

Accelerated School-to-Work transition in Britain: Still true?

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Abstract

This paper investigates whether the British pattern of an early transition from school to work persists. We apply sequence analysis to data from the British Household Panel Survey and the UK Household Longitudinal Study to study how education and employment trajectories of young adults born in 1974–90 differ by birth cohort, gender, and socio-economic background. The distinctive British early transition from school to work is still prevalent, although trajectories have become more complex and precarious with an increase in part-time employment and prolonged stays in education among the youngest cohorts. Occupational outcomes of highly educated men and women were quite similar. However, women who did not continue education were more likely to experience turbulent transitions with longer spells of part-time work and inactivity. The proportion of university graduates from lower socio-economic backgrounds has increased, yet their chances of being in professional and managerial occupations remain significantly lower.

Keywords: School-to-work trajectories; Life course; Education; UK; British Household Panel Survey; Understanding Society; Sequence analysis

Introduction

Employment and education careers of young people are embedded in the complex structure of various life course developments during the transition to adulthood, including partnership and family transitions, and housing and residential trajectories. As a result of various socio-economic changes, such as the expansion of higher education, an increase in gender equality and decrease in normative controls, life course transitions during the early stage of adulthood have become less standardised, more turbulent, individualised, and ‘protracted’ (Shanahan 2000; Macmillan 2005; Elzinga and Liefbroer 2007; Billari and Liefbroer 2010).

The British pattern of the transition to adulthood is usually described as ‘accelerated’ with an early transition from school to work (Cavalli and Galland 1995; Bynner 2001). This tradition is often linked to open labour market relationships based on free market forces and competition and a flexible education and training system that allows various pathways to obtaining necessary work qualifications (Raffe et al. 1998; Bynner 2001; Mills and Blossfeld 2003; Blossfeld et al. 2005). The shift to a service economy starting in the 1970s and rapid development of information technology led to the restructuring of the labour market and a subsequent polarisation of jobs (Ashton et al. 1990; White and Lakey 1992; Goos and Manning 2007). As the increased demand for highly skilled labour led to the expansion of higher and further education and offered career prospects for some, less advantaged young people were left with greater uncertainty (Rowe et al. 2015; Schoon 2020). Young people who had positive perceptions regarding future career prospects without continuing education, faced a new reality of scarce employment opportunities without having specific qualifications (Roberts et al. 1994; Maguire and Maguire 1997; Bynner 2001).

Thus, the traditional rapid school-to-work trajectories have become harder to achieve which posed a greater pressure on young people’s decisions of post-school activities. For example, the median age at starting a first full-time job has increased from 17 years among

men and women born in the 1950s to 19.3 and 20.2 years among men and women born in the 1980s, correspondingly (Pelikh 2019). With the increased individualisation of the life course and further expansion of higher education, and in particular the widening participation among young people from lower socio-economic backgrounds (Chowdry et al. 2013; Murphy et al. 2018), on the one hand, and increased uncertainty due to the restructuring of the labour market, on the other hand, it remains unclear how school-to-work trajectories in the UK have changed in the last 25 years and how they are defined by gender and parental socio-economic background.

To address this gap, this paper aims to investigate school-to-work trajectories of young people born in 1974–90 in the UK and their association with occupational outcomes in early adulthood. We address the following research questions: How have education and employment trajectories changed since the rapid expansion of further and higher education in the beginning of 1990s? What is the association between education and employment trajectories and occupational outcomes 10 years after completing compulsory school education? How do occupational outcomes differ by level of education with regards to cohort, gender, and parental socio-economic background? To answer the research questions, we first conduct sequence analysis on combined employment and education histories from the British Household Panel Survey (BHPS) and the Understanding Society study (UKHLS) to identify school-to-work trajectories. Second, we apply multinomial modelling to examine the factors underpinning these trajectories and to investigate the link between the trajectories and occupational outcomes at age 26.

Previous work has focused mainly on either describing the school-to-work trajectories (Schoon and Lyons-Amos 2016, 2017; Anders and Dorsett 2017; Anderson and Nelson 2021) or on studying early labour market outcomes and earnings with respect to obtained educational qualifications (e.g. Blundell et al. 2000; Smith et al. 2001; Howieson and Ianneli 2008; Belfield

et al. 2018). Although these studies usually find that higher educated groups have better employment prospects, they have paid less attention to the long-term association between school-to-work trajectories and occupational outcomes. We contribute to the literature by investigating how the links between education, school-to-work trajectories and occupational outcomes are influenced by key individual traits – cohort, gender and parental socio-economic background.

Background

The British transition to adulthood

Socio-economic and cultural changes dating back to the 1960s (and often associated with the Second Demographic Transition (van de Kaa 1987)) have dramatically influenced young people's lives in industrialised countries, leading to the de-standardisation of life trajectories (Buchman 1989; Liefbroer 1999; Schanahan 2000; Macmillan 2005). The decrease in normative controls and increased individualisation of the life course has led to a larger variety in the occurrence and sequences of life course events associated with the transition to adulthood, including school-to-work transitions, among cohorts born from the 1970s onwards (Shanahan 2000; Macmillan 2005; Huinink 2013, Schoon and Lyons-Amos 2016).

Yet, an alternative view has emphasised the prevalence of structured trajectories defined by socio-economic origins despite the increased individualisation of the life course and expansion of higher education (Côté 2002; Côté and Bynner 2008; Furstenberg 2008; Sironi et al. 2015; Billari et al. 2019). Traditionally, education and employment trajectories of young people in Britain were found to be largely influenced by social class, gender and ethnicity (Bynner 2001, 2005; Cavalli and Galland 1995; Coffield 1995). These differences in British society are often referred to as the 'youth divide' – the polarisation between the advantaged and the disadvantaged – and the existence of a so called 'fast-' and 'slow-track' in the transition

to adulthood (Bynner 2001, 2005; Jones 2002). The ‘slow-track’ is associated with prolonged periods spent in education and the postponement of labour market entry and family formation. ‘Slow-track’ pathways were traditionally prevalent among young people from more advantaged backgrounds, and among those whose parents have tertiary levels of education (Bynner and Joshi 2002; Patiniotis and Holdsworth 2005). ‘Fast-track’ pathways, on the contrary, relate to young people from lower socio-economic backgrounds who tend to leave school at a minimum age of 16 (raised to 17 in 2013 and to 18 in 2015 in England) and rapidly start work and family careers. The origin of the existence of ‘fast-track’ pathways lie in the tradition of a high demand for unskilled youth in labour-intensive industries in Britain which allowed young people to enter the labour market straight after finishing compulsory school, without any further qualifications (Ashton et al. 1990; Maguire and Maguire 1997).

The shift towards a service-based economy has resulted in increasing polarisation among young people. On the one hand, rising demand was observed in high-skilled and well-paid professional and managerial occupations. On the other hand, technology could not provide a substitute for those kinds of low-paid nonroutine manual skilled jobs that require high levels of soft skills (Goos and Manning 2007). Thus, high demand for jobs in the service sector (e.g., carers and low-level hospitality positions) and a decrease in the number of ‘middling’ jobs, supported the persistence of a ‘low skills equilibrium’ in many places and sectors (Ibid., Finegold and Soskice 1988; Government Office for Science 2017). Nevertheless, even in low-skilled sectors, young people were confronted with the need for further training before applying for a job (Bynner 2001; Gallie et al. 2014), which stimulated the expansion of higher and further education.

As a response to economic restructuring towards highly technological services, the British education participation rate has increased gradually from 12% in 1979 to 30% in the early 1990s, and 49% in 2015 (Department for Education 2019). In 1992, women’s higher

education participation rate exceeded men's and reached 53% by 2015 compared to 43% in men (Department for Education 2019). Despite increases in university tuition fees which took effect in 2006–07 and 2012–13, a new funding system introduced by the government in 2004 (effective from 2006–07) included the abolishment of the system of upfront payment designed to support people from less advantaged backgrounds. As a result, the national participation rate among young people from lower socio-economic background has increased substantially (Murphy et al. 2018). Though, the proportion of people from more advantaged backgrounds who go into higher education has remained almost double as high as that of young people from lower socio-economic groups (Ibid.).

