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BEATING THE ODDS: EXPLORING THE IMPACT OF SOCIAL RISK ON YOUNG PEOPLE'S SCHOOL-TO-WORK TRANSITIONS DURING RECESSION IN THE UK

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Drawing on nationally representative data collected for two age cohorts in the UK, this paper a) assesses the effect of multiple independent socioeconomic risk factors in shaping the transition from school to work; and b) identifies potential protective factors enabling young people to beat the odds. By comparing experiences and findings across two cohorts we assess the generalisability of findings across contexts, i.e. the 2008 and 1980s recessions. The results show that some young people exposed to even severe socioeconomic risks avoid being NEET (not in education, employment or training). Factors that appear to reduce the cumulative risk effect in both cohorts include prior attainment, educational aspirations and school engagement, as well as the social mix of the school environment.

Keywords: Human capital skills; occupational choice; labour productivity

JEL Classifications: J24

1. Introduction

The transition from school to work is one of the most salient developmental tasks of adolescence. Destination states in the years immediately following the end of compulsory education are highly persistent (Crawford, Duckworth, Vignoles and Wyness, 2011). For example, youth unemployment carries long-term wage penalties (Gregg and Tominey, 2005), and low educational attainment is one of the key mechanisms in the intergenerational transfer of disadvantage (Ermisch, Jäntti and Smeeding, 2012). Recent evidence demonstrates that despite the growing participation of young people from relative disadvantaged socioeconomic backgrounds in higher education, they remain over-represented among early labour market entrants (Furlong and Cartmel, 2007) and those who are not in education, employment or training – NEET (Crawford *et al*., 2011). Moreover, in an increasingly competitive labour market, it is those with multiple disadvantages who are likely to face the greatest difficulties (Scarpetta, Sonnet and Manfredi, 2010). However, while the role of social disadvantage in young people's life chances is well established, we know little about the relative and independent effects of different socioeconomic risk factors in shaping school-to-work transitions.

The current study assesses the relative role of parental education, parental employment, family structure and housing, as well as their combined impact, on young people's employment status at age 18. To gain a better understanding of the potential generalisability of our findings and to add to the understanding of the impact of financial crises (past and present) on the transition into early adulthood, we compare the role of these factors in different age cohorts who have both experienced a major economic recession at the time when they were reaching compulsory school leaving age. Furthermore, while many studies have reported associations between socioeconomic disadvantage and youth unemployment or NEET status, overcoming disadvantage is a far greater challenge. Few studies have established factors which can help young people overcome socioeconomic risk. Thus the second aim of this study is to identify potentially protective factors reducing the risk for some young people of becoming NEET.

Drawing on nationally representative data collected for two age cohorts born in 1989/90 (the Longitudinal Study of Young People in England, LSYPE) and in 1970 (British Cohort Study, BCS70), we adopt an ecological approach to understanding individual adaptation in a

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changing social context. Our analysis is informed by a contextual-systems model of human development (Bronfenbrenner, 1979; Bronfenbrenner and Morris, 2006), emphasising the linkages between change at the macro level and individual adaptation (Elder, 1998). Both cohorts have to make their transition to independent adulthood during a time of economic recession. While the BCS70 cohort reached school leaving age at the height of the 1980s recession, cohort members in the LSYPE born in 1989–90 grew up during a time of relative economic stability, yet have to face a changing labour market due to the 2008 global economic crisis. Our aim is to investigate the ways in which individuals negotiate risk and changing education and employment opportunities. We map variations in school-to-work transitions measured at age 18, focusing in particular on young people making the step into further and higher education, those entering employment after completion of compulsory education, and those who are not in education, employment or training (NEET).

Youth transitions in context

There is no doubt that the most recent recession, like those previously, has hit the youth population very hard (Ashton and Bynner, 2011; Scarpetta, Sonnet and Manfredi, 2010). For example, in 1986 the unemployment rate of 16–25 year olds was 19 per cent, compared to 15.1 per cent in 2008, and 20.5 per cent in 2010 (Labour Force Survey, 2011). During the 1970s and into the early 1990s, declines in the demand for low-skilled workers were coupled with an increasing demand for labour market flexibility (Dex and McCulloch, 1995). Furthermore, the expansion of education resulted in a lower proportion of 16 year-olds entering directly into employment and a larger proportion continuing instead in full-time education or undertaking youth training (Andrews and Bradley, 1997; Furlong and Cartmel, 2007). Comparing changes in the pathways of young people between ages 16 and 21 in the 1958 National Child Development Study (NCDS) and BCS70 cohorts, Schoon *et al.* (2001) find that proportionately more BCS than NCDS cohort members experienced spells of unemployment in the transition from school to work. The authors suggest this reflects an increasing polarisation in youth transitions over time and argue that entry to the labour market is harder and takes longer for young people making the transition into work during a period of economic downturn. Using the British Household Panel Survey (BHPS), Francesconi and Golsch (2005) similarly show that non-standard entry into the labour market became increasingly common in Britain following the late 1980s recession, particularly among the more recent cohorts. Using the more recently born LSYPE, Crawford *et al.* (2011) highlight the increased probability of poor labour market outcomes for young people who are NEET in the years immediately following compulsory schooling, particularly those who are persistently NEET between the ages of 16 and 18/19. More generally, Bell and Blanchflower (2009) find evidence that spells of unemployment whilst young have social as well as economic costs, carrying scarring effects for a number of outcomes including happiness, job satisfaction and health.

Socioeconomic adversity

Both parental social class and education have been shown to have a major impact on school-to-work transitions, with young people from high socioeconomic status (SES) backgrounds being more likely to stay on in full-time education after the end of compulsory schooling than their less privileged peers (Micklewright, 1989; Rice, 1999; Dickerson and Jones, 2004), consequently securing good jobs and reducing the risk of substantial unemployment or teenage motherhood (Schoon *et al.*, 2001; Schoon, Martin and Ross, 2007). By contrast, while young people from low SES families are increasingly staying on in education, they continue to be over-represented among early labour market entrants (Furlong and Cartmel, 2007) and NEET populations (Crawford *et al.*, 2011). Worklessness has similarly been highlighted as an increasingly important issue in understanding individual life chances. At the turn of the millennium, workless household rates were double those of the late 1970s (Gregg and Wadsworth, 2001). More recently, Macmillan (2010) shows that the intergenerational correlation in worklessness in the UK is large and has increased over time.

