D-G no A-C | 3214 | 10.3 | 28.4 | 41.3 | 7.7 | 12.3 | 10.3 |
| NO GCSEs | 2977 | 20.8 | 31.1 | 39.1 | 3.7 | 5.3 | 9.6 |
| | | | *Ethnicity* | | | | |
| black | 334 | 7.2 | 9.6 | 16.5 | 42.8 | 23.9 | 1.1 |
| Indian | 678 | 3.4 | 2.9 | 6.5 | 66.5 | 20.7 | 2.2 |
| Pakistani | 406 | 7.9 | 4.1 | 6.4 | 56.7 | 24.9 | 1.3 |
| Bangladeshi | 120 | 5.0 | 17.5 | 5.8 | 42.5 | 29.2 | 0.4 |
| Other ethnic group | 609 | 5.9 | 15.4 | 15.4 | 46.8 | 16.5 | 2.0 |
| White | 28949 | 5.0 | 18.1 | 19.6 | 44.4 | 12.9 | 93.0 |
| | | | *Family Structure* | | | | |
| one sibling | 14209 | 3.4 | 16.6 | 17.3 | 49.0 | 13.7 | 45.7 |
| two siblings | 7507 | 5.4 | 18.5 | 19.6 | 44.1 | 12.4 | 24.1 |
| three siblings | 3023 | 7.2 | 19.3 | 25.1 | 35.2 | 13.2 | 9.7 |
| four or more siblings | 2072 | 12.1 | 20.4 | 25.9 | 28.3 | 13.3 | 6.7 |
| no siblings | 4285 | 5.1 | 15.4 | 15.7 | 48.8 | 15.0 | 13.8 |
| lives with both parents | 28172 | 4.7 | 16.9 | 19.1 | 45.6 | 13.7 | 90.6 |
| lives with mother only | 1862 | 7.9 | 16.6 | 16.2 | 46.7 | 12.6 | 6.0 |
| lives with father only | 519 | 6.2 | 20.6 | 21.8 | 38.3 | 13.1 | 1.7 |
| lives with neither parent | 543 | 15.3 | 41.3 | 20.0 | 15.3 | 8.1 | 1.7 |
| | | | *Housing tenure* | | | | |
| lives in private housing | 26753 | 3.6 | 16.4 | 17.0 | 49.2 | 13.8 | 86.0 |
| lives in social housing | 4343 | 14.0 | 24.0 | 31.0 | 19.2 | 11.8 | 14.0 |
| | | | *Household employment status* | | | | |
| Both parents employed | 12655 | 3.8 | 17.6 | 16.3 | 48.3 | 14.0 | 40.7 |
| Neither parent employed | 3205 | 11.9 | 16.3 | 26.6 | 30.1 | 15.1 | 10.3 |
| One parent employed | 15236 | 4.7 | 17.5 | 19.5 | 45.5 | 12.8 | 49.0 |
| | | | *Socio-economic* | | | | |
| Father SOC Major 1 or 2 | 6094 | 1.6 | 8.1 | 7.3 | 70.3 | 12.7 | 19.6 |
| Father SOC Major 3 | 2806 | 2.0 | 12.7 | 10.5 | 62.0 | 12.8 | 9.0 |
| Father SOC Major 4 | 1753 | 2.3 | 11.5 | 11.5 | 61.9 | 12.8 | 5.7 |
| Father SOC Major 5 | 9440 | 5.8 | 22.9 | 26.0 | 32.5 | 12.8 | 30.4 |
| Father SOC Major 6 or 7 | 2371 | 3.6 | 16.8 | 14.8 | 50.2 | 14.6 | 7.6 |
| Father SOC Major 8 | 2024 | 7.6 | 21.1 | 23.8 | 29.9 | 17.6 | 6.5 |
| Father SOC Major 9 | 1280 | 7.1 | 20.5 | 24.8 | 31.8 | 15.7 | 4.1 |
| Father SOC Major 10 | 5328 | 9.5 | 20.9 | 25.3 | 30.5 | 13.8 | 17.1 |

**Table 2 continued**

| | number in sample | out of work | FT/PT Job | Government scheme | Education Academic | Education Vocational | Column % |
|---|---|---|---|---|---|---|---|
| Mother SOC Major 1 or 2 | 2477 | 2.1 | 7.0 | 6.5 | 71.9 | 12.5 | 8.0 |
| Mother SOC Major 3 | 1690 | 2.8 | 11.2 | 10.8 | 61.7 | 13.5 | 5.4 |
| Mother SOC Major 4 | 4681 | 2.6 | 12.6 | 11.0 | 60.3 | 13.5 | 15.1 |
| Mother SOC Major 5 | 2801 | 5.6 | 23.4 | 29.3 | 30.4 | 11.3 | 9.0 |
| Mother SOC Major 6 or 7 | 7249 | 3.9 | 20.4 | 20.6 | 42.0 | 13.1 | 23.3 |
| Mother SOC Major 8 | 424 | 8.7 | 19.8 | 24.3 | 30.2 | 17.0 | 1.4 |
| Mother SOC Major 9 | 1165 | 7.6 | 23.4 | 25.4 | 27.6 | 16.0 | 3.7 |
| Mother SOC Major 10 | 10609 | 7.5 | 18.5 | 21.9 | 37.9 | 14.2 | 34.1 |
| | | | *Region* | | | | |
| North | 2390 | 5.2 | 17.0 | 29.2 | 37.3 | 11.3 | 7.7 |
| Yorkshire or Humberside | 3226 | 6.4 | 16.9 | 23.8 | 38.6 | 14.3 | 10.4 |
| North West | 3559 | 5.5 | 16.2 | 22.4 | 44.0 | 11.9 | 11.4 |
| East Midlands | 2566 | 4.7 | 18.9 | 21.7 | 41.7 | 13.0 | 8.3 |
| West Midlands | 3492 | 5.7 | 17.5 | 23.7 | 39.9 | 13.2 | 11.2 |
| East Anglia | 1418 | 5.6 | 20.0 | 18.9 | 42.2 | 13.3 | 4.6 |
| Greater London | 2649 | 4.8 | 16.9 | 6.8 | 56.2 | 15.2 | 8.5 |
| South East | 6286 | 3.9 | 19.3 | 11.7 | 51.7 | 13.4 | 20.2 |
| South West | 2672 | 4.7 | 18.1 | 17.6 | 47.1 | 12.5 | 8.6 |
| Wales | 2838 | 5.5 | 12.7 | 21.0 | 43.9 | 16.9 | 9.1 |
| | | | *Cohort* | | | | |
| Cohort 2 | 5678 | 6.6 | 21.4 | 26.6 | 33.3 | 12.1 | 18.2 |
| Cohort 3 | 6366 | 5.8 | 22.2 | 24.9 | 38.7 | 8.4 | 20.5 |
| Cohort 4 | 3201 | 1.9 | 19.4 | 16.6 | 51.5 | 10.6 | 10.3 |
| Cohort 5 | 6028 | 4.3 | 17.0 | 14.9 | 50.9 | 12.9 | 19.4 |
| Cohort 6 | 9823 | 5.2 | 11.7 | 14.0 | 50.2 | 18.9 | 31.6 |
| | | | *Labour market* | | | | |
| unemployment rate cohort2 | | 14.0 | 12.6 | 14.4 | 13.2 | 13.2 | 13.4 |
| unemployment rate cohort3 | | 14.6 | 12.5 | 14.2 | 12.7 | 12.7 | 13.1 |
| unemployment rate cohort4 | | 11.9 | 9.8 | 11.7 | 9.7 | 10.4 | 10.2 |
| unemployment rate cohort5 | | 6.7 | 6.1 | 7.1 | 5.8 | 6.3 | 6.2 |
| unemployment rate cohort6 | | 9.6 | 9.2 | 9.9 | 9.0 | 9.3 | 9.2 |
| Column total | 31096 | 1579 | 5414 | 5895 | 14006 | 4202 | |
| Row percentage | 100 | 5.1 | 17.4 | 19.0 | 45.0 | 13.5 | 100 |