The rapid restructuring and tightening of the labour market and the expansion of higher education have prompted a discussion about the increasing diversity of youth transitions and reconceptualization of the notion of a 'successful' transition. The 'slow-' and 'fast-track' division of youth has been criticized for not considering economic precarity, hindering rapid labour market entry for those not pursuing further education (Stone et al. 2011), as well as overlooking the existence of the 'middling' pathway (Roberts 2011, 2013; MacDonald 2011; Schoon 2015). This pathway refers to those who manage to 'successfully' transition into the labour market, meaning they succeed in consistently remaining in employment and experience a steady career progression without pursuing higher education. On the one hand, we observe an increase in the variety of educational and employment options after school. On the other, the associations between these opportunities and labour market outcomes are becoming more complex. This calls for a more granular approach towards identifying and describing the trajectories beyond distinguishing between those who continue education and who do not and focusing on both the sequences of career events over time, as well as employment details.

Returns to education and labour market uncertainty

Education is traditionally considered an important predictor of future income trajectories, occupational and social mobility. Salary returns to education have been shown to vary with the level of qualification, parental socio-economic background, and gender (Card 1999; Dearden et al. 2002; Friedman et al. 2017). Much less is known about the link between personal characteristics, school-to-work trajectories, educational level and short- and long-term occupational outcomes.

Young adults entering the labour market after the 1990s were influenced both by major changes in the labour market and the expansion of higher education. On the one hand, rising educational attainment is thought to have a positive influence on labour market outcomes. Indeed, evidence has shown consistent earnings returns throughout the 2000s, with highly educated people showing higher occupational progression and income trajectories, despite an increase in the numbers of highly educated young people in the 1990s (Harkness and Machin 1999; Walker and Zhu 2008; McIntosh 2006; Blundell et al. 2016). On the other hand, the increase in the numbers of highly educated people has not translated into successful entries into the labour market among graduates, with some accepting jobs requiring lower qualifications (Battu et al. 2000; Chevalier and Lindley 2009; Felstead and Green 2013). The terms of employment have also become more uncertain with an increase in the prevalence of temporary and zero hours contracts (Williamson 1997; MacDonald 1997; Berrington et al. 2014; Furlong et al. 2018). It is therefore unclear whether and how the association between educational attainment and occupational outcomes has changed across cohorts, given that school-to-work trajectories may have become less straightforward, even for the highly educated.

Evidence on gender differences in early education and employment careers is mixed. On the one hand, previous research has found an overall increasing convergence in early life course transitions between British men and women born in the 1970s and 1980s, including

leaving the parental home, internal migration, and partnership transitions (Stone et al. 2014, Falkingham et al. 2016, Pelikh and Kulu 2018, Pelikh et al. 2022). This suggest that with the increased feminisation of higher education and the labour market, we might expect a convergence in school-to-work trajectories between men and women in the youngest cohorts. On the other hand, previous research has highlighted the long-standing gender pay gap in the UK labour market (Harkness 1996; Olsen et al. 2018). The differences are especially pronounced between low educated men and women. Low educated women were found to be the most disadvantaged financially and often excluded from the labour market, whilst reporting higher prevalence of caring responsibilities (Bynner and Parsons 2001; Howieson and Ianelli 2008; Maguire and McKay, 2017). However, evidence suggests that highly educated women had better chances to occupy professional and managerial positions than highly educated men, yet a gender pay gap was still observed (Blundell et al. 2000, Dearden et al. 2002). It therefore remains unclear how and whether changes in school-to-work trajectories are reflected in gender differences in occupational outcomes in early adulthood.

The restructuring of the labour market in the UK has significantly disadvantaged the employment prospects of young people from lower socio-economic backgrounds (Schoon 2020). As the pathways to getting a job have become more complex, the proportion of young people with no qualifications who are ‘Not in Education, Employment, or Training’ (NEETs) or experience ‘low-pay, no-pay cycles’ has increased (Howieson and Ianelli 2008; Bell and Blanchflower 2010; Schieldrick et al. 2010; Sissons and Jones 2012; Crawford et al. 2014). While for some young people, these education and employment statuses might be temporary due to labour market instability (i.e., short spells of unemployment or inactivity between jobs and/or education), we believe that longer spells of unemployment and inactivity during early adulthood might have a negative long-term effect on occupational outcomes in later life, particularly for those entering the labour market without further qualifications. Although the

numbers of highly educated young people from lower socio-economic background have been consistently increasing in the UK, a gap in earnings among graduates from higher and lower socio-economic backgrounds (SES) has persisted (Friedman et al. 2017). The mechanisms and reasons behind this difference are far less understood. By examining the link between the turbulences in school-to-work trajectories among young people from different backgrounds and their occupational outcomes, we might better understand the drivers of these associations.

Data, methods, and variables

Data

We combined data from the British Household Panel Survey (BHPS) and the UK Household Longitudinal Study (UKHLS) (University of Essex, Institute for Social and Economic Research 2010, 2014; University of Essex, Institute for Social and Economic Research, NatCen Social Research and Kantar Public 2021). The BHPS was designed as an annual survey of a nationally representative sample of more than 5,000 households with approximately 10,000 individuals aged 16 and older interviewed during the first wave. Adults from the households recruited in Wave 1 were followed into subsequent waves. The survey collects detailed information on educational and employment changes, residential changes, and parental socio-economic characteristics. The dataset contains information on economic activity status and changes on up to two economic activity spells per year, educational attainment, and type of occupation by various classifications. Only spells reported as primary economic activity were taken into consideration.

In 2009, the BHPS was succeeded by the UKHLS and BHPS respondents were followed from Wave 2 onwards. The UKHLS and BHPS have the same survey design, allowing us to construct full employment and education sequences from 1991. In UKHLS, all economic activity states could be reported retrospectively since the last interview (up to 9 spells

in some waves), providing the opportunity to create employment and education histories for individuals who might have missed some waves. We used 9 waves of UKHLS to extend the observation window for the original BHPS sample and investigate employment and education careers of younger cohorts born in the 1980s.

We focused our analysis on people who turned 16 between 1991 and 2008 and followed them for as long as they remained in the study. The sample is restricted to respondents for whom we can construct 10-year employment and education histories between the years they turn 16 and 26. The final sample contains 1,860 individuals from three birth cohorts observed between 1991 and 2018: 1974–79 (658 persons), 1980–84 (607 persons) and 1985–90 (595 persons).

Methods

Our methodological strategy follows a two-stage approach. We first use sequence analysis to define school-to-work trajectories and then apply multinomial logistic modelling to identify the individual, family and geographical factors underpinning these trajectories.

Sequence analysis

Following Rowe et al. (2017), we used sequence analysis to define a typology of representative educational and employment trajectories and assess the persistence of the traditional British pattern of ‘accelerated school-to-work transition’. Intuitively, sequence analysis seeks to identify similar sequences of transitions between statuses (i.e., from being unemployed to being employed part-time and then full-time) by measuring their dissimilarity, or minimal cost based on optimal matching techniques. These techniques use insertion/deletion (indel) or substitution operations to obtain an estimate of dissimilarity (Abbott 1995). The dissimilarity between each individual trajectory is computed and then used in a clustering algorithm to define a typology of representative trajectories.

We used sequence analysis to identify representative educational and employment trajectories in our sample. We used a sample of individuals aged 16 and in full-time education (finishing secondary school) at the beginning of the observation period. As time passes, we distinguished between the seven economic activity states that young people could go through: employed full-time (≥ 30 hours), employed part-time (< 30 hours), full-time student (including a small proportion of those in governmental training), unemployed, economically inactive (involved in family care or sick or disabled), taking parental leave, and self-employed (including a fraction of cases in UKHLS where working hours were not reported).

To measure the dissimilarity between individual trajectories, we used an optimal matching technique, known as Dynamic Hamming Distance (DHD) measure. DHD accounts for the timing of transitions and generates a pairwise dissimilarity matrix between individuals (Lesnard 2010). It does this by using time-varying substitution operations. To derive substitution costs, transition rates between states are computed for each time period. These substitution costs are then used to estimate a dissimilarity matrix for all the individuals in our sample.

