The School Leaving Intentions at the Age of Sixteen: Evidence from a Multicultural City Environment

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ABSTRACT

The intention *to continue on to further study by students in full-time education is investigated with particular focus on the role of peer groups and educational experience. Using random effects nominal logit regression analysis and data from the Bradford Youth Cohort surveys, it is found that peer groups and the perceived importance of teachers' advice positively influence the decision to continue onto post-compulsory education. Boys intentions to leave the area in the future appears to be strongly related to the intention to stay on in education, illustrating a link between education and future geographical mobility. The importance of these variables varies between genders.*

1. INTRODUCTION

KENNETH BAKER, the 1987 Conservative government's Secretary of State for Education, said he wished the decision to stay on in post-compulsory education to become 'an almost natural thing for young people' and claimed that there was a need to change the attitude of both parents and children. There have been dramatic changes in the youth labour market since the mid 1980s (Dolton *et al.*, 1999) which have had a significant impact on the choices that young people make at age sixteen. Changes in the structure of employment, as well as in the structure of education, and particularly the qualifications system (the introduction of GCSEs being the most significant), have resulted in an increasing proportion of young people remaining in education post sixteen, with a much smaller number entering employment or Government supported training schemes. In the decade between 1986 and 1996, the proportion of young people remaining in full-time education rose by 23 percentage points, from 47 per cent to 70 per cent (Institute of Employment Research, 1999). The extent to which the changes were as a result of declining opportunities for young people within the labour market or of the increasing proportion of young people obtaining the grades necessary in their GCSEs to continue into further education is debatable, but both factors were certainly influential.

Young people seeking to leave education and enter full-time employment increasingly found their options limited as the number of manual jobs in the manufacturing sector declined and competition for service sector (often part-time) employment increased with the rise in the number of women entering or re-entering the labour market.

In addition, the skills sought by employers have increased considerably. Employers require higher levels of skills and qualifications from their employees and place particular emphasis on 'transferable' skills - communication, customer relations and IT skills - as well as attitudes and other qualities considered to contribute to 'employability' (Institute of Employment Research, 1999).

Partly as a result of these changes, the routes by which young people enter the labour market have become increasingly complex and varied (Dolton *et al.*, 1999). During the two years of post compulsory education, there is considerable movement both within and between the different options of education, employment, Government Supported Training (Modern Apprenticeships, National Traineeships and other Youth Training) and unemployment.

Morris *et al.* (1999, p. 33) argue that post-sixteen educational choices can be seen to represent young people acting upon their pre-sixteen educational attitudes, with these attitudes being formed by any of the above or other factors. The purpose of this paper is to present the results of an investigation into the decision making process of pupils' intention to stay on in post-compulsory education at the age of sixteen. In particular, we investigate the perceived importance of teachers' advice, the experience of completing work experience, the expectation of remaining in the local area after another five years, ethnicity, ability, type of school attended and peer group effects. This allows us to use the estimation to inform on policies that may be developed to increase participation.

The data are drawn from the Bradford Youth Cohort Study (1998 Sweep) which was collected at the school level and is arguably an important source of information about the attitudes of students in a vibrant and multicultural city environment. The structure of this paper is as follows. A review of the relationships identified in the theoretical and empirical literature on the decision to stay on in education is offered in Section II. A description of the data and the estimation technique are then presented in Section III. Results are presented in Section IV, policy implications are suggested in Section V and the conclusions are summarised in Section VI.

2. THEORY AND MODELLING

The theoretical model that underpins the empirical section is the standard model of human capital. This tells us that individuals make decisions regarding education by comparing the utility streams associated with leaving education to those from continuing and leaving at some time in the future. In such models extra schooling, which represents a cost to the individual in terms of foregone earnings and direct costs of education, enhances the individual's productivity and leads to higher wages in the future. It is by comparing these costs and benefits that the individual decides upon the optimal amount of schooling to undertake. One stays on until the economic costs of doing so become greater than the benefits. The individual's decision is a function of many factors; these include the expected future wage streams associated with leaving or staying, individual discount rates, attitudes to risk, consumption value of education, etc.