**Table3 The proportion of females in each destination state in March following the end of compulsory education.**

| | number in sample | out of work | FT/PT Job | Government scheme | Education Academic | Education Vocational | Column % |
|---|---|---|---|---|---|---|---|
| | | | *School Background* | | | | |
| Comprehensive 18 | 20319 | 4.8 | 14.5 | 15.4 | 43.9 | 21.4 | 59.2 |
| Secondary Modern | 1141 | 6.8 | 21.9 | 18.1 | 26.1 | 27.1 | 3.3 |
| Grammar/ Independent | 2884 | 0.7 | 3.6 | 1.8 | 86.1 | 7.8 | 8.3 |
| Other School | 112 | 6.3 | 16.0 | 7.1 | 52.7 | 17.9 | 0.3 |
| Comprehensive 16/college | 9890 | 5.7 | 15.6 | 19.6 | 37.0 | 22.1 | 28.8 |
| | | | *Prior Attainment* | | | | |
| 5+ GCSE A-C | 14192 | 0.8 | 5.7 | 2.8 | 81.5 | 9.2 | 41.4 |
| 1-4 GCSE A-C | 11382 | 4.1 | 17.5 | 18.8 | 26.9 | 32.7 | 33.2 |
| 5+ GCSE D-G no A-C | 3190 | 5.7 | 19.3 | 26.7 | 13.4 | 34.9 | 9.3 |
| 1-4 GCSE D-G no A-C | 3161 | 10.6 | 24.1 | 35.7 | 7.6 | 22.0 | 9.2 |
| NO GCSEs | 2381 | 23.8 | 28.5 | 34.0 | 3.6 | 10.1 | 6.9 |
| | | | *Ethnicity* | | | | |
| black | 452 | 6.0 | 4.2 | 10.8 | 46.7 | 32.3 | 1.3 |
| Indian | 675 | 2.7 | 2.8 | 7.4 | 62.1 | 25.0 | 2.0 |
| Pakistani | 335 | 10.1 | 6.3 | 8.4 | 52.8 | 22.4 | 1.0 |
| Bangladeshi | 120 | 7.5 | 5.0 | 8.3 | 54.2 | 25.0 | 0.3 |
| Other ethnic group | 689 | 7.0 | 15.2 | 13.5 | 44.7 | 19.6 | 2.0 |
| White | 32035 | 4.7 | 14.7 | 15.9 | 44.3 | 20.4 | 93.4 |
| | | | *Family Structure* | | | | |
| one sibling | 15557 | 3.1 | 12.3 | 13.9 | 49.4 | 21.3 | 45.4 |
| two siblings | 8418 | 5.0 | 14.9 | 16.7 | 43.0 | 20.4 | 24.5 |
| three siblings | 3243 | 7.4 | 17.7 | 18.6 | 37.1 | 19.2 | 9.5 |
| four or more siblings | 2440 | 11.6 | 19.8 | 21.5 | 28.0 | 19.1 | 7.1 |
| no siblings | 4648 | 4.9 | 13.7 | 13.5 | 47.2 | 20.7 | 13.5 |
| lives with both parents | 30905 | 4.2 | 13.9 | 15.6 | 45.5 | 20.8 | 90.1 |
| lives with mother only | 2243 | 6.6 | 13.2 | 13.2 | 46.3 | 20.7 | 6.5 |
| lives with father only | 456 | 9.0 | 16.0 | 18.2 | 35.3 | 21.5 | 1.3 |
| lives with neither parent | 702 | 25.4 | 28.3 | 19.1 | 15.1 | 12.1 | 2.1 |
| | | | *Housing tenure* | | | | |
| lives in private housing | 29096 | 3.4 | 12.8 | 13.8 | 49.4 | 20.6 | 84.8 |
| lives in social housing | 5210 | 12.6 | 21.9 | 25.1 | 19.7 | 20.7 | 15.2 |
| | | | *Household employment status* | | | | |
| Both parents employed | 13875 | 3.3 | 14.0 | 13.4 | 48.9 | 20.4 | 40.4 |
| Neither parent employed | 3709 | 11.1 | 14.4 | 22.1 | 30.5 | 21.9 | 10.8 |
| One parent employed | 16722 | 4.7 | 14.3 | 15.8 | 44.6 | 20.6 | 48.8 |
| | | | *Socio-economic* | | | | |
| Father SOC Major 1 or 2 | 6568 | 1.5 | 6.5 | 6.0 | 69.3 | 16.7 | 19.2 |
| Father SOC Major 3 | 3056 | 1.7 | 12.3 | 8.7 | 59.2 | 18.1 | 8.9 |
| Father SOC Major 4 | 1866 | 1.9 | 10.0 | 9.3 | 61.7 | 17.1 | 5.4 |
| Father SOC Major 5 | 11002 | 5.6 | 18.1 | 21.0 | 33.4 | 21.9 | 32.1 |
| Father SOC Major 6 or 7 | 2511 | 3.4 | 13.0 | 12.8 | 47.7 | 23.1 | 7.3 |
| Father SOC Major 8 | 2372 | 5.9 | 13.6 | 16.9 | 38.4 | 25.2 | 6.9 |
| Father SOC Major 9 | 1400 | 6.2 | 17.5 | 21.7 | 32.2 | 22.4 | 4.1 |
| Father SOC Major 10 | 5531 | 9.9 | 17.9 | 20.9 | 29.4 | 21.9 | 16.1 |