In the second stage, the resulting dissimilarity matrix is used in a clustering algorithm to produce representative trajectories. We used the partitioning around medoids algorithm (*PAM*). *PAM* is a modification of the traditional k-means algorithm and provides more robust results when data are not normally distributed (Kaufman and Rousseeuw 2009). To select an appropriate number of k clusters, we followed a three-stage approach. First, we analysed dendrograms produced from applying Ward's hierarchical clustering algorithm to identify natural breaks in the data. Second, we computed the Studer et al. (2011) discrepancy measures of a set of sequences – pseudo F and pseudo R^2 to compare the goodness of cluster solutions. Based on the distance, size and discrepancy parameters of cluster solutions, six and seven cluster solutions were chosen as the number of split for the *PAM* algorithm. We explored

partitioning into eight clusters which was determined to lead to the emergence of small cluster sizes and regarded as unsuitable for analysis. Third, we compared the silhouettes of six and seven cluster solutions. The six-cluster solution is presented in the paper as it produced more distinct clusters with higher silhouette width parameters.

Multinomial logistic regression

We then used multinomial logistic regression for two purposes. First, we investigated how individual characteristics (cohort, gender, parental SES, and region of residence) are related to the probability of following a particular school-to-work trajectory. Our representative trajectories were encoded as a categorical variable and used as an outcome variable. Next, we analysed the link between the individual characteristics, experienced education and employment trajectories, and occupational outcomes at age 26. In this second analysis, occupational outcomes at age 26 were used as the dependent variable. To identify occupational outcomes, we applied the Registrar-General Social Classification, which was consistently used in the BHPS and UKHLS, and identified four groups of outcomes: employed in professional and managerial occupations; employed in intermediate occupations (skilled non-manual); employed in routine occupations (skilled manual and unskilled which also included partly skilled and those in armed forces); looking for a job or out of labour force (OLF).

Variables

Cohort, gender, and parental socio-economic background are our main covariates. We compared education and employment trajectories of young men and women born in 1974–79, 1980–84, and 1985–90. Educational level was measured as: (1) low (compulsory school education, GCSE or equivalent); (2) medium (A-levels or equivalent); and (3) high (degree). Information about the highest qualification was harmonised by the Understanding Society Support Team and accounts for the relevant level of received vocational training. To measure parental socio-economic background we used data on occupational class coded using the

Goldthorpe social class schema. The schema distinguishes between service class (mostly professional and managerial occupations), intermediate class (routine non-manual occupations, small proprietors, technicians), and working class (skilled manual, semi- and unskilled occupations) (Goldthorpe 1983; Goldthorpe et al. 1980). If the occupational class of the mother and the father was different, we used father's occupational status. Considering young adults' parents have been established in the labour market before the changes were introduced in the Registrar General's Social Class (SC) used in BHPS, the Goldthorpe social class schema serves as a more conservative measure to capture family socio-economic background.

We additionally controlled for region and area of residence at age 16 to predict school-to-work trajectories, distinguishing between 'London and the South East' and the rest of the UK, and urban vs rural areas. The variable is based on the Office for National Statistics Rural and Urban Classification of Output Areas 2001. An area is coded as urban if the household address falls within settlements with a population of 10,000 or more. London and the South East of England are traditionally considered to be human-capital 'escalator' regions due to the variety of available jobs and education opportunities as well as faster career progression (Fielding 1992; Faggian and McCann 2009). We therefore controlled for regional migration pattern between area of residence at age 16 and age 26 in the models for predicting occupational outcomes. We also controlled for whether a person had a child by age 26 as earlier childbearing can be associated with lower socio-economic prospects (the mean age at childbearing for the cohorts born post 1974 was over 30, ONS 2022). Table A1 in the Appendix provides a full list of covariates with descriptive statistics.

Results

First, we describe the school-to-work trajectories between ages 16 and 26 and how they are associated with the background characteristics. We then discuss how school-to-work trajectories are linked to the educational level attained by age 26. Next, we investigate the association between the education and employment trajectories and occupational outcomes at age 26. Finally, we analyse the influence of personal background characteristics (cohort, gender, parental SES) on occupational outcomes and how interactions between these characteristics and education play out.

Education and employment career sequences

Figure 1 presents chronograms for six distinctive educational and employment trajectories identified through sequence analysis. Chronograms show the distribution of individuals across education states by year scale. All individuals start at age 16 being enrolled in full-time education (still at school; green colour). Percentages in brackets refer to the proportion of the overall sample following a particular trajectory. Table A2 in the Appendix provides a summary of the number of months spent in each state by cluster, together with the cluster size and medoids. For example, a medoid in the ‘Rapid School-to-Work’ cluster is an individual who has spent the first 24 months after turning 16 in education and the next 96 months being full-time employed.

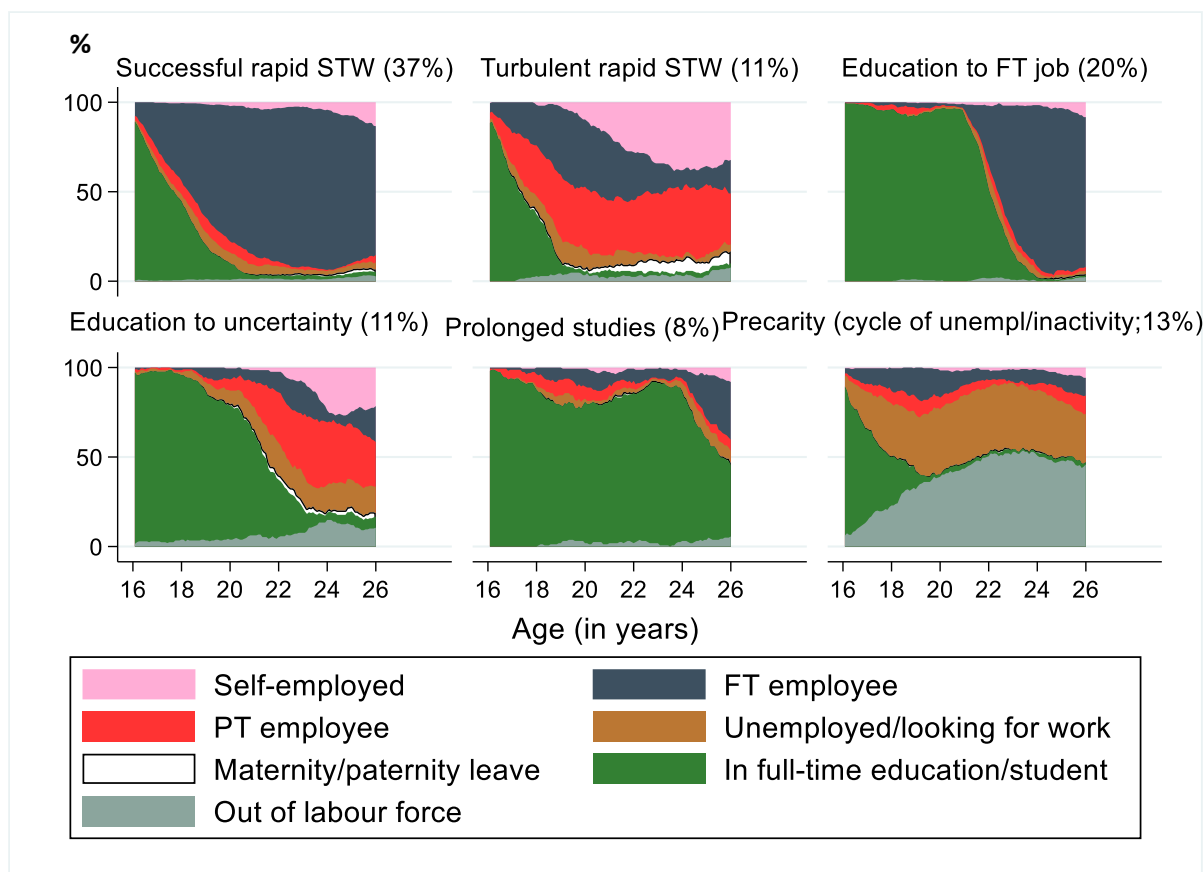


Figure 1 Combined chronogram and indexplots for education and employment trajectories

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Overall, the ‘Rapid School-to-Work’ trajectories contribute almost 48% of all cases, suggesting that the accelerated British pattern of entering the labour market straight after school still dominates among young people. We distinguished between two set of trajectories involving: (1) those who spent most of the time in full-time employment (‘Successful rapid School-to-Work’, 37%); and (2) whose transition into the labour market was more turbulent with longer spells spent in changing full- and part-time jobs or being self-employed (‘Turbulent School-to-Work’, 11%). Around 39% of young people opt for further and higher education prior to entering the labour market. We separated these young people into three distinct trajectories: (1) those who transition to a full-time job after completing education (‘Education to FT job’, 20%); (2) those with less successful entry into the labour market and longer time spent in part-time employment or being self-employed (‘Education to uncertainty’, 11%); and,

(3) those who spent most of the time being in full-time education by age 26 ('Prolonged studies', 8%). Around 13% of young people experience more turbulent and less structured trajectories with longer spells of being inactive (around 4 years) or unemployed (around 3 years) with less than 2 years spent in any kind of employment.