Socioeconomic disadvantage is also linked to difficulties associated with living in social housing (Hills, 2007) – such as lower income, lower qualifications and early parenthood – and there is strong continuity between living in social housing in childhood and in adulthood (Hobcraft, 2002; Sigle-Rushton, 2004). The link from poor early labour market experience and social housing is also evident; the odds of having experienced NEET in the preceding years are eleven times higher for BCS members in social housing at age 30 than for the rest of cohort members (Feinstein *et al.*, 2008). Early motherhood is a further barrier to employment for young women (Freeman and Wise, 1982; Moffit, 2002); on average, children of young mothers score more poorly on cognitive measures and are at higher risk of poor school attainments than children of older mothers (Feinstein, Robertson and Symons, 1999; Furstenberg, Brooks-Gunn and Morgan, 1987; Hawkes and Joshi, this issue). Similarly, having a single parent has been linked with poor educational outcomes (Haveman and Wolfe, 1995). Young women are often at a particular

disadvantage when they enter the labour market (Bell and Blanchflower, 2010); while the expansion of education saw increasing numbers of women enrolling (Schoon *et al*., 2001), early employment opportunities continue to favour men (Crawford *et al*., 2011).

Previous evidence has shown that social risks do not occur in isolation, and that cumulative disadvantage matters more than any single factor in shaping development (Duncan and Brooks-Gunn, 1997; Huston, McLoyd, and Coll, 1994; Rutter, 1979). However, most studies have focussed on specific indicators of disadvantage, such as low education, rather than the relative and independent impact of different interlinked risks. These risks are often difficult to disentangle. For example, Hills (2007) finds that a third of people living in social housing have incomes within the poorest fifth of the income distribution and are simultaneously more likely to be lone parents and less likely to be employed. The current study therefore examines the relative effects of a number of risk factors as well as using a cumulative risk approach to explore the relationship between social disadvantage and young people's early transitions. Moreover, the existing evidence concerning disadvantage is quite diverse, either focussing on socioeconomic risk or family structure. We further seek to bring these issues and divergent literatures together.

Protective factors: Beating the Odds

Not all young people are affected in the same way by the experience of adversity and disadvantage. Some seem to be able to 'beat the odds', to avoid negative outcomes or do better than expected, a phenomenon also referred to as resilience (Luthar, Cicchetti & Becker, 2000; Luthar, 2003; Masten, 2001; Rutter, 1987; Schoon, 2006). Research on resilience highlights key factors, such as individual characteristics, support from significant others and the wider social context, that might help young people beat the odds and avoid negative outcomes such as becoming (and remaining) NEET. For example, achievement in both reading and mathematics during middle childhood is a powerful predictor of a host of adult outcomes including completed schooling, earnings and social inclusion (Currie and Thomas, 1999; Heckman, Stixrud and Urzua, 2006). Mathematics skills in particular have been linked to adult success and play a key role in the intergenerational transmission of advantage (Duncan *et al*. 2012). Furthermore, school motivation is associated with successful career development across cultural contexts (Fredericks *et al*., 2004; Schoon, 2008; Wang and Holcombe, 2010). It is also associated with early school leaving and early drop out, and is among the most promising leverages for interventions designed to prevent it (Appleton *et al*., 2006). Young people's aspirations also play an important role in predicting future educational and occupational choices (Bond and Saunders, 1999; Crawford *et al*., 2011; Schoon *et al*., 2007; Strand, 2007). Similarly, parents are important socialisers of aspirations and values related to achievement and young people's occupational visions of themselves (Eccles, 1993; Strand, 2007), providing key support for their children's education (Schoon, 2006; Pilling, 1990). In addition, early engagement with the labour market has been found to play a protective role in helping young people make successful school-to-work transitions (Mortimer, Harley and Aronson, 1999; Mortimer and Staff, 2004) and preventing young people from the risk of being NEET later on (Crawford *et al*., 2011).

Finally, schools are also a salient social context for young people. Children in schools with a high proportion of families from low SES or low income households, for example, do less well than those in schools with more advantaged peer intakes (Feinstein and Symons, 1999; Mortimore, Mortimore and Thomas, 1994; Robertson and Symons, 2003) and, in general, the differences between these groups tend to increase, rather than decrease, over time (Strand, 1999). In fact, positive school experiences can act to counterbalance the disadvantage experienced in the family context and promote the development and maintenance of individual capabilities and competencies (Schoon and Bartley, 2008; Pilling, 1990; Rutter, 1989; Van Ryzin, 2011).

The present study

This study adds to previous research in a number of ways. First, by considering two cohorts potentially entering the labour market during recession, we are better able to compare the shift in prevalence of individual risk factors across the two studies and generalise findings concerning specific risk and protective effects. Our analysis is closely matched across the two datasets in order to facilitate such comparison. Second, our focus on social adversity is more broadly defined to include social housing and parental worklessness alongside more frequently used risk indicators such as low parent education. This approach also reflects more accurately the everyday experiences within the family context than do studies using income or social status as sole indicators of socioeconomic disadvantage. Third, we consider both the relative and combined role of different risk factors to gain a better understanding of risk processes. Finally, we examine potential protective factors which may help young people overcome experience of social adversity and beat the odds stacked against them.

Building on the literature reviewed above, we test

the following hypotheses. First, we expect that the experience of socioeconomic adversity, in particular cumulative adversity, increases the likelihood of a young person becoming NEET and decreases the likelihood of being in employment and particularly of being in full-time education at age 18. We expect to see evidence of intergenerational continuity with respect to education and work. In line with Davis-Kean (2005), who demonstrates the importance of parents' education in the intergenerational transmission of advantage over and above that of income or race, we expect that parental education will be relatively more important than parents' social class, especially in the later born cohort. Finally, we predict that indicators of individual competencies (prior achievement and school motivation), parental support for education, and a more advantaged school composition can reduce the risk effect associated with cumulative disadvantage, especially regarding the likelihood of becoming and remaining NEET.