**Table 3 continued**

| | number in sample | out of work | FT/PT Job | Government scheme | Education Academic | Education Vocational | Column % |
|---|---|---|---|---|---|---|---|
| Mother SOC Major 1 or 2 | 2717 | 1.5 | 5.8 | 5.7 | 72.0 | 15.0 | 7.9 |
| Mother SOC Major 3 | 1881 | 2.3 | 9.6 | 8.6 | 61.1 | 18.4 | 5.5 |
| Mother SOC Major 4 | 5045 | 2.2 | 9.0 | 8.4 | 61.2 | 19.2 | 14.7 |
| Mother SOC Major 5 | 3520 | 5.7 | 22.3 | 22.8 | 29.5 | 19.7 | 10.3 |
| Mother SOC Major 6 or 7 | 8743 | 3.6 | 16.2 | 16.7 | 40.9 | 22.6 | 25.5 |
| Mother SOC Major 8 | 560 | 8.2 | 15.2 | 19.1 | 32.7 | 24.8 | 1.6 |
| Mother SOC Major 9 | 1422 | 7.3 | 16.5 | 20.5 | 28.9 | 26.8 | 4.1 |
| Mother SOC Major 10 | 10418 | 7.6 | 15.0 | 18.4 | 38.2 | 20.8 | 30.4 |
| | | | *Region* | | | | |
| North | 2710 | 5.6 | 12.0 | 24.7 | 39.7 | 18.0 | 7.9 |
| Yorkshire or Humberside | 3602 | 5.9 | 15.7 | 19.5 | 37.4 | 21.5 | 10.5 |
| North West | 4046 | 6.0 | 13.1 | 18.9 | 44.4 | 17.6 | 11.8 |
| East Midlands | 2650 | 5.1 | 15.1 | 17.7 | 43.0 | 19.1 | 7.7 |
| West Midlands | 3905 | 5.4 | 12.0 | 20.6 | 42.5 | 19.5 | 11.4 |
| East Anglia | 1578 | 5.4 | 18.7 | 14.1 | 43.0 | 18.8 | 4.6 |
| Greater London | 3075 | 4.3 | 14.6 | 5.7 | 52.8 | 22.6 | 9.0 |
| South East | 6790 | 3.8 | 16.4 | 9.6 | 48.4 | 21.8 | 19.8 |
| South West | 2770 | 3.2 | 14.6 | 15.6 | 44.5 | 22.1 | 8.0 |
| Wales | 3180 | 4.5 | 10.0 | 13.6 | 48.3 | 23.6 | 9.3 |
| | | | *Cohort* | | | | |
| Cohort 2 | 6336 | 6.4 | 18.8 | 22.2 | 30.8 | 21.8 | 18.4 |
| Cohort 3 | 6375 | 6.4 | 19.6 | 21.3 | 36.2 | 16.5 | 18.6 |
| Cohort 4 | 4016 | 1.8 | 16.8 | 13.9 | 49.6 | 17.9 | 11.7 |
| Cohort 5 | 6515 | 4.2 | 13.4 | 12.1 | 51.2 | 19.1 | 19.0 |
| Cohort 6 | 11064 | 4.5 | 7.9 | 11.0 | 52.3 | 24.3 | 32.3 |
| | | | *Labour market* | | | | |
| unemployment rate cohort2 | | 13.9 | 12.7 | 14.6 | 13.0 | 13.2 | 13.4 |
| unemployment rate cohort3 | | 14.4 | 12.5 | 14.4 | 13.0 | 13.0 | 13.3 |
| unemployment rate cohort4 | | 12.1 | 9.6 | 12.1 | 10.1 | 10.3 | 10.4 |
| unemployment rate cohort5 | | 7.0 | 6.1 | 7.2 | 6.0 | 6.2 | 6.2 |
| unemployment rate cohort6 | | 9.7 | 9.1 | 10.0 | 9.1 | 9.3 | 9.3 |
| | | | | | | | |
| Column total | 34306 | 1656 | 4864 | 5325 | 15378 | 7083 | |
| Row percentage | 100 | 4.8 | 14.2 | 15.5 | 44.8 | 20.7 | |

**Table 4 Testing for pooling of outcomes, choice of destination at age 16**

| Model | Outcomes | No outcomes | Log $L$[a] | LR [b]$v$ (U) | d.f. |
|---|---|---|---|---|---|
| Females | | | | | |
| Unrestricted | 0,1,2,3,4 | 5 | -37073 | | |
| pool 0 and 2 | 0/2,1,3,4 | 4 | -37493 | 839 | 52 |
| pool 1 and 2 | 0,1/2,3,4 | 4 | -37622 | 1097 | 52 |
| pool 3 and 4 | 0,1,2,3/4 | 4 | -40855 | 7563 | 52 |
| pool 0,1 and 2 | 0/1/2,3,4 | 3 | -38086 | 2025 | 104 |
| staying on | 0/1/2,3/4 | 2 | -41866 | 9585 | 156 |
| | | | | | |
| Males | | | | | |
| Unrestricted | 0,1,2,3,4 | 5 | -32829 | | |
| pool 0 and 2 | 0/2,1,3,4 | 4 | -33209 | 760 | 52 |
| pool 1 and 2 | 0,1/2,3,4 | 4 | -33311 | 965 | 52 |
| pool 3 and 4 | 0,1,2,3/4 | 4 | -35355 | 5053 | 52 |
| pool 0,1 and 2 | 0/1/2,3,4 | 3 | -33734 | 1810 | 104 |
| staying on | 0/1/2,3/4 | 2 | -36256 | 6855 | 156 |