In modelling this decision we can follow two approaches. The structural approach, adopted by Willis and Rosen (1979), uses a two-stage modelling procedure. In the first stage a probit model of the decision to stay on is estimated, using variables assumed to determine expected wages and discount rates. This model is then used to compute extra regressors that correct for any sample selection bias in the education specific wage equations in the manner of Heckman (1976). Using the corrected equations predicted wages are computed for each of the options, and these are then included in the structural probit.

A second approach, adopted here, is less ambitious in scope and estimates a single equation logit model, where no attempt is made to compute the future expected wage. The estimates employ measures of ability and other variables as proxies for the expected difference in wages, discounted rates and other factors believed to affect the decision. Examples of this approach using UK data are Micklewright (1989), Rice (1987, 1996) and Thomas (2000).

3. REVIEW
School Factors
Various factors have already been shown to be important in the decision making process associated with staying on in post-compulsory education. Early contributions include Micklewright (1989) and Rice (1987, 1996) who found that ability, family background and type of school attended were all independently important in the decision to stay on. More recently, Cheng (1995) and Armstrong (1999) include school attributes such as overall GCSE performance and the school attendance rate. One would expect schools with better GCSE performance to be more likely to have pupils that decide to stay on. Armstrong (1999) finds this to be the case with pupils who attend schools with good overall GCSE performance being more likely to remain in full-time education. These effects are interpreted as picking up different school cultures in that better exam performance is linked to an academic culture that fosters staying on in education.

Selective schools might promote academic achievement that fosters the academic culture and encourages students to stay on. Jesson *et al.* (1991), Cheng (1995) and Mortimore *et al.* (1997) all found that the pupil's school type did in part explain post-sixteen destinations. Similarly, Smith and Tomlinson (1989) studied the choices of 3,000 pupils in 20 comprehensive schools and found that the school attended influenced exam results at age sixteen and, as a consequence, the decision to stay on.

Valuing the advice of teachers might be associated with a higher probability of staying on at school, whereas having undertaken work experience may reduce such likelihood. Although engaging in employment while in full-time education may have positive aspects, such as an opportunity to learn about the world of work, Martinez and Munday (1998) cite work experience as a contributory factor behind withdrawing from education. Maychell *et al.* (1998) suggest that the desire to get a job and earn money is a strong reason for leaving education, and this may be strengthened by work experience.

Gender differences
There may well be asymmetries between the decision making process of girls and boys. Mac an Ghaill (1994) argues that various elements inform how male students should act within schools, which he terms the 'macho-male' culture. This culture is associated with the perception of academic life being more suitable for females. If this is so, there should be no surprise that the decision to continue on to further study is based on a wealth of contrasting and contradictory forces which can confuse or strengthen the decision making process of boys. Such complex decision making processes have not been identified for females. The decision-making process for female pupils may therefore be based upon more straightforward choices, such as ability.

To further illustrate the potential for gender difference, some studies have found that males may be more influenced by peers than females. Burlingame (1967) found that adherence to peer culture was greater amongst boys than girls and that adherence to the peer group was negatively correlated with academic achievement. This would support the 'macho lads' culture

idea and could lead to the conclusion that masculinity is a non-academic trait that may result in males leaving academia early to nurture their masculine identity. Following this line of thought, it may well be the case that males have to look for intellectual approval before they decide to continue on to post compulsory education, and for this intellectual approval to be associated with masculinity.

Social class

Stressing the importance of family background, McWhirter *et al*. (1988) found that this factor had a significant effect on the decision to stay on, even when controls for academic achievement had been included. Emler and St. James (1990) found that school effects disappeared once fathers' social class was introduced into the model. However, Brooks (1998) presented results that suggest whilst staying on rates are increasing overall, the biggest increase is amongst those who had fathers in unskilled manual occupations; this could mean that the effects of social class may be diminishing.

However, even though all the aforementioned factors may well individually influence portions of the cohort, they should be modelled in a manner that incorporates both individual effects and the effects of clustering across schools. A multilevel statistical analysis may therefore be appropriate and would be in accordance with recommendations made by Brooks (1998).