Methods

Data

British Cohort Study (BCS). The BCS is a longitudinal study following into adulthood all the individuals born in Great Britain during one week in 1970 (Bynner, Ferri and Shepherd, 1997, Elliott and Shepherd, 2006). Data collection sweeps for BCS took place when the cohort members were aged 5, 10, 16, 26, 30, 34, 38 and most recently 42 years. The birth sample of 17,196 infants was approximately 97 per cent of the target birth population. The current sample is made up of 12,744 individuals (52 per cent male) who have complete data at birth and work history data measured in early adulthood in order to construct the age 18 economic activities.

The Longitudinal Study of Young People in England. The LSYPE is a large-scale panel study which began in February 2004, when the sample of young people was aged between 13 and 14 in Year 9. It includes students attending both maintained and independent schools, as well as pupil referral units. All sample members were born between 1 September 1989 and 31 August 1990. Annual follow-up studies were conducted between 2004 and 2010. Our analytic LSYPE sample is made up of 9,872 individuals (52 per cent male) who were included in the first sweep and have complete activity history data between ages 16 to 18 years.

Measures

Both datasets are extremely rich and enable us to consider a range of factors, including family background, a range of potential protective factors and outcomes at age 18.

Main economic activity. Young people's activity status is based on monthly activity history data collected as part of each study. In the BCS, activity histories were collected retrospectively at age 30 (Galindo-Rueda, 2002), whereas in the LSYPE they were collected as a routine part of each data sweep. In both studies, we use economic activities reported in the October when young people are aged 18, i.e. 1988 for the BCS and 2008 for the LSYPE.[1] Main economic activity is broadly reported and captured by three dichotomous variables: young person is in full-time education; young person is in employment; young person is NEET. Using the history data, we also use a binary indicator of whether the young person has been NEET for six months or more between the ages of 16 and 18.

Indicators of socioeconomic risk

Indicators of risk in childhood are taken from the survey at age 10 in BCS and from the first wave of LSYPE at age 13/14.

Low parent education. The measure of parents' educational qualifications is based on mother and father/partner highest level of educational qualifications. Low parent education is coded as 1: No qualifications; 0: Level 1 qualifications and higher. Highest household education is the combination of both parents' highest level of qualification (comprising academic and vocational qualifications).[2]

Low parent social class. The BCS social class data are based on the Registrar General's Social Class based on Occupation (RGSC) and the LSYPE's data are based on the National Statistics Socio-economic Classification (NSSEC). For both datasets, social class is coded as the higher of the mother or father/partner.[3] This variable is coded as 1: Partly skilled/Semi-routine and Unskilled/Routine occupations; 0: Skilled, Intermediate, Managerial and Professional Occupations.

Lone parent family. This variable is coded as 1 if the young person lives in a lone parent family and 0 if two parents are present at age 10 or 14 respectively.

Teen parent. This variable is coded 1 if the cohort member was born to a teen mother and 0 otherwise.

Social housing. Housing tenure is coded as 1 if the young person lives in council or another form of social housing and 0 if otherwise in the relevant survey.

Workless family. Using both mother and father/partner reported data at age 10 (BCS) and age 14 (LSYPE) surveys, this variable is coded as 1 if both parents are unemployed or economically inactive and 0 where at least one parent

is working. In single parent families, the variable is coded 1 if that parent is not working and 0 if they are.

Control variables

Our multivariate analyses control for gender, income, ethnicity and region. We selected these covariates as they can be considered the most exogenous to the staying on decision made at 16 but are nevertheless likely to be associated with educational and occupational choices.

Gender. In both cohorts, gender is coded as 1 for females and 0 for males.

Income. In both cohorts income is used as a control variable to ensure that the socioeconomic risk indicators are not merely proxies for income. In the BCS, gross weekly family income, before deductions, was measured in bands at age 10 and 16. Our analysis takes the midpoint of each band, averaged across the two time points, and log transforms this information to normalise the distribution. The LSYPE gross weekly income was reported by the main parent at wave 1 (age 13/14) and is again log transformed.[4]

Ethnicity. The BCS sample is predominantly white (about 3 per cent are from Indian, Pakistani, Bangladeshi, African, Caribbean, Chinese or mixed origin), reflecting the ethnic composition of the UK population at the time (Ferri, Bynner and Wadsworth, 2003), and is coded 1 where the cohort member is white and 0 otherwise. The later born LSYPE reflects the current ethnic make-up of England and includes sample boosts and weights to ensure representation. Ethnicity is included as a categorical variable and covers the following groups: white (coded as 0); mixed (1); Indian (2); Pakistani (3); Bangladeshi (4); Black Caribbean(5); Black African (6); Other (7).

Region is based on the broad government office regions to take into account geographical variation in the labour market.

Potential protective factors

Reading/English. The BCS assesses reading using the 67 item Shortened Edinburgh Reading Test which examines children's vocabulary and word recognition, as well as their understanding of syntax, sequencing, comprehension, and retention and has a reported reliability of 0.96 (Butler *et al.*, 1982; SSRU, 1982). The LSYPE contains Key Stage 2 linked data from the National Pupil Database. The English assessment is marked out of 100 and consists of three tests: a reading test, a writing test and a spelling test.

Mathematics. Achievement in mathematics for the BCS was measured by the 'Friendly Maths Test' developed by the University of Bristol, specifically for the age 10 sweep of the BCS, in collaboration with specialists in primary mathematics (SSRU, 1982). It was piloted in two halves in Bristol primary schools, each of over 400 children, and consists of 72 multiple choice questions, with a reported reliability of 0.93. In LSYPE the KS2 mathematics test is marked out of 100 and consists of three separate tests: a calculator paper, a non-calculator paper and a mental arithmetic test. Additional marks for both English and mathematics can be gained through pupils sitting extension papers with marks added onto their individual result to minimise any possible ceiling effects.

Both reading and mathematics achievement scores are standardised with a mean of zero and a standard deviation of 1.

YP wants to stay on post-16. Measured at age 16 in the BCS and age 14 in the LSYPE, young people were asked whether they planned to stay on in post-compulsory schooling. This variable is coded 1 where the individual plans to stay on and 0 where they intend to leave.

Parent wants YP to stay on post-16. Measured at age 10 in the BCS and age 14 in the LSYPE, parents were also asked about their educational aspirations for their children. Again, this variable is coded 1 where the parent wants their child to stay on in post-compulsory education and 0 where they want them to leave.