[a] Computed from the log likelihood of the pooled model, which is then adjusted for freely estimated constants (Cramer and Ridder 1991).
[b] Likelihood ratio test, distributed $\chi^2$ (degrees of freedom)

**Table 5 Determinants of the school to work transition, males**

| | Out of work | | Full or Part time job | | Government scheme | | FT Education-Academic | | FT Education-Vocational | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value |
| *Prior attainment* | | | | | | | | | | |
| 5+ GCSE grades A-C | -0.125 | 0.000 | -0.404 | 0.000 | -0.434 | 0.000 | 1.053 | 0.000 | -0.090 | 0.000 |
| 1-4 GCSE grades A-C | -0.084 | 0.000 | -0.259 | 0.000 | -0.219 | 0.000 | 0.488 | 0.000 | 0.074 | 0.000 |
| 5+ GCSE grades D-G no A-C | -0.065 | 0.000 | -0.189 | 0.000 | -0.127 | 0.000 | 0.283 | 0.000 | 0.098 | 0.000 |
| 1-4 GCSE grades D-G no A-C | -0.034 | 0.000 | -0.111 | 0.000 | -0.054 | 0.000 | 0.127 | 0.000 | 0.073 | 0.000 |
| *School Type* | | | | | | | | | | |
| comprehensive with sixth form | -0.005 | 0.026 | -0.030 | 0.000 | -0.027 | 0.000 | 0.055 | 0.000 | 0.007 | 0.214 |
| secondary modern | 0.003 | 0.566 | 0.014 | 0.330 | 0.031 | 0.008 | -0.063 | 0.010 | 0.015 | 0.274 |
| grammar or independent | -0.014 | 0.052 | -0.143 | 0.000 | -0.137 | 0.000 | 0.325 | 0.000 | -0.031 | 0.024 |
| other school | -0.002 | 0.848 | -0.004 | 0.911 | -0.013 | 0.672 | 0.057 | 0.269 | -0.038 | 0.272 |
| *Ethnicity* | | | | | | | | | | |
| black | -0.010 | 0.215 | -0.173 | 0.000 | -0.036 | 0.109 | 0.130 | 0.001 | 0.089 | 0.000 |
| Indian | -0.024 | 0.003 | -0.373 | 0.000 | -0.197 | 0.000 | 0.487 | 0.000 | 0.107 | 0.000 |
| Pakistani | -0.018 | 0.019 | -0.335 | 0.000 | -0.251 | 0.000 | 0.503 | 0.000 | 0.100 | 0.000 |
| Bangladeshi | -0.047 | 0.002 | -0.067 | 0.126 | -0.236 | 0.000 | 0.263 | 0.000 | 0.087 | 0.006 |
| other ethnic group | -0.019 | 0.004 | -0.102 | 0.000 | -0.101 | 0.000 | 0.173 | 0.000 | 0.048 | 0.003 |
| *Socio-Economic Status* | | | | | | | | | | |
| father occupation managerial, professional | -0.019 | 0.000 | -0.089 | 0.000 | -0.062 | 0.000 | 0.156 | 0.000 | 0.014 | 0.074 |
| father occupation associate professional | -0.014 | 0.005 | -0.074 | 0.000 | -0.069 | 0.000 | 0.129 | 0.000 | 0.028 | 0.003 |
| father occupation clerical or secretarial | -0.012 | 0.050 | -0.082 | 0.000 | -0.051 | 0.000 | 0.125 | 0.000 | 0.020 | 0.084 |
| father occupation personal, protective, sales | -0.008 | 0.075 | -0.038 | 0.000 | -0.040 | 0.000 | 0.076 | 0.000 | 0.009 | 0.327 |
| father occupation plant and machine operative | 0.005 | 0.144 | 0.022 | 0.048 | 0.016 | 0.067 | -0.046 | 0.009 | 0.002 | 0.810 |
| father occupation other manual | 0.003 | 0.562 | -0.009 | 0.498 | 0.004 | 0.722 | -0.005 | 0.805 | 0.008 | 0.534 |
| father occupation unknown | 0.001 | 0.783 | -0.021 | 0.011 | -0.012 | 0.069 | 0.021 | 0.111 | 0.011 | 0.169 |