Next, we investigated how our trajectories are linked to personal background characteristics (Table 1 in the Appendix) and analysed how background characteristics relate to the probability of following one of the six education and employment trajectories based on multinomial logistic regression estimates. Figure 2 presents the predicted probabilities for our key covariates – cohort, gender, and socio-economic background (full multinomial logistic regression results are reported in the Appendix Table A3). We observed major changes in the trajectories undertaken by young people across cohorts characterised by a significant decrease in the proportion of more successful transitions into the labour market, i.e., 'Successful Rapid School-to-Work' and 'Education to FT job' trajectories, mirroring an increase in 'Turbulent Rapid School-to-Work', 'Education to uncertainty' and 'Prolonged studies' for the youngest cohort. Young people from cohorts 1980–84 were less likely to follow a 'Successful Rapid STW', but more likely to stay in education for longer ('Prolonged studies') compared to those 1975–79 cohorts. Individuals from cohorts 1985–90 were significantly more likely to experience turbulent careers. This was true of both those who continued education and who pursued a job straight out of school. Thus, the probability of following a 'Successful Rapid STW' decreased, whereas the 'Turbulent Rapid STW' increased. Young people in the 1985–90 cohort were also less likely to find a full-time job after studies, but more likely to experience uncertainty and stay in education for longer.

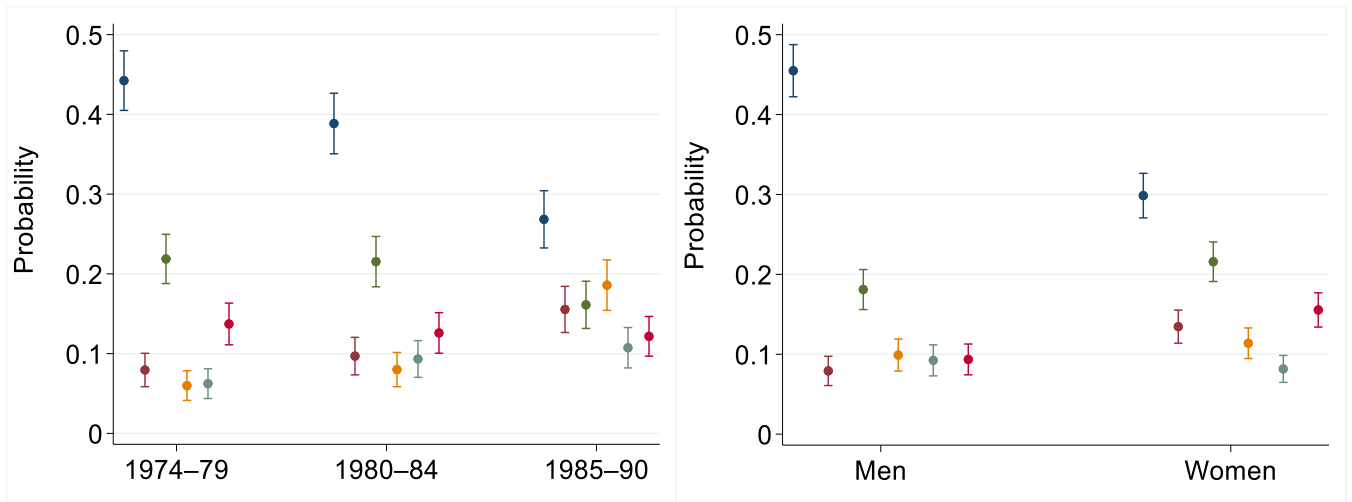
Pronounced gender differences by trajectories are also observed. More than half of men (54%) and nearly half (44%) of women in the sample followed the 'Rapid School-to-Work' trajectories, with women more likely to experience a more turbulent trajectory ('Turbulent

Rapid School-to-Work’). An almost equal proportion of men and women (37% and 39% correspondingly) opted for education after school with equal chances of following any of the three trajectories associated with further and higher education. Women were more likely to experience longer cycles of unemployment and inactivity compared to men.

As expected, considerable differences in the distribution of trajectories are found with regards to parental socio-economic background. Almost 60% of young people from working class backgrounds followed ‘Rapid School-to-Work’ trajectories, as opposed to 40% from the service class. More than half of young people from service class backgrounds (53%) transition into higher or further education after school, compared to almost a third (36%) and a quarter (28%) of young people from intermediate and working-class backgrounds. Young people from intermediate and working-class backgrounds were considerably less likely to experience a transition to a full-time job after finishing education (if they went for the academic route), compared to young people from the service class. Young people whose parents had workless background were more likely to experience longer spells of unemployment and time out of the labour market compared to all other groups.

a) by cohort

b) by gender



c) by parental SES

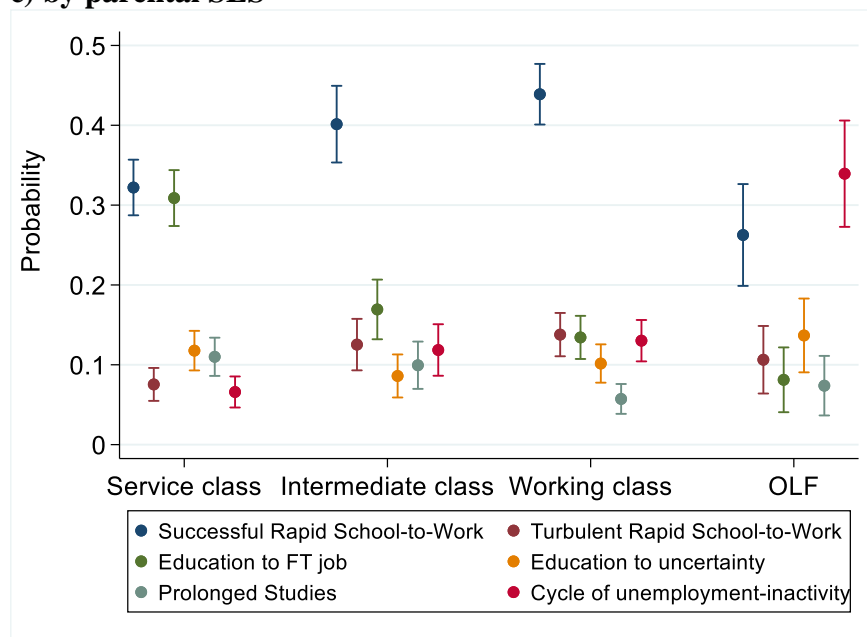


Figure 2 Predicted probabilities of school-to-work trajectories, by a) cohort; b) gender; and c) parental SES

Note: The models control for cohort, gender, parental SES, region and area of residence at age 16.

Source: BHPS waves 1-18 and UKHLS waves 2-9; own calculations

The place of residence also seems to influence school-to-work transitions to adulthood (Table A3 in the Appendix). Young people living in London and the South East at age 16 appear to be significantly less likely to follow the precarious pathways of unemployment and

inactivity. Young people living in an urban area were more likely to experience cycles of precarity and less likely to successfully transition into the labour market after finishing their studies. This could reflect a sustained reduction in the range and availability of full-time entry-level employment opportunities in urban economies, making the transition to the labour market increasingly difficult for young people (Rowe et al. 2015).