School motivation. In the BCS at age 16, cohort members completed a 5-item school motivation scale including items such as school is largely a waste of time; I do not like school. The five items were measured on a 3-point Likert scale in BCS70 with good internal consistency (alpha = 0.76). The scale's validity has been established, showing, for example, significant correlations with educational expectations (Schoon *et al.*, 2007) and time spent in education (Schoon, 2008). In the LSYPE, this is a score based on summed answers to twelve attitudinal questions measured at age 14. Questions include: I am happy at school; school work is worth doing; I work as hard as I can at school; the work I do in lessons is interesting to me; I get good marks for my work. For both studies, the scale score was z-standardised to ensure comparability of coefficients across cohorts. A high score indicates positive school motivation and a low score school disengagement.

YP has a part-time job. This is a binary indicator of whether a young person has a part-time job measured at age 16 in the BCS and 14 in the LSYPE.

YP does not truant. This variable is a dichotomous indicator of whether a young person truants frequently (coded 1) or not, measured at age 16 in the BCS and 14 in the LSYPE.

Proportion of pupils at school from low SES families/ eligible for free school meals. Measured at age 10 in the BCS and 14 in the LSYPE,[5] this variable captures the proportion of pupils in the cohort member's school who are not from low SES families (BCS) or not eligible for free school meals (LSYPE) and ranges from 0 to 1.

Missing data

To account for missing data in each dataset, we used multiple imputation by chained equations (ICE) as implemented in STATA (Royston, 2005) to generate 20 multiply imputed datasets for each study.

Results

Table 1 summarises the main economic status of young people in the two cohorts when they are aged 18, which in the BCS was in 1988 and in the LSYPE was in 2009.

In the BCS, the majority of young people are in full-time employment (69 per cent) and about 7 per cent are categorised as NEET. Compared to BCS, considerably more young people in LSYPE were categorised as being NEET (16.3 per cent), fewer young people were in employment, and more participated in full-time education at age 18.

Table 2 shows the incidence of the six dichotomised measures of social risk in the two cohorts and their correlations.

Parents in the later-born LSYPE were better educated. While in BCS 40 per cent of young people lived in families where neither parent had any educational qualifications, in LSYPE only 12 per cent of parents have no education qualifications. Despite this, similar numbers of young people grow up in low social class households across the two studies. In the twenty years spanning the two cohorts, the proportion living in social housing has fallen by around a third – reflecting policy changes in housing and initiatives such as the Right-to-Buy scheme introduced in the 1980s. However, at the same time, the proportions of young people living in workless households and lone parent households have more than trebled. Interestingly, the number of young people born to a teenage mother has not changed across the two cohorts (and the number of women who were themselves mothers by age 18 was low in both cohorts (4 per cent in BCS and about 3 per cent in LSYPE). The correlations between these measures show significant associations across nearly all indicators of social risk within each cohort, as well as differential risk effects. As with the means, the strength of the associations between parental worklessness, social housing and lone parent status in particular appear to have increased over

Table 1. Main economic activity at 18, per cent

	BCS (n=12,744)			LSYPE (n=9,872)		
	All	Male	Female	All	Male	Female
NEET	6.8	5.3	8.3	16.3	17.1	15.4
Full-time education	24.2	23.5	24.9	43.5	40.0	47.2
In employment	69.1	71.2	66.8	40.2	42.9	37.5

Notes: LSYPE statistics use wave 6 cross-sectional weights which take into account: i) the probability of being selected to take part; ii) non-response among particular groups; and iii) population weights. Further detail on LSYPE weighting can be found at: https://ilsype.education.gov.uk/workspaces/public/wiki/UserGuide/Weighting.

Table 2. Means and correlations of main economic activity at 18 and socioeconomic risk indicators

BCS	LSYPE (Mean)	1 00.16	2 0.44	3 0.40	4 0.12	5 0.14	6 0.23	7 0.09	8 0.21	9 0.13
	BCS									
1. NEET	0.07		–0.39*	–0.34*	0.12*	0.09*	0.11*	0.08*	0.18*	0.16*
2. Full–time education	0.24	–0.15*		–0.73*	–0.04*	–0.09*	–0.07*	–0.07*	–0.13*	–0.05*
3. In employment	0.69	–0.40*	–0.84*		–0.04*	0.03*	–0.01*	0.01*	0.00	–0.06*
4. Parents no qualifications	0.40	0.09*	–0.18*	0.11*		0.26*	0.21*	0.07*	0.28*	0.35*
5. Low parent social class	0.13	0.08*	–0.09*	0.04*	0.28*		0.20*	0.12*	0.25*	–
6. Lone parent family	0.07	0.05*	–0.03*	0.00	0.14*	0.12*		0.07*	0.32*	0.39*
7. Born to a teen mother	0.09	0.06*	–0.07*	0.03*	0.08*	0.05*	0.16*		0.22*	0.13*
8. Social housing	0.33	0.10*	–0.18*	0.11*	0.34*	0.22*	0.13*	0.13*		0.44*
9. Workless family	0.04	0.05*	–0.02*	–0.01*	0.11*	–	0.14*	0.01*	0.11*	

Notes: * $p<0.05$. Entries above the leading diagonal are the means and correlations for LSYPE, those below for BCS. Sample as in table 1.

time, especially regarding NEET status. Across both studies, being NEET is positively correlated with each of the social risk indicators considered, while being in full-time education is negatively related with social risk. Being in employment at 18 is also negatively correlated with socioeconomic risk but the size of the associations is generally smaller.

Predicting school-to-work transitions

Our next set of analyses compares the role of these risk factors in shaping the transition from school to work for the two cohorts. Table 3 shows the odds ratios from logistic regressions of young person's main economic activity at 18 on the separate indicators of social risk separately for each cohort. Each column shows the association of a given risk factor with the outcome of interest when all socioeconomic risks are entered simultaneously, controlling for family income, ethnicity and region. We also show the odds ratios for gender to examine the shift over time for male and female transitions.