**Table 5 continued**

| | Out of work | | Full or Part time job | | Government scheme | | FT Education-Academic | | FT Education-Vocational | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value |
| *Socio-Economic status* | | | | | | | | | | |
| mother occupation managerial, professional | -0.004 | 0.540 | -0.086 | 0.000 | -0.067 | 0.000 | 0.153 | 0.000 | 0.003 | 0.819 |
| mother occupation associate professional | -0.006 | 0.345 | -0.064 | 0.000 | -0.052 | 0.000 | 0.127 | 0.000 | -0.006 | 0.675 |
| mother occupation clerical or secretarial | -0.005 | 0.245 | -0.045 | 0.000 | -0.048 | 0.000 | 0.095 | 0.000 | 0.003 | 0.766 |
| mother occupation personal, protective, sales | -0.004 | 0.339 | -0.005 | 0.573 | -0.016 | 0.038 | 0.021 | 0.191 | 0.004 | 0.681 |
| mother occupation plant and machine operative | 0.014 | 0.059 | 0.005 | 0.846 | 0.016 | 0.398 | -0.032 | 0.393 | -0.002 | 0.939 |
| mother occupation other manual | 0.005 | 0.347 | 0.038 | 0.014 | 0.008 | 0.524 | -0.046 | 0.079 | -0.005 | 0.729 |
| mother occupation unknown | 0.005 | 0.164 | -0.017 | 0.096 | -0.019 | 0.018 | 0.017 | 0.297 | 0.013 | 0.204 |
| *Family Background* | | | | | | | | | | |
| one sibling | -0.008 | 0.009 | 0.022 | 0.007 | 0.018 | 0.009 | -0.026 | 0.032 | -0.007 | 0.329 |
| two siblings | -0.002 | 0.580 | 0.026 | 0.004 | 0.012 | 0.125 | -0.016 | 0.235 | -0.020 | 0.014 |
| three siblings | -0.001 | 0.784 | 0.024 | 0.033 | 0.029 | 0.001 | -0.046 | 0.007 | -0.006 | 0.573 |
| four or more siblings | 0.009 | 0.023 | 0.035 | 0.007 | 0.024 | 0.024 | -0.063 | 0.002 | -0.005 | 0.687 |
| both parents work | 0.003 | 0.150 | 0.026 | 0.000 | -0.002 | 0.759 | -0.036 | 0.000 | 0.008 | 0.155 |
| neither parent works | 0.006 | 0.041 | -0.034 | 0.001 | 0.000 | 0.950 | 0.016 | 0.287 | 0.012 | 0.183 |
| mother only in household | 0.009 | 0.011 | -0.008 | 0.470 | -0.037 | 0.000 | 0.051 | 0.002 | -0.015 | 0.158 |
| father only in household | -0.004 | 0.579 | 0.014 | 0.470 | -0.006 | 0.688 | 0.007 | 0.832 | -0.010 | 0.585 |
| lives with neither parent | 0.046 | 0.000 | 0.221 | 0.000 | 0.035 | 0.048 | -0.296 | 0.000 | -0.005 | 0.827 |
| *Housing Tenure* | | | | | | | | | | |
| living in social housing | 0.023 | 0.000 | 0.032 | 0.000 | 0.028 | 0.000 | -0.069 | 0.000 | -0.014 | 0.079 |
| *Labour Market* | | | | | | | | | | |
| logged unemployment rate | 0.007 | 0.051 | -0.062 | 0.000 | 0.050 | 0.000 | -0.002 | 0.918 | 0.006 | 0.534 |
| logged vacancy rate | -0.011 | 0.004 | 0.016 | 0.152 | 0.000 | 0.958 | -0.024 | 0.137 | 0.019 | 0.056 |
| *Region* | | | | | | | | | | |
| residing in the North | -0.003 | 0.563 | 0.013 | 0.378 | 0.183 | 0.000 | -0.147 | 0.000 | -0.046 | 0.001 |
| residing in Yorkshire and Humberside | 0.003 | 0.496 | 0.004 | 0.757 | 0.161 | 0.000 | -0.166 | 0.000 | -0.003 | 0.820 |
| residing in the North West | 0.002 | 0.600 | -0.002 | 0.905 | 0.153 | 0.000 | -0.132 | 0.000 | -0.022 | 0.059 |
| residing in the East Midlands | -0.004 | 0.392 | 0.001 | 0.914 | 0.152 | 0.000 | -0.133 | 0.000 | -0.016 | 0.180 |
| residing in the West Midlands | -0.002 | 0.730 | 0.009 | 0.494 | 0.163 | 0.000 | -0.151 | 0.000 | -0.019 | 0.097 |

**Table 5 continued**

| | Out of work | | Full or Part time job | | Government scheme | | FT Education-Academic | | FT Education-Vocational | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value |
| *Region* | | | | | | | | | | |
| residing in East Anglia | 0.004 | 0.480 | 0.005 | 0.732 | 0.146 | 0.000 | -0.140 | 0.000 | -0.015 | 0.277 |
| residing in the South East | -0.003 | 0.425 | -0.008 | 0.480 | 0.080 | 0.000 | -0.073 | 0.000 | 0.004 | 0.685 |
| residing in the South West | 0.006 | 0.218 | 0.003 | 0.799 | 0.140 | 0.000 | -0.142 | 0.000 | -0.007 | 0.563 |
| residing in Wales | -0.004 | 0.416 | -0.052 | 0.000 | 0.142 | 0.000 | -0.095 | 0.000 | 0.009 | 0.448 |
| *Cohort* | | | | | | | | | | |
| cohort3 | -0.007 | 0.026 | 0.028 | 0.001 | 0.004 | 0.568 | 0.027 | 0.049 | -0.053 | 0.000 |
| cohort4 | -0.020 | 0.000 | 0.002 | 0.878 | -0.015 | 0.093 | 0.051 | 0.002 | -0.017 | 0.110 |
| cohort5 | 0.009 | 0.041 | -0.033 | 0.006 | 0.007 | 0.486 | -0.003 | 0.856 | 0.021 | 0.073 |
| cohort6 | 0.009 | 0.012 | -0.073 | 0.000 | -0.035 | 0.000 | 0.012 | 0.453 | 0.087 | 0.000 |
| _cons | 0.005 | 0.642 | 0.455 | 0.000 | 0.021 | 0.446 | -0.373 | 0.000 | -0.108 | 0.000 |
| | | | | | | | | | | |
| Log Likelihood | -32829.134 | | | | | | | | | |
| chi2 | 12411.13 [a] | | | | | | | | | |
| Pseudo R2 | 0.2463 [b] | | | | | | | | | |
| sample size | 31096 | | | | | | | | | |
| Prob > chi2 | 0.0000 | | | | | | | | | |

[a] Chi-squared tests the hypothesis that all the slope coefficients are jointly zero.
[b] Pseudo $R^{2,}$ is the associated likelihood ratio index 1 -ln L/ln $L_0$, where $L_0$ is the likelihood without regressors.