4. DATA AND ESTIMATION

Data used in the analysis were taken from the Bradford Youth Cohort survey that was conducted in 1998; this is a separate entity from the national Youth Cohort Study. The principal object of the survey was to examine the experiences and attitudes of young people about a range of issues associated with education, qualifications and the labour market in order to inform the policy and practice of organisations including schools, the careers service and the Training and Enterprise Council. Both public and private schools were included in the sample; in total there were thirty-two schools with the highest staying or rate being 100 per cent and the lowest being 63 per cent. The full sample is comprised of 903 girls and 1130 boys.

Bradford is a multicultural city with a relatively large proportion of its population from the minority ethnic communities. Various studies have shown that ethnicity has an effect on aggregate participation rates. Shaw (1994) studied 2,571 school leavers in 6 urban areas around the UK and found that Asians were more likely than whites to participate in post-compulsory education. Drew (1995) reported that participation rates were higher for ethnic minorities than for white students. In addition Leslie and Drinkwater (1999) found that ethnic minorities were less likely to leave education than whites and even though Black Caribbean males had lower overall staying on rates in the raw data, they were more likely to stay on once characteristics were controlled for in their empirical model. Controls are therefore included to investigate whether differences across ethnic backgrounds persist when controls for ability etc. are included.

At the centre of the work was an administered questionnaire that was distributed in class time with students completing them under teacher supervision. As the data in the survey were collected at school level, the probability of an individual being included in the sample depends on the school that he or she attends. There exist two levels to the data here: the individual level and the school level. We cannot estimate a model of pupil choice, ignoring the fact

that the individual data are clustered within schools; to do so would be to assume independence of observations, which is unlikely to be true as individual observations are clustered within schools and are therefore likely to be correlated. The solution to this problem is to use a model in which the degree of dependency within clusters is jointly estimated with the usual model parameters. In the econometrics literature examples of such models are random or fixed effects models (see, for example, Greene, 1990); in the education literature these are referred to as multilevel models. In order to estimate the models we use a maximum likelihood estimator that incorporates random school effects to control for clustering. For a discussion of the model and the software package, see Hedeker (1999).

Collecting data at school level also allows for the construction of school culture variables similar to those of Cheng (1995) and Armstrong (1999). As we are able to identify the schools which each of the pupils attended, it is possible to construct a variable aimed at capturing school quality or peer group effects. The variable is calculated by aggregating data on each of the individuals in the school sample, but excluding the response of the particular individual. The measure we use is the average staying on rate of all of the pupils in the school, excluding the decision of the individual.

The dependent variable in the study is not the actual decision to stay-on, but the intention to stay on. The reason for modelling intention, as opposed to actual choices, allows us to use the estimation to inform on policies that may be developed to increase participation. The use of actual choices reflects not only intentions but also the outcome of exams. This muddies the effect that background variables have on the staying on decision and also the inferences that can be drawn. By using data on intentions it is possible to identify who is at risk, prior to exam success/failure. Using outcomes as the dependent variable is simply an assumption that intentions are inevitably realised.

Means of the variables used in the estimations are presented in Table 1. The mean intention staying on rate for boys was 78 per cent and 86 per cent for girls; this compares with national average realised rates of 83 per cent and 89 per cent for boys and girls respectively (DfEE, 1999). The models include a set of variables that are expected to be important in the staying on decision. Tastes for schooling are proxied by the variable *teachimp*. If teachers opinions were important in forming decisions, this is interpreted as a positive taste for schooling. A further variable that may be correlated with tastes is *workexp*. It is expected that, although significant proportions of girls and boys in the sample experienced work experience, this will be correlated with a negative taste for schooling (see Martinez and Munday, 1998). The variable, *local02*, is related to the link between education and mobility. It is hypothesised that those individuals who are less mobile (i.e. who anticipate that they will still be living in Bradford in five years time) are also less likely to undertake further education.

Ability controls included in the models pertain to key skills. Specifically we include variables that indicate whether or not the individual is good at English and mathematics. They are based on the individual's expected GCSE grade. The expected GCSE grades are formed from information supplied to the student by the teacher. The student then writes this down as their expected grade. The peer group effect is proxied by *stayav*. Individuals who attend schools where the majority of the student body is staying on will themselves be more likely to stay on. An alternative interpretation of this variable is that it is picking up school quality and the estimated effect in this instance is the effect of school quality on staying on.