Following an increasing diversity in education and employment trajectories with longer time spent in education or vocational training, we also examined the link between school-to-work trajectories and educational attainment at age 26 (Figure 3). As expected, the proportion of highly educated is considerably higher among trajectories where young people opted to continue education after school. However, it is worth noting that regardless of the trajectory, more than 50% of young people in each trajectory tend to gain some additional qualifications beyond compulsory school level (GCSE) by age 26.

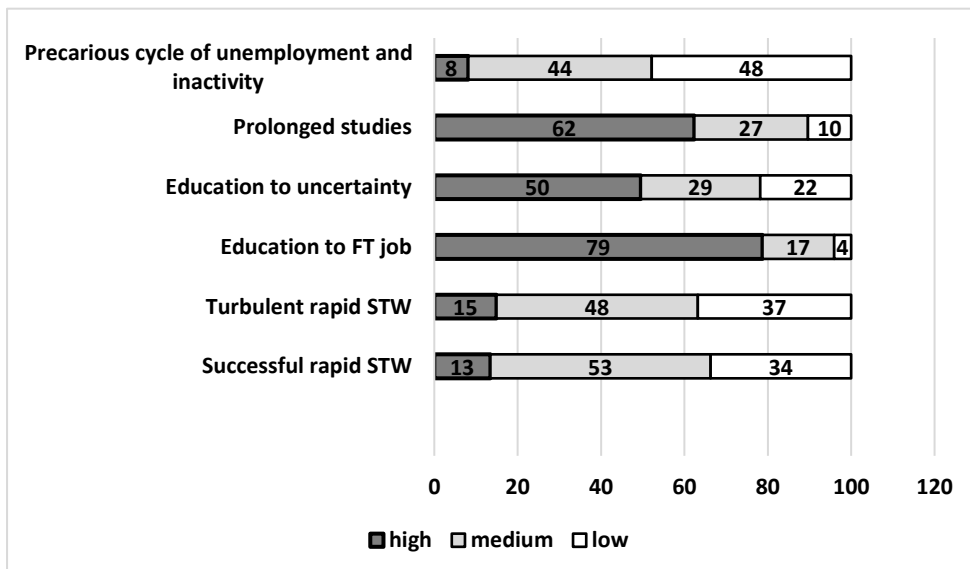


Figure 3. Educational attainment at age 26 by education and employment trajectories

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Occupational outcomes at age 26

Collectively, personal background characteristics, and education and employment trajectories are key in shaping labour market outcomes in the transition to the workforce. We explored how these attributes and trajectories contribute to influence occupational outcomes early in life based on multinomial logistic regression modelling. Figure 4 reports the predicted probabilities of having a certain occupational outcome at age 26 following the transition through a certain school-to-work trajectory (Table A4 in the Appendix).

Figure 4 reveals that young people who are employed immediately after school had significantly higher chances of being in routine occupations compared to those who continued education. However, some differences are observed within both groups. Individuals immediately transitioning into the workforce (both ‘Successful Rapid STW’ and ‘Turbulent Rapid STW’) had a higher probability of being employed, relative to those struggling to secure a job after a longer period in education (‘Education to uncertainty’ and ‘Prolonged studies’ trajectories).

Young people who managed to transition to FT employment after finishing their studies had the highest probability of occupying professional and managerial jobs compared to all other groups. However, the occupational outcomes for the other two trajectories among those who continued education were mixed. Those who experienced uncertainty after finishing their studies (‘Education to uncertainty’) had equal chances of being in all-level occupations as well as looking for a job or being OLF. Among those who stayed in education over a longer period (‘Prolonged studies’), we observed some signs of polarisation: some individuals had high chances of being employed in professional and managerial occupations while the others were likely to be looking for job or being OLF (including those still in education at the end of the period). The results also reveal that experiencing cycles of unemployment and inactivity during the transition to the workforce (‘Precarity’) significantly reduces the chances of being

employed, resulting in a very high probability of staying out of the labour market at age 26 compared to all other trajectories.

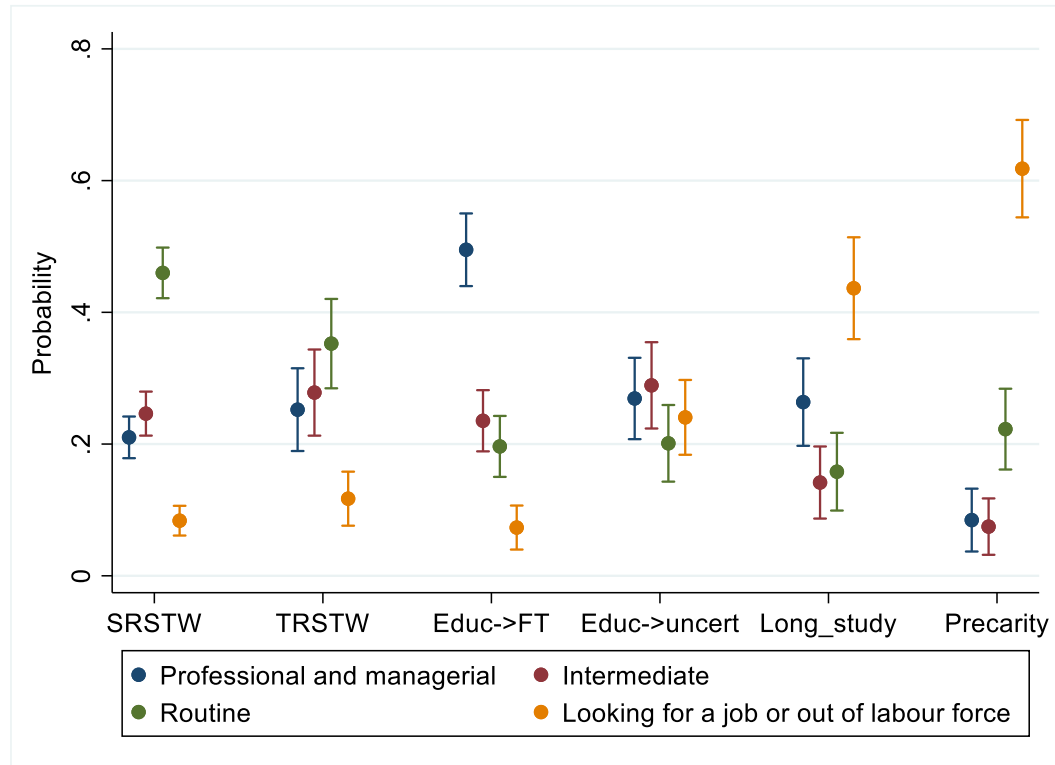


Figure 4. Predicted probabilities of occupational outcomes, by school-to-work trajectories

Note: ‘SRSTW’ stands for ‘Successful Rapid School-to-Work’; ‘TRSTW’ stands for ‘Turbulent Rapid School-to-Work’; ‘Educ->FT’ refers for ‘Education to FT job’; ‘Educ->uncert’ stands for ‘Education to uncertainty’; ‘Long_study’ stands for ‘Prolonged studies’; ‘Precarity’ refers to the trajectory of longer spells of unemployment and inactivity. The models control for gender, cohort, parental SES, and having a child by age 26. Full model results are presented in Table 3 in the Appendix.

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Overall, our estimates suggest that a higher educational level is linked to better chances of being in professional and managerial occupations, although the chances of being unemployed are also high. The question arises as to whether there is an interaction effect between education and cohort, as the expansion of higher education seems to have worsened the chances of a successful transition to full-time employment among the youngest cohort due to increased labour market competition and overqualification. Our main model results show statistically significant cohort effects, but an interaction between cohort and education (Table

A5, panel A in the Appendix) shows non-significant effects, suggesting that differences across cohorts are pronounced and are not moderated by educational level. Young people in the cohort 1985–90 were significantly less likely to be in intermediate and routine occupations compared to the 1974–79 cohort, but were more likely to be looking for a job or being OLF. There were no significant differences between the 1980–84 and 1975–79 cohorts.

Next, we analysed how occupational outcomes differ between men and women in relation to educational level by including an interaction effect between education and gender (Figure 5). We present marginal effects instead of predicted probabilities to highlight the relative gender differences in outcomes by educational level (Table A5, panel B in the Appendix). Women were less likely to be in routine occupations regardless of educational level. Highly educated women had higher chances of being in intermediate positions than highly educated men. Women with some qualifications beyond GCSE (medium educated) were more likely to be looking for a job or being OLF compared to men with similar qualifications. No differences were observed in the chances of being in professional and managerial occupations between men and women regardless of educational level.