## Table 6 Determinants of the school to work transition, females

| | Out of work | | Full time/part time job | | Government scheme | | FT education-Academic | | FT education - Vocational | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value |
| *Prior attainment* | | | | | | | | | | |
| 5+ GCSE grades A-C | -0.110 | 0.000 | -0.312 | 0.000 | -0.349 | 0.000 | 0.984 | 0.000 | -0.214 | 0.000 |
| 1-4 GCSE grades A-C | -0.075 | 0.000 | -0.211 | 0.000 | -0.174 | 0.000 | 0.426 | 0.000 | 0.033 | 0.061 |
| 5+ GCSE grades D-G no A-C | -0.059 | 0.000 | -0.158 | 0.000 | -0.104 | 0.000 | 0.223 | 0.000 | 0.098 | 0.000 |
| 1-4 GCSE grades D-G no A-C | -0.036 | 0.000 | -0.106 | 0.000 | -0.052 | 0.000 | 0.125 | 0.000 | 0.068 | 0.001 |
| *School Type* | | | | | | | | | | |
| comprehensive with sixth form | -0.004 | 0.046 | -0.015 | 0.002 | -0.021 | 0.000 | 0.053 | 0.000 | -0.013 | 0.040 |
| secondary modern | 0.008 | 0.070 | 0.017 | 0.118 | -0.005 | 0.604 | -0.046 | 0.035 | 0.026 | 0.082 |
| grammar or independent | -0.017 | 0.016 | -0.102 | 0.000 | -0.113 | 0.000 | 0.290 | 0.000 | -0.058 | 0.000 |
| other school | 0.016 | 0.218 | -0.011 | 0.765 | -0.073 | 0.077 | 0.146 | 0.016 | -0.079 | 0.115 |
| *Ethnicity* | | | | | | | | | | |
| black | -0.016 | 0.020 | -0.243 | 0.000 | -0.060 | 0.001 | 0.229 | 0.000 | 0.090 | 0.000 |
| Indian | -0.028 | 0.000 | -0.282 | 0.000 | -0.132 | 0.000 | 0.388 | 0.000 | 0.054 | 0.007 |
| Pakistani | -0.007 | 0.301 | -0.188 | 0.000 | -0.150 | 0.000 | 0.382 | 0.000 | -0.038 | 0.181 |
| Bangladeshi | -0.027 | 0.019 | -0.229 | 0.000 | -0.118 | 0.002 | 0.414 | 0.000 | -0.039 | 0.379 |
| other ethnic group | -0.005 | 0.327 | -0.060 | 0.000 | -0.056 | 0.000 | 0.131 | 0.000 | -0.009 | 0.633 |
| *Socio-Economic Status* | | | | | | | | | | |
| father occupation managerial, professional | -0.016 | 0.000 | -0.055 | 0.000 | -0.051 | 0.000 | 0.131 | 0.000 | -0.010 | 0.278 |
| father occupation associate professional | -0.017 | 0.000 | -0.018 | 0.038 | -0.053 | 0.000 | 0.091 | 0.000 | -0.003 | 0.788 |
| father occupation clerical or secretarial | -0.016 | 0.004 | -0.043 | 0.000 | -0.042 | 0.000 | 0.128 | 0.000 | -0.028 | 0.037 |
| father occupation personal, protective, sales | -0.008 | 0.026 | -0.024 | 0.006 | -0.028 | 0.000 | 0.050 | 0.000 | 0.011 | 0.325 |
| father occupation plant or machine operative | -0.005 | 0.169 | -0.009 | 0.346 | -0.008 | 0.310 | 0.031 | 0.042 | -0.010 | 0.366 |
| father occupation other manual | 0.002 | 0.640 | 0.017 | 0.114 | 0.017 | 0.036 | -0.030 | 0.118 | -0.006 | 0.676 |
| father occupation unknown | 0.001 | 0.794 | 0.003 | 0.636 | -0.011 | 0.048 | -0.001 | 0.940 | 0.008 | 0.378 |

**Table 6 continued**

| | Out of work | | Full time/part time job | | Government scheme | | FT education- Academic | | FT education - Vocational | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value |
| *Socio-Economic Status* | | | | | | | | | | |
| mother occupation managerial, professional | -0.014 | 0.015 | -0.070 | 0.000 | -0.033 | 0.003 | 0.147 | 0.000 | -0.030 | 0.052 |
| mother occupation associate professional | -0.010 | 0.067 | -0.061 | 0.000 | -0.035 | 0.002 | 0.124 | 0.000 | -0.019 | 0.229 |
| mother occupation clerical or secretarial | -0.010 | 0.015 | -0.068 | 0.000 | -0.038 | 0.000 | 0.115 | 0.000 | 0.001 | 0.929 |
| mother occupation personal, protective, sales | -0.007 | 0.034 | -0.026 | 0.000 | -0.006 | 0.338 | 0.026 | 0.064 | 0.012 | 0.236 |
| mother occupation plant or machine operative | 0.008 | 0.149 | -0.017 | 0.354 | 0.006 | 0.677 | -0.003 | 0.919 | 0.006 | 0.805 |
| mother occupation other manual | 0.006 | 0.197 | 0.004 | 0.760 | 0.017 | 0.085 | -0.048 | 0.035 | 0.021 | 0.183 |
| mother occupation unknown | 0.001 | 0.664 | -0.041 | 0.000 | -0.006 | 0.361 | 0.047 | 0.001 | -0.002 | 0.839 |
| *Family Background* | | | | | | | | | | |
| one sibling | -0.006 | 0.021 | -0.017 | 0.013 | 0.002 | 0.738 | 0.008 | 0.447 | 0.013 | 0.118 |
| two siblings | -0.001 | 0.668 | -0.008 | 0.300 | -0.002 | 0.779 | 0.018 | 0.136 | -0.008 | 0.419 |
| three siblings | 0.006 | 0.089 | 0.013 | 0.153 | 0.001 | 0.931 | -0.004 | 0.823 | -0.016 | 0.189 |
| four or more siblings | 0.008 | 0.024 | 0.028 | 0.007 | 0.008 | 0.339 | -0.030 | 0.122 | -0.014 | 0.309 |
| both parents work | -0.001 | 0.554 | 0.013 | 0.012 | 0.000 | 0.986 | -0.001 | 0.941 | -0.011 | 0.085 |
| neither parent works | 0.000 | 0.855 | -0.030 | 0.000 | -0.006 | 0.315 | 0.025 | 0.067 | 0.011 | 0.283 |
| mother only in household | 0.008 | 0.012 | -0.019 | 0.036 | -0.025 | 0.001 | 0.041 | 0.005 | -0.005 | 0.661 |
| father only in household | 0.022 | 0.000 | 0.020 | 0.272 | 0.020 | 0.165 | -0.066 | 0.039 | 0.004 | 0.869 |
| lives with neither parent | 0.056 | 0.000 | 0.113 | 0.000 | 0.036 | 0.006 | -0.178 | 0.000 | -0.026 | 0.300 |
| *Housing Tenure* | | | | | | | | | | |
| living in social housing | 0.019 | 0.000 | 0.051 | 0.000 | 0.024 | 0.000 | -0.088 | 0.000 | -0.006 | 0.511 |
| *Labour Market* | | | | | | | | | | |
| logged unemployment rate | 0.008 | 0.010 | -0.056 | 0.000 | 0.063 | 0.000 | 0.001 | 0.966 | -0.016 | 0.118 |
| logged vacancy rate | -0.011 | 0.002 | 0.028 | 0.003 | -0.007 | 0.381 | -0.022 | 0.146 | 0.012 | 0.303 |
| *Region* | | | | | | | | | | |
| residing in the North | -0.001 | 0.878 | -0.033 | 0.005 | 0.124 | 0.000 | -0.037 | 0.051 | -0.053 | 0.000 |
| residing in Yorkshire and Humberside | 0.000 | 0.932 | -0.001 | 0.894 | 0.106 | 0.000 | -0.103 | 0.000 | -0.002 | 0.905 |
| residing in the North West | 0.009 | 0.030 | -0.028 | 0.007 | 0.110 | 0.000 | -0.050 | 0.003 | -0.040 | 0.002 |
| residing in the East Midlands | 0.002 | 0.678 | -0.017 | 0.111 | 0.113 | 0.000 | -0.051 | 0.005 | -0.047 | 0.001 |