The findings suggest differential risk effects. All risk factors are independently associated with the outcomes, in addition and above the other variables included in the model. Low parental education and living in social housing are positively associated with being NEET or (for BCS70) being in employment at age 18, and negatively with being in full-time education, especially in BCS. In LSYPE low parental education is not significantly associated with education participation at age 18, suggesting increasing educational mobility in the later born cohort. Living in a workless family is a significant risk factor for being NEET at 18 and not being in full-time education (LSYPE), but is not a significant risk in either cohort for being employed at 18. Growing up with a lone parent is a risk for the LSYPE cohort regarding the NEET and full-time education outcomes, while for the BCS it reduces the chances of being employed. Young people born to a teenage mother are more likely to be NEET and less likely to be in full-time education at 18. As noted in table 1, girls are less likely to be NEET in the later born cohort and more likely to stay on in full-time education. Furthermore, in both cohorts girls are around 20 per cent less likely to be in employment at 18 than boys, controlling for social risks and other background characteristics.

Cumulative risk

Despite some specific differences outlined above and discussed in more detail below, the general pattern of results in the social risk factors which predict early economic activity is remarkably similar across the two cohorts. Given this comparability, we combine our individual risk indicators into a single summary index of socio-demographic risk. Although each of the factors is independently associated with the outcomes, serious risk emanates from the combination of adversities (Rutter, 1989). A composite measure assesses the joint and additive influence of multiple risk factors (Moore, Vandivere and Redd, 2006; Schoon *et al*., 2002).

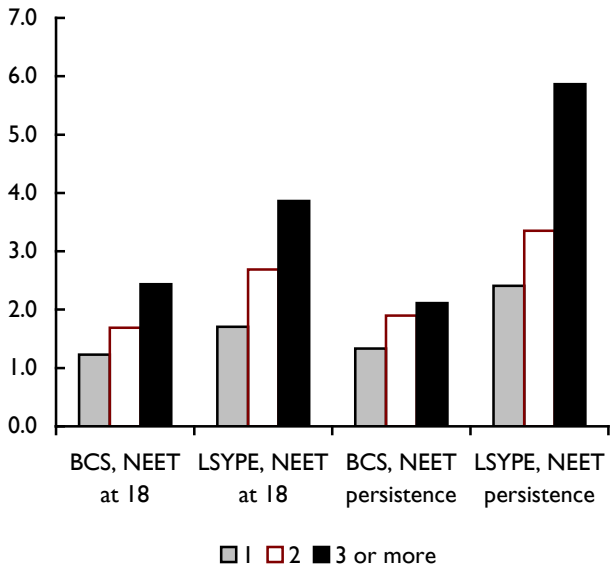
In both cohorts, the average number of risks experienced by young people is about one (BCS = 1.05; LSYPE =

Table 3. Socioeconomic indicators of childhood risk (age 10 BCS and age 13/14 LSYPE) as predictors of age 18 economic activity (odds ratios and standard errors of coefficients in brackets)

	NEET at 18		In full-time education at 18		Employed at 18	
	BCS	LSYPE	BCS	LSYPE	BCS	LSYPE
Low parent education	1.28*	1.31*	0.59***	0.96	1.44***	0.86
	(0.13)	(0.14)	(0.04)	(0.09)	(0.09)	(0.09)
Socioeconomic status (*ref: middle/high status*)						
Workless family	1.35**	1.32*	0.89	0.85*	0.93	1.01
	(0.16)	(0.16)	(0.09)	(0.07)	(0.08)	(0.09)
Low social class (family of origin)	1.44†	1.65***	0.57*	0.87	1.37***	1.38***
	(0.28)	(0.23)	(0.21)	(0.12)	(0.08)	(0.07)
YP lives in a lone parent family	0.98	1.20*	0.72*	0.84*	0.80†	1.06
	(0.18)	(0.11)	(0.19)	(0.06)	(0.10)	(0.07)
YP born to a teen mother	1.55**	1.33*	0.67***	0.76**	1.13	1.06
	(0.22)	(0.16)	(0.07)	(0.08)	(0.10)	(0.11)
YP lives in social housing	1.40**	1.90***	0.52***	0.56***	1.46***	1.14
	(0.16)	(0.20)	(0.04)	(0.04)	(0.09)	(0.09)
Female	1.62***	0.84*	1.08	1.31***	0.81***	0.83***
	(0.14)	(0.07)	(0.06)	(0.07)	(0.04)	(0.04)

Table notes: †$p<0.10$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$. LSYPE survey weights applied. Each equation was estimated separately. All models control for income, ethnicity and region. Sample as in table 1.

Figure 1. Relationship between the number of social risks and NEET status at 18, and for at least 6 months: reporting odds ratios controlling for gender, income, ethnicity and region



0.92), with a minimum of zero and a maximum of five.[6] Figure 1 shows the relationship between the number of risks experienced and NEET status. In line with Bynner and Parsons (2002), we consider both the likelihood of (i) being NEET at 18, as well as (ii) being NEET for at least six months between 16 and 18 (7 per cent of the BCS cohort and 13 per cent in the LSYPE), again controlling for gender, income, ethnicity and region.

In both cohorts, there is a monotonically increasing relationship between the number of social risks young people experience and their subsequent likelihood of becoming and remaining NEET. In line with the descriptives outlined above, the later born LSYPE cohort is more likely to be NEET at 18 and shows a stronger relationship between experience of social risks and the likelihood of being NEET. The relationship between risks and being NEET for a minimum of six months between 16 and 18, i.e. NEET persistence, is particularly strong for the LSYPE cohort. For example, relative to no risks, young people in the BCS cohort with three or more risks are just over twice as likely to be persistently NEET between 16 and 18. This likelihood is slightly smaller than the one for the LSYPE cohort, where young people experience just one social risk relative to none; young people in the later born cohort with three or more risks are almost six times as likely as those with no risks to be persistently NEET between 16 and 18. The findings thus suggest that young people in the later born LSYPE who are exposed to socio-demographic risk have relatively more adverse outcomes than those in the earlier born BCS, an indication of increasing polarisation of socioeconomic adversity.