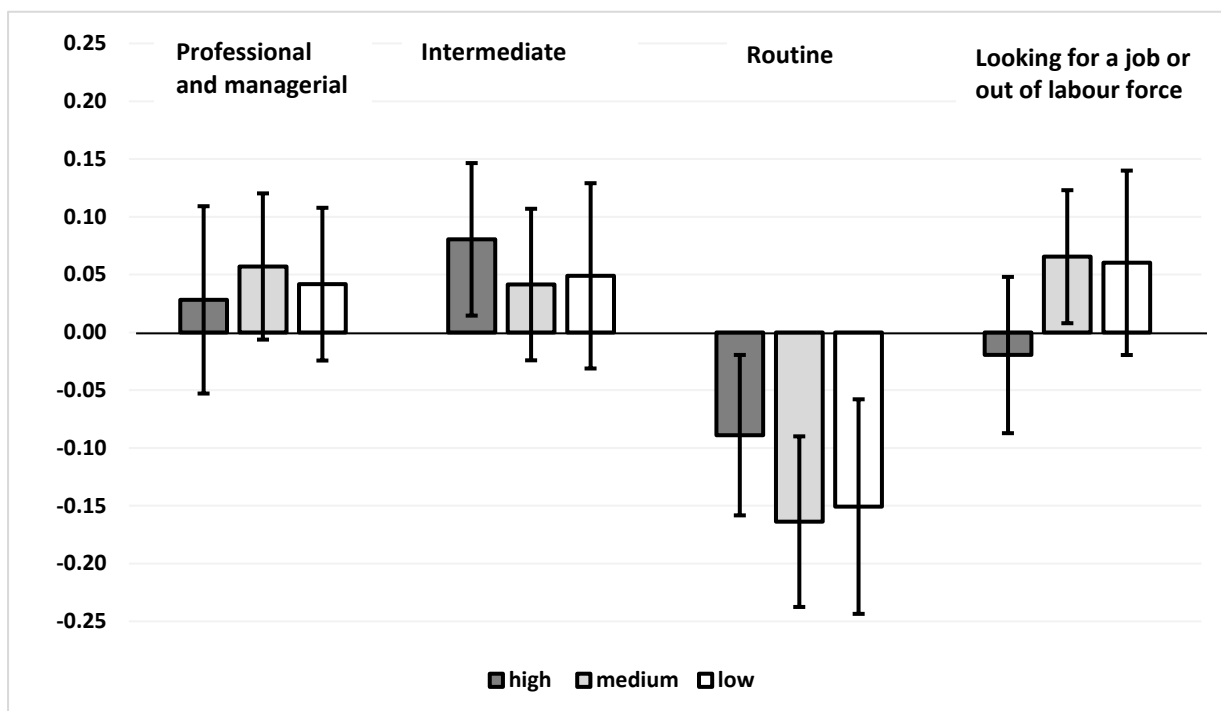


Figure 5 Marginal effects of educational level on occupational outcomes, women compared to men

Note: Men are the reference category. The models control for cohort, parental SES, and having a child by age 26.

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Figure 6 shows the marginal effects of education on occupational outcomes among young people from working class and workless backgrounds, compared to those from a service class background. People from working class and workless backgrounds are considered together as they displayed very similar results. Young people from less advantaged backgrounds have a lower probability of being in professional and management occupations compared to young people from more advantaged backgrounds, regardless of educational level. In contrast, less advantaged low educated young people were more likely to be employed in routine occupations or be out of the labour force. The difference in outcomes between young people from an intermediate class background and from a service class background were not significant when disaggregated by educational level (Table A5, panel C in the Appendix).

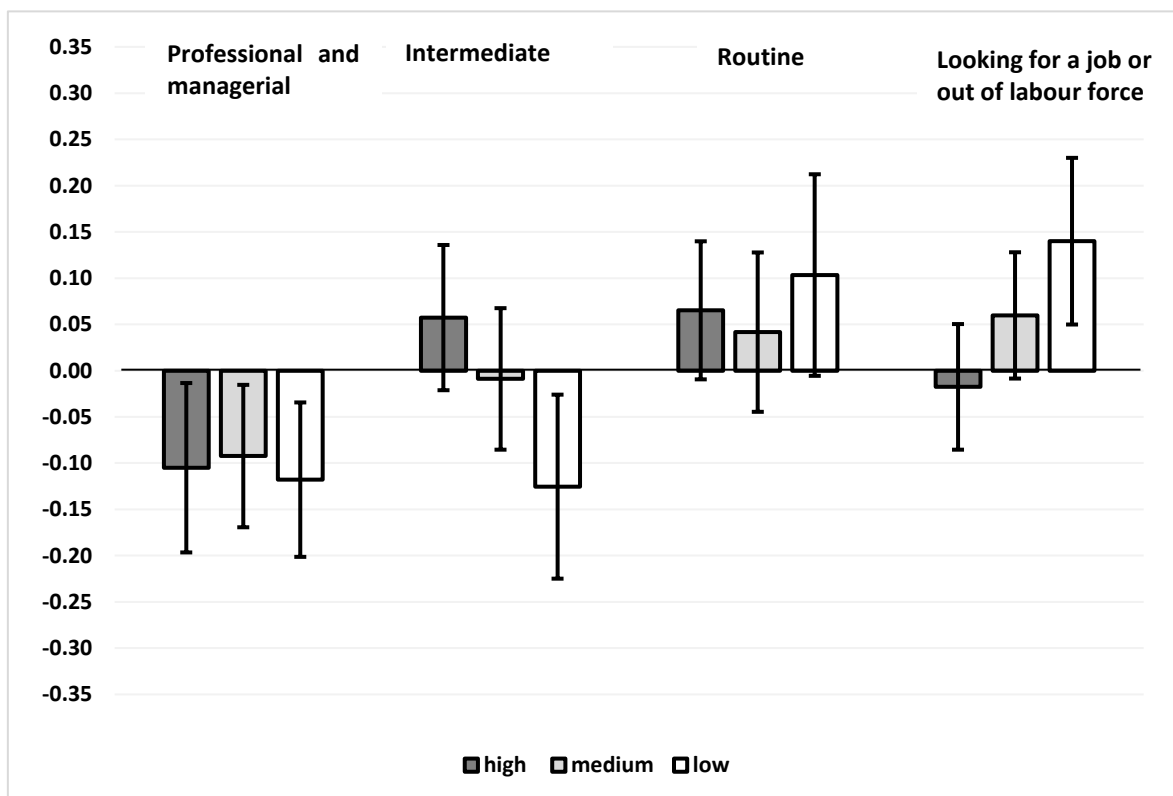


Figure 6 Marginal effects of educational level on occupational outcomes, young people from working class and workless backgrounds in reference to the service class

Note: Service class is the reference category. The models control for cohort, gender, and having a child by age 26.

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Regarding the control variables, having a child by age 26 was negatively associated with the chances of being in professional, managerial, and intermediate occupations (Table A4 in the Appendix), but increased the chances of being in routine occupations or out of the labour market. We additionally looked at the proportion of men and women who had a child by age 26 in each education and employment trajectory (Table A6 in the Appendix). More women (35%) had a child by age 26 than men (13.9%), with the proportion being the highest among women who experienced cycles of unemployment and inactivity (85.7%), followed by women who experienced turbulent rapid school-to-work transitions (52.3%). Our main results were robust after including a variable capturing previous migration experience between ages 16 and 26 (moves to and out of London and the South East, ‘escalator’ region effects), but were not included in the paper as the total number of movers in the data was less than 5%, providing unstable coefficients.