**Table 6 continued**

| | Out of work | | Full time/part time job | | Government scheme | | FT education- Academic | | FT education - Vocational | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value | Marginal Effect | Prob value |
| *Region* | | | | | | | | | | |
| residing in the West Midlands | 0.002 | 0.626 | -0.038 | 0.000 | 0.129 | 0.000 | -0.064 | 0.000 | -0.030 | 0.018 |
| residing in East Anglia | 0.011 | 0.027 | 0.014 | 0.222 | 0.111 | 0.000 | -0.094 | 0.000 | -0.042 | 0.010 |
| residing in the South East | 0.000 | 0.990 | -0.020 | 0.024 | 0.069 | 0.000 | -0.053 | 0.001 | 0.005 | 0.683 |
| residing in the South West | -0.008 | 0.074 | -0.028 | 0.007 | 0.111 | 0.000 | -0.081 | 0.000 | 0.006 | 0.644 |
| residing in Wales | -0.005 | 0.218 | -0.062 | 0.000 | 0.069 | 0.000 | -0.002 | 0.913 | 0.000 | 0.988 |
| *Cohort* | | | | | | | | | | |
| cohort3 | -0.003 | 0.229 | 0.019 | 0.007 | -0.005 | 0.378 | 0.053 | 0.000 | -0.064 | 0.000 |
| cohort4 | -0.020 | 0.000 | -0.010 | 0.216 | -0.020 | 0.004 | 0.096 | 0.000 | -0.046 | 0.000 |
| cohort5 | 0.009 | 0.017 | -0.044 | 0.000 | 0.015 | 0.066 | 0.043 | 0.011 | -0.024 | 0.063 |
| cohort6 | 0.009 | 0.008 | -0.088 | 0.000 | -0.026 | 0.000 | 0.057 | 0.000 | 0.049 | 0.000 |
| _cons | 0.002 | 0.815 | 0.410 | 0.000 | -0.041 | 0.075 | -0.505 | 0.000 | 0.134 | 0.000 |
| Diagnostics | | | | | | | | | | |
| loglikelihood | -37073.801 | | | | | | | | | |
| Chi2 | 13509.4[a] | | | | | | | | | |
| Pseudo R2 | 0.2269[b] | | | | | | | | | |
| Sample size | 34306 | | | | | | | | | |
| Prob > chi2 | 0.0000 | | | | | | | | | |

[a] Chi-squared tests the hypothesis that all the slope coefficients are jointly zero.
[b] Pseudo $R^{2,}$ is the associated likelihood ratio index 1 -ln L/ln $L_0$, where $L_0$ is the likelihood without regressors.

**Table 7 The percentage of young people in each GCSE category**

| | 5+ A-C grades | 1-4 A-C grades | 5+ D-G grades | 1-4 D-G grades | No grades |
|---|---|---|---|---|---|
| MALES | | | | | |
| Cohort 2 | 27.3 | 32.4 | 7.0 | 17.9 | 18.3 |
| Cohort 3 | 31.2 | 31.5 | 5.2 | 17.6 | 20.5 |
| Cohort 4 | 46.9 | 29.5 | 12.6 | 5.3 | 5.7 |
| Cohort 5 | 45.2 | 30.9 | 11.5 | 6.5 | 5.9 |
| Cohort 6 | 45.3 | 29.1 | 13.7 | 5.2 | 6.6 |
| FEMALES | | | | | |
| Cohort 2 | 27.9 | 36.4 | 7.1 | 17.8 | 10.8 |
| Cohort 3 | 30.7 | 35.4 | 5.9 | 16.9 | 11.2 |
| Cohort 4 | 46.1 | 32.4 | 12.2 | 4.9 | 4.4 |
| Cohort 5 | 48.6 | 32.2 | 10.1 | 4.4 | 4.7 |
| Cohort 6 | 49.3 | 31.0 | 11.0 | 4.2 | 4.5 |

**Table 8 Predicted probabilities of entering academic education.**

| | Cohort 2 | Cohort 3 | Cohort 4 | Cohort 5 | Cohort 6 |
|---|---|---|---|---|---|
| Males | | | | | |
| No grades at GCSE | 0.045 | 0.059 | 0.073 | 0.081 | 0.081 |
| 1-4 grades D-G | 0.082 | 0.107 | 0.126 | 0.138 | 0.131 |
| 5+ grades D-G | 0.144 | 0.183 | 0.206 | 0.219 | 0.204 |
| 1-4 grades A-C | 0.272 | 0.326 | 0.353 | 0.362 | 0.343 |
| 5+ grades A-C | 0.757 | 0.792 | 0.810 | 0.807 | 0.810 |
| Females | | | | | |
| No grades at GCSE | 0.039 | 0.052 | 0.071 | 0.075 | 0.082 |
| 1-4 grades D-G | 0.075 | 0.099 | 0.127 | 0.132 | 0.138 |
| 5+ grades D-G | 0.112 | 0.147 | 0.179 | 0.184 | 0.186 |
| 1-4 grades A-C | 0.220 | 0.275 | 0.320 | 0.323 | 0.326 |
| 5+ grades A-C | 0.701 | 0.751 | 0.789 | 0.786 | 0.800 |