Beating the odds

While there is clearly a strong association between the experience of social risk and subsequent NEET status, it is also true that not all young people exposed to risk factors become NEET (see Appendix table A1). For example, in the BCS more than half (57 per cent) of those who are not NEET at 18 experienced at least one social risk with just over one in ten (11.4 per cent) experiencing more than three risks. For the LSYPE, a smaller proportion, 42 per cent, of young people experiencing earlier risks goes on to avoid becoming NEET at 18. Young people exposed to risks who avoid becoming NEET can be described as resilient or *beating the odds* and provide an interesting comparator to the *expected* group, i.e. young people who experience risks and do become NEET. Table 4 shows the proportion of each cohort falling into each category as a 2 x 2 (risk/no risk x NEET/Not NEET) table and is the basis for our final set of analyses.

Reflecting the summary statistics discussed above, 5 per cent of the BCS cohort can be categorised in the expected group while for the LSYPE this group is twice as big and includes one in ten 18 year-olds. Over half (52.9 per cent) of the BCS compared with more than a third of the LSYPE cohort (35.5 per cent) can be classified in the resilient group and as beating the odds. The majority of young people in our samples do not experience any risks or have experience of being NEET (40.3 per cent in the BCS and 49.0 per cent in the LSYPE). Finally, less than 2 per cent of the BCS and 5 per cent of the LSYPE can be classified as vulnerable, i.e. they do not experience any of the social risks outlined here and yet are NEET at 18.

Using the same definitions of NEET status as in figure 1 and controlling for experience of social risk, as well as gender, income, region and ethnicity, we examine potential protective factors that help young people to

Table 4. Experience of risks and NEET status at 18, 2x2 table classification, per cent

Beating the Odds category:	BCS	LSYPE
Expected: At least 1 risk and NEET	5.1	10.1
Resilient: At least 1 risk but not NEET	52.9	35.5
Vulnerable: No risks, NEET	1.7	5.4
Advantaged: No risks, not NEET	40.3	49.0

Note: BCS (n=12,744); LSYPE (n=9,872).

beat the odds, i.e. to avoid becoming NEET despite the experience of social risk. Tables 5 and 6 report the odds ratios for young people exposed to risks and who avoid becoming NEET. Turning first to those experiencing at least one socioeconomic risk, table 5 confirms that, in line with figure 1, those with more risks are less likely to avoid being NEET. For both being NEET at 18 and particularly being persistently NEET, the likelihood of beating the odds is lower for the LSYPE than the BCS, indicating they are more affected by socioeconomic adversity than the earlier born cohort. However, prior achievement (in reading for the BCS cohort and maths for the later born LSYPE), individual aspirations, educational engagement, experience of the labour market, and attending more advantaged schools appear to be protective against becoming NEET.

For example, for a young person experiencing at least one socioeconomic risk a one standard deviation increase in reading for the BCS increases the likelihood of not being NEET at 18 by 25 per cent and not being persistently NEET between 16 and 18 by 21 per cent. Over and above the other variables included in the model, a young person wanting to stay on in school post-16 increases the likelihood of avoiding NEET status by between 36 per cent and 69 per cent. School motivation and not truanting are positively associated with avoiding becoming and remaining NEET. For BCS in particular, young people with experience of employment in the form of having a part-time job are approximately twice as likely to avoid becoming and remaining NEET between 16 and 18 than those with no early attachment to the labour market. For the later born LSYPE, early labour market engagement is also protective but only for the static measure of being NEET at 18 and not the more dynamic, longitudinal definition. Finally, school characteristics also matter in young people's transitions; in addition to socioeconomic risks, individual and family characteristics, those attending schools with more advantaged peer intakes, i.e. those with fewer pupils from low SES and low income households, are more likely to avoid being NEET at 18 or persistently NEET between 16 and 18.

Table 6 repeats the analysis of table 5 for young people experiencing three or more risks. Interestingly, in this model the social risk index is no longer significantly associated with the outcomes, suggesting a possible ceiling effect. Nonetheless, we find evidence of potential protective effects. Achievement reduces the odds of being NEET at 18; for the BCS cohort a standard deviation increase in age 10 reading ability increases the likelihood of beating the odds by approximately a third ($p < 0.10$). In LSYPE it is mathematical skills that have a similar beneficial effect. Young people in the LSYPE who want to stay on in school post-16 are approximately 60 per cent more likely to avoid subsequent NEET status. For the BCS cohort, wanting to stay on is significant at the 10 per cent level for the measure of NEET persistence. School motivation remains significantly associated with avoiding NEET persistence among young people in

Table 5. Predictors of young people who 'beat the odds': young people experiencing one or more socioeconomic risks and avoiding becoming NEET (odds ratios and standard errors of coefficients in brackets)

	One or more risks			
	Not NEET at 18		Not NEET for 6 months or more b/w 16 and 18	
	BCS	LSYPE	BCS	LSYPE
Social risk score	0.81** (0.06)	0.77*** (0.06)	0.89 (0.06)	0.72*** (0.06)
Achievement:				
Reading (age 10/11)	1.25** (0.10)	1.05 (0.10)	1.21* (0.10)	1.19† (0.11)
Maths (age 10/11)	1.12 (0.09)	1.34*** (0.12)	1.05 (0.09)	1.26** (0.11)
Educational aspirations and motivation:				
YP to stay on at age 16	1.36† (0.24)	1.35* (0.18)	1.69** (0.32)	1.51** (0.22)
School motivation at age 16	1.25* (0.11)	1.30*** (0.07)	1.13 (0.11)	1.44*** (0.09)
YP does not truant	1.70** (0.34)	1.52*** (0.19)	1.93*** (0.34)	1.66*** (0.21)
YP has a part-time job	2.15*** (0.40)	1.33* (0.18)	1.95*** (0.31)	1.24 (0.18)
Parental characteristics:				
Parent wants YP to stay on at age 16	1.02 (0.14)	1.01 (0.14)	1.09 (0.15)	1.23 (0.18)
School characteristics:				
% of pupils NOT in low SES families/ NOT eligible for FSM	1.09 (0.06)	1.31*** (0.08)	1.18*** (0.06)	1.20** (0.08)
Female	0.52*** (0.06)	1.17 (0.13)	0.69*** (0.07)	1.07 (0.13)

Notes: †p<0.10; *p<0.05; **p<0.01; ***p<0.001. LSYPE survey weights applied. Each equation was estimated separately. All models control for income, ethnicity and region. All continuous variables were standardised. Sample as in table 1.