Discussion and conclusion

In this paper we analysed 10-year school-to-work trajectories and labour market outcomes among young people born in the late 1970s and 1980s. A core aim of our research was to assess changes and continuities in the traditional British pattern of the transition to adulthood characterised by a rapid entry into working life. We showed that trajectories have become more complex and diverse, with longer time spent in education or vocational training as well as longer periods spent looking for a job observed among the youngest cohorts. Still, more than half of men and nearly half of women have continued to follow the traditional British pattern of rapid school-to-work transitions. Our analysis revealed how closely occupational outcomes 10 years after school are linked to individual education and employment trajectories, and the magnitude of these effects is altered by gender and parental socio-economic background. Despite an overall positive association between entering higher education and securing a job,

highly educated young people from less advantaged backgrounds have significantly lower chances of being in professional and managerial occupations after graduation. We also found evidence for the persistence of disadvantage over time. Low-educated young people, as well as those from lower socio-economic backgrounds, are more likely to be engaged in low skill occupations or experience longer spells of unemployment and inactivity which might have a continuous scarring effect in later life. We also found that low-educated women, in particular, were highly likely to be excluded from the labour market for longer periods.

Accelerated trajectories from school to work have remained prevalent among young adults aged 16 to 26 over the last 25 years. We observed a continuing decrease in the mean time spent in full-time employment and an increase in part-time employment and time spent in education among the youngest cohorts. The shift towards part-time employment might, on the one hand, mirror an increase in flexible working arrangements for those who seek these arrangements, but on the other hand, it may mask the lack of opportunities to find a full-time job. The continuous expansion of higher and further education has resulted in a steady increase in the proportion of young people continuing education after school. Although, despite the prolonged stay in education, the proportion of highly educated individuals in each cohort by age 26 increased very little. This finding poses a further question around whether time spent in education, without an increase in qualifications, can be seen as a way to avoid unemployment or inactivity. The effects of educational attainment on occupational outcomes did not differ by cohort; however, young people in the cohort 1985–90 were more likely to be looking for a job or being OLF compared to the 1974–79 cohort, suggesting that employment chances have worsened even for those with more qualifications. Indeed, many young adults across all cohorts experienced spells of unemployment, part-time employment, and inactivity even if they have transitioned through trajectories comprising long periods of full-time employment and

education, suggesting that short spells of temporary uncertainty have become an integral part of school-to-work trajectories.

Despite the feminisation of higher education and the labour market, gender differences in education and employment transitions persist. While more than half of men (54%) and nearly half (44%) of women in the sample followed ‘Rapid School-to-Work’ trajectories involving employment immediately after school, women were more likely to experience turbulent transitions with less time in full-time employment and more time in part-time work or being inactive. Although we find that highly educated women and men had similar chances of attaining professional and managerial positions by their mid-twenties, there is strong evidence of the existence of a gender pay gap in these occupations later in life (Blundell et al. 2010; Olsen et al. 2018). It is therefore important to further investigate how other life course events, e.g., career breaks and childbirth, might have a scarring effect on women’s employment later in life (Harkness et al. 2019; Costa Dias et al. 2020). Indeed, we find that low educated women who experienced precarious careers were more likely to experience early childbearing. However, even after controlling for these experiences in our models, it remains unclear why low educated women experience worse employment outcomes compared to low educated men. This calls for a better understanding of female careers in general if a key policy aim is to reduce gender imbalances.

Pronounced differences were observed in school-to-work trajectories and occupational outcomes across parental socio-economic background. ‘Rapid School-to-Work’ trajectories were mostly followed by young people from less advantaged backgrounds. More than half of young people from service class backgrounds embarked on trajectories involving continuing education after school, compared to less than a quarter from working class backgrounds. Although with the overall expansion of higher education and increased shares of individuals from working class backgrounds holding a university degree, our analysis revealed substantial

differences in labour market outcomes after graduation. Highly educated young people from less advantaged backgrounds tend to have lower chances of securing a job in professional and management occupations compared to their counterparts from more advantaged backgrounds. Our analysis showed that highly educated young people from less advantaged backgrounds were more likely to experience a more turbulent transition into the labour market after finishing studies (i.e., less likely to follow the 'Education to FT job' trajectory) which can negatively affect future employment trajectories. This finding adds to existing evidence indicating that the first spell of unemployment might have a long-term scarring effect on future employment and earnings (Arumlampalam 2001; Gregg and Tominey 2005; Bell and Blanchflower 2010; Sissons and Jones 2012).

While school-to-work trajectories contribute to our understanding of the inequalities in labour market outcomes between young people with the same qualifications from different backgrounds, there is some evidence that other factors might also play a role in explaining these associations. Thus, pre-university educational achievements (Del Bono and Holford 2018), university activities (Delavende et al. 2020), educational aspirations and cultural background (Croll 2008; Berrington et al. 2016), as well as interpersonal skills (Longhi et al. 2018) and social networks (Macmillan et al. 2014) could influence educational performance and future labour market achievements. Future research could study how the combination of these factors might influence education and employment trajectories from a longitudinal perspective and help inform evidence-based policies supporting successful entry into the labour market in the future.

With an overall increase in the complexity and diversity in education and employment trajectories, this paper also provides strong evidence of persistence of less favourable outcomes. The increased uncertainty in the labour market is reflected in the large proportion of young people experiencing at least one spell of unemployed or inactivity in the early stages of

their career. This period might result in long-term unstructured ‘patchwork careers’ posing a serious threat to young people’s future career progression. This finding adds to earlier evidence regarding the persistence of precarious employment conditions among less advantaged young people, e.g. the existence of the ‘low-pay, no-pay cycle’ (Schieldrick et al. 2010; Furlong et al. 2018). While having the highest qualification does not guarantee full-time employment, we showed that longer periods of time spent in unemployment or inactivity are more prevalent among those without qualifications. These findings are worrying as extended periods of job insecurity and unemployment have been linked to negative consequences on young people’s well-being and mental health, resulting in severe illnesses, depression and low self-esteem, which subsequently pose a threat towards future employability (Bell and Blanchflower 2010; Sissons and Jones 2012).

We analysed differences in the influence of educational and employment trajectories on occupation outcomes at age 26. Future work could expand this by analysing the extent to which the trajectory from school to work contributes to shaping future occupational outcomes as individuals progress through their professional careers, and the extent to which observed differences in early working life may remain, reduce or be augmented in the future. Existing work has also emphasised key inequalities across ethnic minorities. Limited representativeness of ethnic minorities in BHPS prevented us from exploring these differences in the transition from school to work. Future work could investigate ethnic differences in education and employment trajectories as illustrated in the study. Small sample size also prevented us from analysing important characteristics of employment, such as the number of job changes within the trajectories, types of contracts, or sector and industry. Analysing differentials in these attributes could greatly enhance our understanding of both school-to-work trajectories and occupational outcomes.

Thus, our analysis has looked at how school-to-work trajectories have changed over the last 25 years in the UK and investigated important links between those trajectories and labour market outcomes at age 26. Accelerated school-to-work trajectories remain a prominent characteristic of the British transition to adulthood. However, trajectories have become more complex and turbulent over time with periods of temporary uncertainty becoming an integral part of labour market transitions, which might lead to the persistence of patterns of disadvantage, especially among those without qualifications. Studying school-to-work trajectories contributes to our understanding of the inequalities in occupational outcomes at age 26 observed with regards to gender and parental socio-economic background. Future analysis could incorporate longer sequences and occupational mobility and compare outcomes in long-term earning trajectories. This could improve our understanding of mechanisms of reproduction of social inequalities which stem from education and employment trajectories in early adulthood and be used as evidence for planning effective policy interventions to help those in vulnerable positions avoid falling into long-term patterns of disadvantage.

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Appendix

Table A1 Background characteristics of education and employment trajectories, % in rows

	Successful Rapid STW	Turbulent STW	Education to FT job	Education to uncertainty	Prolonged studies	Precarious cycle of unemployment- inactivity	Total N
Cohort							
1974-79	46	8	22	6	6	12	658
1980-84	39	10	22	8	9	12	607
1985-90	26	16	16	19	10	13	595
Gender							
Male	46	8	18	10	9	9	850
Female	30	14	21	12	8	16	1010
Parental SES							
Service class	33	7	31	11	11	6	661
Intermediate class	39	13	17	9	10	12	386
Working class	45	14	13	10	5	14	622
OLF	24	12	7	15	7	35	191
Region of residence at age 16							
London and South East	41	8	25	8	10	8	348
Rest of the UK	36	12	19	11	8	14	1512
Area of residence at age 16							
Urban	38	11	18	10	8	15	1343
Rural	34	11	25	12	9	8	509*

Note: * 8 respondents have missing values for the area of residence variable.