Unfortunately the questionnaire did not include data relating to family background. This is a problem for the estimation because family background has been identified as an important factor by many of the studies discussed above. However, Foskett and Hesketh (1997) found that

Table 1:Variable definitions and means					
Variable	*Definition*	*Means: full sample*	*Means: Boys*	*Means: Girls*	*Expected Sign*
Stay-on	=1 if the individual intends to stay on; =0 else	0.818 (0.386)	0.777 (0.415)	0.864 (0.343)	
Teachimp	=1 if teachers played an important role in giving advice about options; =0 else	0.874 (0.332)	0.851 (0.357)	0.903 (0.297)	+
Workexp	=1 if the individual had completed some work experience during their final year; =0 else	0.889 (0.314)	0.849 (0.359)	0.939 (0.239)	-
Local02	=1 if the individual expected to be living locally in the year 2002; =0 else	0.771 (0.420)	0.758 (0.429)	0.788 (0.409)	-
Asian	Self reported ethnic group: =1 if Asian; =0 else	0.025 (0.156)	0.028 (0.166)	0.021 (0.144)	?
Black	Self reported ethnic group: =1 if Black; =0 else	0.033 (0.180)	0.038 (0.191)	0.028 (0.164)	?
Subcont	Self reported ethnic group: =1 if Indian, Pakistani, Bangladeshi; =0 else	0.259 (0.438)	0.250 (0.433)	0.270 (0.444)	?
Engabil	=1 if expected to achieve grades A*-C in English Language; =0 else	0.653 (0.476)	0.622 (0.485)	0.691 (0.462)	+
Mathabil	=1 if expected to achieve grades A*-C in Maths; =0 else	0.589 (0.492)	0.609 (0.488)	0.564 (0.496)	+
Stayav (%)	Expected staying on rate of the individual's schoolmates	81.209 (8.491)	81.881 (9.010)	80.368 (7.715)	+
Sex	=1 if male; =0 if female	0.556 (0.497	–	–	?

Note: Whites were the reference group for the zero-rated dummy variable for ethnicity. '?' implies that we are unsure of the effect on the staying on decision. Standard deviations are in parentheses.

while staying on in post-compulsory education has increased, the nature of the differences across social classes have changed. They found that working class pupils who stayed on were more likely to opt for vocational courses. Yet as vocational courses are less likely to lead to higher education, it suggests that social class differences may now be more important in the

decision at age eighteen rather than at age sixteen.

The models are estimated for the full sample and then for boys and girls separately. The reason for doing so is that it is possible that the factors which affect the decision to stay on may differ across gender. For example, using data on intention to stay on, Thomas (2000) found that there were significant differences across gender relating to peer group effects. The most important factor affecting the decision to stay on for girls was ability, and whilst some support was found for the influence of peer groups, the variable had little effect on predicted staying on probabilities. This was in stark contrast to the situation for boys. Again ability was found to be important but predicted staying on probabilities were found to be highly sensitive to the peer group variable.

5. RESULTS

Table 2 presents the random effects logit results for the probability of staying on in school at age sixteen. Columns one and two provide estimates of the model for the full sample, including a dummy variable to account for gender differences, columns three and four contain those for boys and the results for girls are included in columns five and six. The first model in each case is the simple logit regression assuming independence of observations. This is included to afford a comparison of the results when we do and do not take into account the data clustering.

Examining the results for the full sample first, it is clear that there are differences attributable to gender. Boys are found to have a lower likelihood of staying on than girls. There is also clear evidence that ability is an important factor in the decision to stay on; greater ability in maths and English both significantly increase the probability of staying on. In line with other studies, we also find that ethnic minorities also have higher predicted staying on probabilities, other things being equal.

The taste variables have the expected sign and are significant. Tastes for schooling, as represented by the importance of teachers' opinions in decision making, is positive and significant; having had work experience has the expected sign but is significant only at the 10 per cent level. Expecting to live locally in the future significantly reduces the probability of staying on. Having peers who are staying on significantly increases the probability of staying on in our random effects models but not in the logit estimations. This could also be interpreted as a school quality effect, attending good quality schools, as proxied by the school staying on rate, increases the probability of staying on.[2]

Turning to the estimates for boys and girls, we can see that the individual explanatory variables are qualitatively similar (but recall that girls are more likely to wish to stay on overall). Tastes for education are found to be important, slightly more so for girls, as is ethnic background. The ability controls are as expected, slightly higher in magnitude to girls although this difference is not statistically significant.