Table 6. Predictors of young people who 'beat the odds', deep risk: young people experiencing three or more socioeconomic risks and avoiding becoming NEET (odds ratios and standard errors in brackets)

	Deep risk (three or more risks)							
	Not NEET at 18				Not NEET for 6 months or more b/w 16 and 18			
	BCS		LSYPE		BCS		LSYPE	
Social risk score	0.77	(0.20)	0.71	(0.16)	0.94	(0.24)	0.69	(0.17)
Achievement:								
Reading (age 10/11)	1.32†	(0.19)	1.05	(0.16)	1.33*	(0.19)	1.19	(0.17)
Maths (age 10/11)	1.11	(0.16)	1.30†	(0.19)	0.95	(0.14)	1.14	(0.17)
Educational aspirations and motivation:								
YP to stay on at age 16	1.46	(0.40)	1.57*	(0.34)	1.74†	(0.50)	1.58*	(0.35)
School motivation at age 16	1.22	(0.16)	1.13	(0.11)	1.14	(0.16)	1.36***	(0.12)
YP does not truant	1.84*	(0.44)	1.77**	(0.37)	2.13**	(0.56)	1.69**	(0.33)
YP has a part-time job	1.95**	(0.49)	1.47	(0.40)	1.97*	(0.52)	1.34	(0.34)
Parental characteristics:								
Parent wants YP to stay on at age 16	1.16	(0.26)	0.89	(0.21)	1.16	(0.30)	0.94	(0.23)
School characteristics:								
% of pupils NOT in low SES families/ NOT eligible for FSM	1.16	(0.11)	1.38***	(0.13)	1.23*	(0.12)	1.22†	(0.12)
Female	0.53**	(0.11)	1.00	(0.20)	0.60**	(0.12)	0.75	(0.14)

Notes: †$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$. LSYPE survey weights applied. Each equation was estimated separately. All models control for income, ethnicity and region. All continuous variables were standardised. Sample as in table 1.

LSYPE, while those with deep risk who do not truant are far more likely to evade both negative outcomes. Having a part-time job is particularly beneficial for the BCS and, again, those in more advantaged schools are also less likely to be NEET at 18 (LSYPE only) and persistently NEET after leaving compulsory education.

Discussion

The aims of this study were to assess the role of multiple risk factors in shaping the transition from school to work and identify potential protective factors that may help young people at risk overcome disadvantage and 'beat the odds'. Our analyses provide an overview of the economic activities of young people during economic recession and compare the incidence and impact of different socioeconomic risks for young people born twenty years apart. The results confirm previous research, cited above, demonstrating the socially graded nature of school-to-work transitions, namely that those who become NEET come from the most disadvantaged families, while those who continue in full-time education come from relatively more advantaged backgrounds. Our findings go one step further, however, and highlight that specific socioeconomic risks are differentially associated with the various economic activities pursued by young people in the period immediately following compulsory education. Finally, our study demonstrates that prior achievement as well as educational aspirations and school engagement, and school characteristics can help young people overcome disadvantage and avoid becoming and remaining NEET.

Comparison of the BCS and LSYPE cohorts shows a clear shift in the activities of young people, with the expansion of education and the corresponding reduction of labour market participation. There has also been an increase in the numbers of young people classified as NEET across the two cohorts. As noted by Bynner and Parsons (2002), we find that in the 1970 born cohort women are more likely to be NEET than men, a pattern that has reversed over the intervening twenty-year period. Bynner and Parsons suggest that some of the NEET young women in the earlier born BCS cohort pursued motherhood as an alternative full-time career and argue that their 'dropping out' through pregnancy is in many ways equivalent to young men's disengagement from education, employment and training. The increased educational opportunities for women in the LSYPE may have helped to change this, improving their life chances and decreasing the risk of social exclusion in adulthood.

Regarding indicators of family socioeconomic adversity, the pattern of social risks has shifted quite markedly over the two decades spanning the BCS and LSYPE studies, with the exception of teen motherhood and low parental social class. Parents in the later born cohort are better educated, and the proportion of parents with no qualifications has fallen from 40 per cent in the BCS to just 12 per cent in the LSYPE. Interestingly,

the incidence of lone parent and workless families has trebled for the later born cohort. Despite this, the role and magnitude of risk factors shaping the transition experiences for young people is very similar between the two datasets.

One of the biggest changes in the association between socioeconomic risks across the cohorts is the negative impact of social housing on becoming NEET in the later born cohort. Young people growing up in social housing in the BCS were 40 per cent more likely than those not to be NEET at 18; for the later born LSYPE this likelihood has more than doubled to 90 per cent. This increase is particularly noteworthy given the decline in real terms of the numbers of young people living in social housing in the LSYPE and suggests a shift in what living in social housing actually means between the two cohorts. Exploring the associations between social housing and life chances over the period from the end of the Second World War to 2003, Feinstein *et al.* (2008) similarly report the negative correlations for those living in housing provided by the public sector, with the disadvantage that emerged for those born in 1970 strengthening over time. Their results further show that social housing may play a role in the persistence of disadvantage; the authors argue that as social housing increasingly becomes the option for people with the least choice, the negative associations found will further increase and be harder to explain away by other aspects of disadvantage.

As predicted, we also see evidence of the intergenerational transmission of education, most notably, however, for the earlier born BCS. While, in both studies, young people whose parents have no educational qualifications are significantly more likely to be NEET at 18, only those in the BCS are less likely to be in full-time education at 18 and more likely to be employed. This finding is likely to reflect the expansion of education across the two cohorts and increasing opportunities for educational mobility. Contrary to our expectations and findings in the US (Davis-Kean, 2005), parental education does not appear to be more important in predicting young people's transitions than parental social class. Rather, for the NEET outcome – and for the BCS for education and employment outcomes – both low parental education and low social status are significant risks. Our analysis also separates low parental social class from worklessness and shows the unique impact of each as a significant risk. Echoing the intergenerational findings of Macmillan (2010), young people in both cohorts are more likely to be NEET at 18 if they are from a workless family, even controlling for low family social class, other risk factors, gender, income, ethnicity and region.

The current study demonstrates that the socio-demographic risk factors are not only correlated but cumulative, as indicated by the monotonically increasing relationship between the number of social risks experienced and the likelihood of becoming NEET, particularly persistent NEET status between the ages of 16 and 18 in both cohorts. Our analyses further show that not only is the incidence of being NEET much higher in the LSYPE, but also the number of young people experiencing risks and not becoming NEET is much lower in LSYPE than in the BCS, suggesting that the proportion of young people *beating the odds* is much lower and suggests an aggravation of disadvantage.