**Table 9 Predicted probabilities, individuals in the mid-range of GCSE results**

| | Cohort 2 | Cohort 3 | Cohort 4 | Cohort 5 | Cohort 6 |
|---|---|---|---|---|---|
| Academic education | | | | | |
| 1-4 grades D-G (M) | 0.082 | 0.107 | 0.126 | 0.138 | 0.131 |
| 1-4 grades D-G (F) | 0.075 | 0.099 | 0.127 | 0.132 | 0.138 |
| 5+ grades D-G (M) | 0.144 | 0.183 | 0.206 | 0.219 | 0.204 |
| 5+ grades D-G (F) | 0.112 | 0.147 | 0.179 | 0.184 | 0.186 |
| Vocational Education | | | | | |
| 1-4 grades D-G (M) | 0.124 | 0.093 | 0.130 | 0.161 | 0.241 |
| 1-4 grades D-G (F) | 0.233 | 0.190 | 0.236 | 0.265 | 0.349 |
| 5+ grades D-G (M) | 0.187 | 0.138 | 0.185 | 0.225 | 0.326 |
| 5+ grades D-G (F) | 0.320 | 0.262 | 0.310 | 0.345 | 0.438 |
| Employment | | | | | |
| 1-4 grades D-G (M) | 0.276 | 0.302 | 0.336 | 0.286 | 0.201 |
| 1-4 grades D-G (F) | 0.240 | 0.261 | 0.287 | 0.232 | 0.141 |
| 5+ grades D-G (M) | 0.253 | 0.276 | 0.291 | 0.247 | 0.168 |
| 5+ grades D-G (F) | 0.214 | 0.235 | 0.244 | 0.197 | 0.116 |
| Government training | | | | | |
| 1-4 grades D-G (M) | 0.426 | 0.415 | 0.326 | 0.318 | 0.308 |
| 1-4 grades D-G (F) | 0.365 | 0.360 | 0.310 | 0.281 | 0.269 |
| 5+ grades D-G (M) | 0.364 | 0.354 | 0.294 | 0.257 | 0.240 |
| 5+ grades D-G (F) | 0.301 | 0.300 | 0.245 | 0.223 | 0.204 |

**Table 10 Predicted probabilities of destination for ethnic group**

| | unemployed | employed | Government training | Academic education | Vocational education |
|---|---|---|---|---|---|
| MALES | | | | | |
| White | 0.052 | 0.181 | 0.196 | 0.441 | 0.129 |
| Black | 0.046 | 0.008 | 0.175 | 0.486 | 0.212 |
| Indian | 0.043 | 0.033 | 0.074 | 0.642 | 0.208 |
| Pakistani | 0.051 | 0.041 | 0.053 | 0.654 | 0.201 |
| Bangladeshi | 0.021 | 0.160 | 0.057 | 0.548 | 0.213 |
| Other race | 0.041 | 0.129 | 0.128 | 0.522 | 0.179 |
| FEMALES | | | | | |
| White | 0.049 | 0.149 | 0.161 | 0.436 | 0.204 |
| Black | 0.038 | 0.034 | 0.115 | 0.532 | 0.280 |
| Indian | 0.032 | 0.029 | 0.073 | 0.621 | 0.245 |
| Pakistani | 0.059 | 0.054 | 0.063 | 0.642 | 0.182 |
| Bangladeshi | 0.034 | 0.043 | 0.085 | 0.659 | 0.180 |
| Other race | 0.051 | 0.113 | 0.119 | 0.509 | 0.209 |

APPENDIX
DEFINITION OF VARIABLES

| | |
|---|---|
| DESTIN4 | 0= out of work<br>1= employed<br>2=government training scheme<br>3 = full-time academic education<br>4= full-time vocational education. |
| **School type** | |
| COMPI6 | Attended comprehensive to age 16 (no sixth form) |
| COMP18 | Attended comprehensive to age 18 (with 6th form) |
| GRAMINDEP | Attended grammar school (selective)or an Independent school (private) |
| SECMOD | Attended a secondary modern school |
| **Attainment** | |
| GCSE5 | Individual gained five or more GCSE grades A-C |
| GCSE4 | Individual gained one to four GCSE grades A-C |
| GCSE3 | Individual gained five or more GCSE grades D-G but no A-C |
| GCSE2 | Individual gained one to four GCSE grades D-G but no A-C |
| NOGCSE | Individual gained no GCSE grades. |
| **Personal** | |
| PAKISTAN | Pakistani |
| INDIAN | Indian |
| BANGLAD | Bangladeshi |
| BLACK | Black |
| OTHERACE | Other race |
| WHITE | White |
| **Family** | |
| SOCHSG | Social housing, includes accommodation rented from local authority, accommodation rented from housing associations, lodgings and hostel. |
| PRIVHSG | Private housing includes owner occupied, rented privately and tied accommodation. |
| ALLWORK | Both Parents in full-time employment |
| WORKLESS | Both Parents Unemployed |
| ONEWORK | One Parent in full-time employment |
| SIBLNONE | Individual has no siblings |
| SIBLING1 | Individual has one sibling |

| | |
|---|---|
| SIBLING2 | Individual has two siblings |
| SIBLING3 | Individual has three siblings |
| SIBLING4 | Individual has four or more siblings |
| | |
| HHBOTH | Both parents present in household |
| HHMAONLY | Mother is only parent present in the household |
| HHPAONLY | Father is the only parent present in the household |
| HHOTHER | There are no parents present in the household |
| | |
| **Socio-economic** | |
| PASOC12 | Manager, Administrator, Professional |
| PASOC3 | Associate professional or technical |
| PASOC4 | Clerical or secretarial |
| PASOC5 | Craft or related |
| PASOC67 | Personal and protective services, sales |
| PASOC8 | Plant and machine operatives |
| PASOC9 | Other manual occupations |
| PASOC10 | Unspecified or unknown |
| | Classification of mother's occupation-MASOC is same as that for father |
| | |
| **Region** | |
| NORTH | North of England |
| YORKSH | Yorkshire or Humberside |
| NWEST | North West |
| EMID | East Midlands |
| WMID | West Midlands |
| GLONDON | Greater London |
| EANGLIA | East Anglia |
| SEAST | South East England |
| SWEST | South West England |
| WALES | Wales |
| | |
| **Labour Market** | |
| | |
| LURATE | Log of local unemployment rate |
| LVRATE | Log of local vacancy rate, job centre vacancy rates. |
| | |
| **Cohort** | |
| COHORT 2 | Those eligible to leave school aged 16 in 1985 |
| COHORT 3 | Those eligible to leave school aged 16 in 1986 |
| COHORT 4 | Those eligible to leave school aged 16 in 1988 |
| COHORT 5 | Those eligible to leave school aged 16 in 1990 |
| COHORT 6 | Those eligible to leave school aged 16 in 1991 |