The estimated effect of ethnic background is of some interest. White pupils have significantly lower intentions to stay on, even after controlling for the other factors. This is possibly related to push factors identified in Leslie and Drinkwater (1999) where higher unemployment rates result in higher predicted staying on probabilities (Owen *et al.*, 2000).

Of some interest is the fact that the estimated peer group/school quality effect actually increases when we control for clustering, which is slightly counter-intuitive. One would think that such a variable would in fact cease to be important once the clustering had been taken into account,

Table 2:Estimated equations using intentions: Logistic versus random effects

Variable	Full sample (n=2033)		Boys (n=1130)		Girls (n=903)	
	1	2	3	4	5	6
Constant	2.568	-1.460	-3.086	-3.284	-0.158	0.987
	(1.506)	(1.880)*	(3.139)***	(2.814)***	(0.116)	(0.192)
Teachimp	0.775	0.492	0.460	0.382	0.574	0.660
	(4.043)***	(2.810)***	(2.162)**	(1.730)*	(1.782)*	(2.136)**
Workexp	-0.345	-0.415	-0.378	-0.424	-0.421	-0.091
	(1.220)	(1.678)*	(1.286)	(1.447)	(0.864)	(0.097)
Local02	-0.380	-0.411	-0.376	-0.375	-0.486	-0.300
	(2.528)**	(2.274)**	(1.657)*	(1.876)*	(1.527)	(1.000)
Asian	1.785	1.671	1.803	2.032	1.380	2.728
	(2.672)***	(2.844)***	(2.523)**	(2.451)**	(1.329)	(2.005)**
Black	0.741	1.289	1.417	1.375	0.968	4.167
	(1.591)	(3.126)***	(2.948)***	(2.739)***	(1.204)	(4.361)***
Subcont	1.232	1.487	2.043	1.949	0.806	0.698
	(4.717)***	(7.458)***	(6.979)***	(4.195)***	(2.816)***	(3.709)***
Engabil	0.677	0.691	0.670	0.656	0.720	0.698
	(3.497)***	(4.844)***	(3.522)***	(2.969)***	(3.287)***	(2.380)**
Mathabil	0.953	0.967	1.024	0.961	0.880	1.105
	(4.513)***	(6.608)***	(5.361)***	(4.154)***	(3.796)***	(3.673)***
Stayav	-0.010	0.031	0.041	0.046	1.138	0.028
	(0.535)	(3.569)***	(3.669)***	(4.154)***	(0.255)	(5.325)***
Sex	-0.995	-0.679	-	-	-	-
	(4.861)***	(5.128)***				
Log likelihood	824.7	807.4	475.7	469.2	324.1	314.8

Notes: The dependent variable is the intention to stay-on in full-time post-compulsory education. *t*-statistics are in parentheses with *, ** and *** implying significance at the 10%, 5% and 1% level respectively.

as it might be expected that this was in fact picking up some of the variation attributable to the clustering. That this is not the case increases the evidence that the peer group/school quality effect is important.[3]

In order to further utilise the data, it is possible to consider realisations of the decision to stay on. To shed light on this issue, we use data that originates from a follow-up survey, namely the 1999 sweep of the same pupil cohort. The data relating to the actual decision are

available for the cohort who chose to undertake their sixth form studies at the schools included in the sample or who chose to remain in the study if they left.[4] There is significant attrition across this sample. Of the 2033 individuals initially included in the estimation, we now have data on 1337, which is roughly two thirds of the initial sample. In terms of realisations, 84.4 per cent actually stayed on and 15.6 per cent left. Of the 1337 students that remain in the sample, 87 per cent intended to stay on and 13 per cent intended to leave. Slightly less then 10 per cent changed their initial choice. It would be interesting to know the reasons why these individuals altered their choice but unfortunately no questions were asked regarding this issue. This represents considerable attrition, and this attrition is unlikely to be random. There is likely to be a considerable self-selection problem, and in addition to this we do not have data on those who stayed on, decided to continue their study at colleges of further education but chose not to fill in the questionnaire in the second sweep. The results of estimating the above model on realisations are presented in Table 3.