In both cohorts we find evidence that a number of potential protective factors are associated with avoiding negative outcomes (i.e. becoming NEET) even in the face of severe social risk exposure. These include prior achievement, educational aspirations and engagement (i.e. school motivation and not truanting), previous experience of the labour market (particularly for the earlier born BCS), as well as school characteristics. For deep risk exposure for example, i.e. young people experiencing three or more socioeconomic risks, school engagement (i.e. high school motivation and not truanting) as well as educational aspirations and school characteristics are important in helping the LSYPE cohort to avoid persistent NEET status in addition and above prior academic attainment and the other variables included in the model. For both low and deep levels of risk, the protective role of prior achievement comes from reading for the BCS and from mathematics for the later born LSYPE, possibly highlighting the importance of maths skills in the current knowledge economy. While in BCS early labour market experience shows a beneficial effect in avoiding NEET, this is not the case in LSYPE, maybe indicating changing labour market opportunities for young people. We also note that parental education aspirations for their children are not directly associated with avoiding NEET in addition and above the other variables included in the model. It is however possible that the influence of parental aspirations is mediated by the young people's own aspirations and their school engagement (Schoon, 2010).

Limitations

Our study considers mostly dichotomous outcomes, namely being NEET, in full-time education or in employment at age 18. We also consider a more longitudinally defined indicator of NEET status wherein young people are NEET for at least six months between the ages of 16 and 18 (NEET persistence). However, several authors highlight that young people move in and out of risk (for example, see Schoon, 2006 and Feinstein and Sabates, 2006) and so argue that both risk

and resilience need to be considered in a dynamic rather than static way. Our measure of NEET persistence moves towards such a definition but cannot fully take into account the changing circumstances young people experience between these years. Furthermore, given the differences in the assessment points in the two data sources, such dynamic analysis was beyond the scope of the current study. In future studies, we hope to adopt a more transactional model of individual adjustment and investigate the reciprocal interactions between individuals and their context over time, using the annually collected data in the LSYPE, to identify potential sources of resilience helping young people beat the odds.

Another potential limitation is the treatment of missing data, which might have affected the validity of the results. Although the analytic sample remained largely representative of the population, young people from less privileged family backgrounds were less likely to be included in our analysis. Response bias at the individual level would tend to underestimate the magnitude of effects of social disadvantage, as sample attrition is greatest among cohort members in more deprived circumstances. The problem of missing data was addressed using multiple imputation as implemented in STATA, although the results might still provide a conservative estimate of social inequalities in the samples.

Conclusions

Both politicians and educators are concerned about today's cohorts of young people, particularly those leaving initial education and training with few or no qualifications. These young people have been particularly affected by the disappearance of traditional entry jobs and by the polarisation of the labour market. They are disadvantaged on the basis of their social background and this is compounded by a lack of educational credentials, especially during a time of an economic downturn. While young people in LSYPE are more at risk of being NEET than those in the earlier born cohort, the results presented here suggest a similar relationship and relative importance of different socio-demographic risk factors regarding early school-to-work transitions. What does appear to have shifted between the two cohorts is the cumulative impact of these risks; the LSYPE cohort shows a stronger relationship between cumulative risk and becoming and remaining NEET and a reduced likelihood of beating the odds, suggesting an increasing polarisation of social disadvantage across the twenty-year period considered here.

The current study emphasises that socioeconomic risk is complex and multidimensional and that the prevalence of risks changes over time. Nonetheless, in both cohorts we could identify specific risk effects for specific outcomes. The findings do not support strategies focusing on the elimination of single risk factors only (such as parental worklessness), but highlight the importance of an integrated and more holistic approach in addressing multiple and interlinked risk factors. The results underline the seriousness of the current recession for young people's lives, especially for the most disadvantaged. Rather than focusing on the negative outcomes associated with the experience of socioeconomic risk, our findings add to the evidence by demonstrating the role of potential protective factors.

Given that young people who are NEET on leaving school have a very high risk of remaining unemployed in the medium term (five years) and longer term (ten years) (Crawford *et al.*, 2011), preventing young people from becoming NEET should remain a high priority on the policy agenda aiming to support young people in their transition to independent adulthood. The results presented here suggest that improving school motivation and educational engagement among young people, as well as school characteristics, may represent possible leverage for reducing the risk of subsequently becoming NEET. The importance of 'soft skills' over and above academic capability and attainment has been emphasised in a number of other studies (for example, Heckman and Krueger, 2005; Schoon, 2008) highlighting the importance of developing and nurturing those critical soft skills in the education system. Our findings thus make a case for investment in education and training infrastructure that engages young people throughout their educational career as potential sources of resilience.

NOTES

1 October is a useful month to record activities as it is relatively free from seasonal variation and marks the beginning of the academic year so that full-time students will be adequately captured. Information regarding economic activities in BCS collected retrospectively at age 30 was cross-checked against earlier information provided directly at ages 16 and 26, as well as the information provided for 10 per cent of the sample at age 21 (see Schoon *et al.*, 2001).

2 Where one parent's education detail is missing, the other's is used as the sole indicator of qualifications achieved.

3 As above, if mother's class is missing, then it is coded to the father's class, and vice versa.

4 Where wave 1 data is missing, wave 2 weekly income was used.

5 Due to the different ages of assessment, we have information on primary schools for BCS and secondary school for LSYPE, which can involve different school sizes.

6 As noted above, living in a low SES background and coming from a workless household are mutually exclusive categories.

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Table A1. The number of risks experienced by NEET status

	Not NEET		NEET		ALL	
	BCS	LSYPE	BCS	LSYPE	BCS	LSYPE
0	43.2	58.1	24.7	35.0	41.9	54.4
1	26.6	19.0	23.2	19.3	26.4	19.0
2	18.8	11.5	25.9	18.7	19.3	12.6
3 or more	11.4	11.5	26.2	27.1	12.4	14.0
% in each group	93.3	84.5	6.7	15.5	100.0	100.0

Note: BCS (n=12,744); LSYPE (n=9,872).