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Table A2. Mean time spent in each state by cluster (in months) with size and medoid of each cluster

Pathways	FT Emp.	PT Emp.	Self- Emp.	Parental leave	FT educ.	Un- emp.	In- active	Size	%	Medoid
Successful Rapid STW	82	5	4	1	22	5	1	690	37	24 S - 96 FT 24 S - 7 FT - 6 PT - 37 F -46 PT
Turbulent Rapid STW	27	37	23	4	19	7	3	204	11	72 S - 48 FT
Education to FT job	41	3	2	0	71	3	1	370	20	75 S - 45 PT
Education to uncertainty	9	21	8	2	61	12	8	200	11	120 s
Prolonged studies	10	6	2	0	95	4	2	160	8	
Precarious cycle of unemployment-inactivity	11	7	2	1	16	37	46	236	13	26 S - 1 U - 93 I

Note: Months are rounded to the nearest whole number. “S” stands for being a student; “I” for being inactive; “PT” for being part-time employed; “FT” for being full-time employed; “U” for being unemployed.

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Table A3 Marginal effects on education and employment trajectories estimated from multinomial logit models

Variables	Successful rapid STW	Turbulent rapid STW	Education to FT job	Education to uncertainty	Prolonged studies	Precarious cycle of unemployment – inactivity
Gender (Males - Ref.)						
Females	-0.166 (0.023)	0.060 (0.015)	0.033 (0.019)	0.019 (0.014)	-0.009 (0.014)	0.062 (0.015)
Parental SES (Service class - Ref.)						
Intermediate class	0.083 (0.032)	0.049 (0.019)	-0.145 (0.027)	-0.029 (0.018)	-0.011 (0.02)	0.053 (0.019)
Working class	0.122 (0.028)	0.061 (0.017)	-0.181 (0.024)	-0.014 (0.017)	-0.054 (0.016)	0.065 (0.017)
Out of labour force	-0.066 (0.039)	0.035 (0.024)	-0.237 (0.028)	0.022 (0.027)	-0.037 (0.023)	0.283 (0.037)
Cohort (1974-79 - Ref.)						
1980-84	-0.059 (0.029)	0.017 (0.016)	-0.002 (0.024)	0.021 (0.015)	0.032 (0.016)	-0.010 (0.018)
1985-90	-0.190 (0.028)	0.077 (0.019)	-0.057 (0.023)	0.135 (0.02)	0.045 (0.017)	-0.010 (0.018)
Region of residence at age 16 (Rest of UK - Ref.)						
London and South East	0.037 (0.031)	-0.025 (0.018)	0.035 (0.025)	-0.020 (0.018)	0.020 (0.019)	-0.048 (0.017)
Area of residence at age 16 (Rural - Ref.)						
Urban	0.023 (0.027)	0.010 (0.016)	-0.074 (0.023)	-0.010 (0.016)	-0.007 (0.015)	0.058 (0.015)

Note: Marginal effects show the differences in the predicted probabilities for cases in one category relative to the reference category when all other variables equal their means. Estimates in italics and bold denote statistical significance at the 5% level. Standard errors are reported in parentheses.

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Table A4 Marginal effects on occupational outcomes at age 26 estimated from multinomial logit models

Variables	Professional and Managerial	Intermediate	Routine	Looking for a job or out of labour force
Cohort (1974-79 - Ref.)				
1980-84	0.022 (0.028)	-0.017 (0.026)	-0.037 (0.029)	0.032 (0.024)
1985-90	0.051 (0.029)	-0.061 (0.028)	-0.081 (0.031)	0.092 (0.024)
Gender (Males - Ref.)				
Females	0.052 (0.024)	0.055 (0.022)	-0.129 (0.026)	0.023 (0.020)
Parental SES (Service class - Ref.)				
Intermediate class	-0.078 (0.031)	0.004 (0.030)	0.080 (0.035)	-0.006 (0.027)
Working class	-0.113 (0.028)	-0.004 (0.026)	0.089 (0.030)	0.028 (0.024)
Out of labour force	-0.200 (0.052)	-0.049 (0.047)	0.161 (0.049)	0.088 (0.031)
Education and Employment Trajectories (Successful Rapid STW - Ref.)				
Turbulent Rapid STW	0.037 (0.043)	0.016 (0.038)	-0.100 (0.034)	0.047 (0.040)
Education to FT job	0.292 (0.037)	-0.020 (0.028)	-0.239 (0.026)	-0.032 (0.033)
Education to uncertainty	0.027 (0.041)	-0.001 (0.036)	-0.233 (0.027)	0.207 (0.048)
Prolonged studies	-0.017 (0.042)	-0.145 (0.027)	-0.269 (0.025)	0.430 (0.053)
Cycle of unemployment – inactivity				
	-0.199 (0.030)	-0.205 (0.023)	-0.214 (0.027)	0.618 (0.041)
Having a child by age 26 (None - Ref.)				
	-0.121 (0.030)	-0.080 (0.023)	0.087 (0.027)	0.114 (0.041)

Note: Marginal effects show the differences in the predicted probabilities for cases in one category relative to the reference category when all other variables equal their means. Estimates in italics and bold denote statistical significance at the 5% level. Standard errors are reported in parentheses.

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Table A5 Marginal effects of interaction effect between education and A) cohort; B) gender; C) parental SES on occupational outcomes at age 26 estimated from multinomial logit models

Variables	Professional and Managerial	Intermediate	Routine	Looking for a job or out of labour force
A) Interaction effect between cohort and education				
Cohort 1980-84 (cohort 1974-79- Ref.)				
High	-0.008 (0.047)	-0.048 (0.041)	0.000 (0.043)	0.055 (0.039)
Medium	0.018 (0.038)	0.006 (0.040)	-0.053 (0.044)	0.029 (0.033)
Low	0.072 (0.041)	-0.008 (0.048)	-0.084 (0.054)	0.020 (0.041)
Cohort 1985-90 (cohort 1974-79- Ref.)				
High	0.035 (0.047)	-0.048 (0.040)	-0.099 (0.038)	0.112 (0.039)
Medium	0.033 (0.038)	-0.058 (0.038)	-0.077 (0.043)	0.102 (0.035)
Low	0.011 (0.039)	-0.037 (0.048)	-0.122 (0.055)	0.147 (0.048)
B) Interaction effect between gender and education				
Women (men - Ref.)				
High	0.028 (0.041)	0.080 (0.034)	-0.089 (0.035)	-0.020 (0.034)
Medium	0.057 (0.032)	0.041 (0.033)	-0.164 (0.038)	0.065 (0.029)
Low	0.042 (0.034)	0.049 (0.041)	-0.151 (0.047)	0.060 (0.041)
C) Interaction effect between parental SES and education				
Intermediate class (Service class- Ref.)				
High	-0.073 (0.055)	0.003 (0.045)	0.066 (0.045)	0.003 (0.043)
Medium	-0.076 (0.046)	0.017 (0.047)	0.066 (0.053)	-0.008 (0.038)
Low	-0.017 (0.056)	-0.058 (0.063)	0.051 (0.068)	0.024 (0.053)
Working class and workless background (Service class- Ref.)				
High	-0.105 (0.047)	0.057 (0.040)	0.065 (0.038)	-0.018 (0.035)
Medium	-0.092 (0.039)	-0.009 (0.039)	0.042 (0.044)	0.060 (0.035)
Low	-0.118 (0.043)	-0.125 (0.051)	0.103 (0.056)	0.140 (0.046)

Note: Marginal effects show the differences in the predicted probabilities for cases in one category relative to the reference category when all other variables equal their means. Estimates in italics and bold denote statistical significance at the 5% level. Standard errors are reported in parentheses.

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.

Table A6. Proportion of men and women who had a child by age 26, by education and employment trajectories, %

	Men	Women	Total
Successful rapid STW	21.2	24.0	22.4
Turbulent rapid STW	11.3	52.3	39.1
Education to FT job	4.0	3.4	3.7
Education to uncertainty	1.3	39.7	24.0
Prolonged studies	0.0	22.4	11.3
Precarious cycle of unemployment – inactivity	26.4	85.7	66.8
Total	13.9	35.0	25.4

Source: BHPS waves 1–18 and UKHLS waves 2–9; own calculations.