The results for the sample of pupils for which we have realisation data are presented in column one. Expected grades are employed as a regressor to limit the potential endogeneity that could result if actual grades were employed. The *stayav* variable continues to employ the intentions of peers to continue on to post-compulsory education. The signs and magnitude of the coefficients are on the whole the same as the results presented in Table 2. Only living locally in the future, being Indian/Pakistani/Bangladeshi and able at maths significantly affect the staying on probability, all other variables being insignificant at conventional levels. The situation is similar if one considers the results for boys and girls in columns two and three. There is some difference, notably the peer group variable and the importance of teachers in the decision, but on the whole the results are in stark contrast to those presented in Table 2. A possible reason for the reduction in the number of significant regressors could be attrition. It is notable that there are now more girls than boys in the sample, whereas the opposite was true initially. This suggests that either boys are more likely to non-respond, or are more likely to continue their education at institutions other than schools. The reduction in the influence of the ethnic controls could also be evidence of the above.

6. POLICY IMPLICATIONS

The results suggest that, in seeking to increase participation in education and training post sixteen, gender is one of the key factors that needs to be taken into consideration. There are strong suggestions that the factors that influence the decision making processes of boys are significantly more complex than those of girls, with males more susceptible to a range of external influences than females. This has important implications for teachers and those who provide advice and guidance to young people, including the soon to be established ConneXions Service.[5] People need to be aware of these differences and ensure that the programmes and projects they undertake in order to facilitate effective and appropriate decision making are not 'gender blind'. Almost all of the factors identified in the analysis have a more significant and larger impact on males than females.

The influence of the peer group/school quality variable on males is of greater importance in relation to the way that boys are treated in schools than for girls. This suggests, for example, that in order to increase the propensity to remain in education, pupils need to be in contact with others who share that intention. The grouping together of males who may be amongst the most likely to leave education may, therefore, reinforce that likelihood further. As

Table 3: Means and estimated equations using realisations: random effects only

	Means			Estimated coefficients		
	Full sample (n=1337)	Boys (n=615)	Girls (n=72)	Full sample (n=1337)	Boys (n=615)	Girls (n=722)
Constant				-1.243 (0.576)	-2.759 (2.119)**	-2.436 (1.109)
Teachimp	0.892 (0.311)	0.872 (0.335)	0.909 (0.288)	0.573 (1.355)	0.800 (2.198)**	0.576 (1.040)
Workexp	0.888 (0.316)	0.842 (0.365)	0.927 (0.261)	-0.021 (0.048)	-0.428 (0.941)	0.730 (1.373)
Local02	0.735 (0.441)	0.719 (0.45)	0.749 (0.434)	-0.868 (2.273)**	-1.096 (2.871)***	-0.625 (1.274)
Asian	0.017 (0.13)	0.026 (0.159)	0.010 (0.098)	0.357 (0.386)	0.113 (0.099)	0.409 (0.265)
Black	0.022 (0.146)	0.020 (0.138)	0.024 (0.152)	0.978 (0.661)	1.872 (1.511)	0.614 (0.610)
Subcont	0.292 (0.455)	0.267 (0.443)	0.314 (0.465)	1.319 (2.173)**	1.807 (4.521)***	1.169 (1.448)
Engabil	0.719 (0.45)	0.696 (0.46)	0.738 (0.44)	0.781 (1.643)	0.614 (2.073)**	0.974 (2.225)**
Mathabil	0.637 (0.481)	0.667 (0.472)	0.612 (0.488)	1.080 (2.939)***	1.266 (4.293)***	0.911 (2.253)**
Stayav (%)	81.567 (8.457)	82.49 (9.149)	80.78 (7.74)	0.023 (1.193)	0.044 (2.837)***	0.027 (1.109)
Sex	0.46 (0.50)			-0.264 (1.136)		
Log likelihood				470.693	213.500	253.159

a result, it is important that boys with the potential to remain in education, but not necessarily the inclination, are kept in contact with those whose intention is to stay on. This raises important issues around the use of mixed ability classes, which, according to the data, will have the potential to increase the staying on rates amongst those with relatively low levels of attainment and aspirations, but, therefore, could also jeopardise the staying on decisions of those with higher level aspirations.

That young males who do not stay on in education tend to have relatively low aspirations is reinforced by the association between mobility and staying on rates. There is clearly a significant issue about widening the horizons of some young males and encouraging them to seek opportunities that may seem beyond their immediate grasp.

Low aspirations may also be a factor in the association of work experience with the likelihood of leaving education, as some pupils fail to take a longer-term view of the options that are available to them and the potential impact that these could have on their future opportunities in the labour market. Instead, they may choose the option that appears to offer the most immediate rewards; this could be reflected by a weak coefficient for work experience. Again, there is an important role to be played by teachers and providers of advice and guidance in raising aspirations and helping to develop a wider perspective about future opportunities.

In addition to raising aspirations, raising awareness of the different options at age sixteen may be an important factor in increasing staying on rates amongst young males, and particularly amongst young white males who have been shown to have a greater propensity to wish to leave education.

Whilst raising aspirations and awareness may be important factors in encouraging more boys to remain in education, raising attainment appears to be a key factor that is associated with both males and females, indicated by the significance of ability in maths and English in the staying on decision. The linkages between attainment and continuing education are strong and proven, and as a result there is a need to continue the focus on raising achievement amongst all young people in order to facilitate a higher progression rate from pre- to post-sixteen education.

Many of the factors that shape intentions are reflected in realisations. Boys appear to have been highly influenced by the staying on rate of their peers when they were shaping their intentions. Similarly, the link between education and mobility and the perceived importance of teachers' advice were also very influential for boys, but only the latter is true for girls.

7. CONCLUSIONS

The purpose of this paper was to report the results of an investigation into the determinants of the intention of pupils at the age of sixteen to stay on in post-compulsory education. The focus of the analysis was on peer group effects and educational experience effects for boys and girls, although the perceived importance of teachers advice, the experience of completing work experience, the expectation of remaining in the local area after five years and ability were also incorporated into the study.

The data are drawn from a survey of schools across the English City of Bradford that allows us to control for clustering that is the result of attendance at particular schools. Two models are employed: ordinary logit and multilevel (or random effects) regression analysis. Results are compared to identify whether the method of analysis produces different results.

Our results suggest that ability and teachers' advice are important factors contributing to the intention of pupils to stay on. Whether the pupil intends to stay in the area after another five years appears to be important in the decision making process of boys over girls. When the clustering is incorporated into the model it appears that peer groups are not important factors for the decision making process of girls, whereas this is always the case for boys.

When comparing intentions and realisation, ability appears to be the common push

factor for both boys and girls. Being good at English language appears to have a stronger effect for girls than boys, while being good at maths has the reverse gender effect. The taste for the schooling, proxied by the impression of the teacher, is significant only for boys, and the link between mobility and education appears to be much stronger for boys than for girls.

ENDNOTES

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2. We included several variables aimed at capturing a school effect. Dummies for type of school were included but these added little to the empirical analysis and were omitted from the final specifications. However, unobserved heterogeneity in quality across schools is captured in the random effects. The inclusion of dummy variables for schools in the random effects estimation procedure bias the results because of collinearity between the random effects and the included variables.

3. Some further evidence that relates to the appropriateness of the random effects procedure can be gleaned from the coefficients on the peer group/school quality effect in the logit results. The estimated coefficient on this variable is large in the case of girls but insignificant, is incorrectly signed in the pooled sample and positive and significant in the case of boys. This contrasts with the results from the random effects regression where the results, whilst being different in each of the regressions are roughly the same magnitude.

4. An added problem is that some schools chose not to participate in subsequent sweeps. This further restricts the comparison of the realisation-intention identifiable relationship. Few individuals who left school decided to reply to a postal follow up. This will bias the results in favour of those who did stay on.

5. The ConneXions Service is the new advice, guidance and support service available to all 13-19 year olds. The service will be delivered primarily through a network of personal advisers drawn from public, private, voluntary and community organisations. These organisations will work together to form a ConneXions Partnership. The aim of the ConneXions Service is to raise the aspirations of all young people and to help them to realise their potential. Personal advisers will work closely with young people depending on their identified needs. They will offer general advice and support, including careers advice, to all young people; provide more in-depth support for those who require it; and provide integrated and specialist support for the most disadvantaged and disaffected.

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