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# Chapter Two: The British Cohort Study: Youth Transitions in Education and Employment

"a different country… You have to blink and rub your eyes". – Jacques (1982)[[1]](#footnote-1)

# Introduction to Chapter Two

Continuing the theme set in chapter one, chapter two attempts to replicate the previous analysis of entry from school into work. This chapter focuses on the British Cohort Study (BCS) that started in 1970. As in chapter one, this chapter will focus on the pathways and choices made by individuals in the BCS after they reached 16 and ended mandatory schooling. Once more focus will be placed upon structural inequalities of social class, sex, and housing tenure to understand young people’s transitional experiences during this period. An attempt is made to duplicate the NCDS chapter as precisely as possible to enable a comparison of cohort transitional experiences.

This chapter begins with a literature review of present literature on the topic of BCS youth and their transitional experiences. Then this chapter will move on to a duplication analysis of the model used in chapter one, with sensitivity analysis and handling missing data sections. Finally, this chapter will conclude with a comparison of NCDS and BCS youth.

The data used comes from sweeps from birth up to age 30 using the BCS. The present chapter continues the tradition of the previous by updating prior literature with modern statistical techniques. This chapter will look at four primary economic activity outcomes: employment, education, training & apprenticeship, and unemployment & out of the labour force. Due to the nature of the BCS, missingness will form a key discussion within this overall chapter.

## Literature Review: BCS Timeframe and Context

This section provides an overview of the literature within the field of youth transitions of the BCS cohort. This review focuses on existing research outlining the school-to-work transition and examination of the structural impacts upon that transition within the context of the BCS cohort. Initially literature will focus upon the historical and temporal context of the BCS cohort to ground the empirical research on transitions. As with chapter one, major transition themes are identified as they relate to employment, education, training, and unemployment. Each are influenced to some degree by structural factors that impact individual choice and opportunity. The changing nature of the labour market, and British polity during the BCS timeframe have had a substantive impact on the role of training and apprenticeships within an individual’s first major transition from mandatory schooling into the world of economic activity.

At the time of the BCS cohort, young people were in full time education until the age of 16 – like the NCDS cohort. At this age, individuals were typically expected to sit some form of examination – for the BCS cohort they were some of the last individuals to sit the O’level at 16, prior to its replacement with the GCSE. After this period of mandatory schooling there were options of continuing within education, moving on to training under the YTS scheme, entering employment, or becoming unemployed or out of the labour force. The relative diversity of options comparative to the NCDS cohort was restricted. Traditional apprenticeship schemes were gone, as was unemployment benefit for individuals aged 16-18. These effects will be discussed at length in the literature review below.

### Story of transitions for BCS youth

Within Britain, the 1970s and 1980s were periods of large-scale transformation (Bynner, Ferri and Shepherd, 2019). The 1970 BCS cohort can be characterized by a continuing decline in manufacturing and apprenticeships, high levels of unemployment, greater government intervention in young people’s economic activity, and a growing higher education participation rate.

The 1970s onwards saw a continuing trend post-war of a simultaneous growth of automation and technology alongside a decline of manufacturing, though this came more out of the 1973-5 recession that devastated the heavy industrial markets of the North of England – the recovery and rebuilding of a service economy was located exclusively within the South of England (Hamnett, McDowell and Sarre, 1989) – half of all jobs created between 1983-87 were created in the south east (ibid). These pressures brought about major labour market and societal transformation for society, and increased uncertainty and risk for the worker (Schoon, 2007; Beck, 2014). A result of this transformation of society, Hutton describes this period of British history as the ‘30/30/40’ society, whereby 40 per cent of the population are permanently in casual employment, 30 per cent are doing fine, and another 30 per cent are struggling, leading to the phrase ‘Getting on, getting by, getting nowhere’ (Bynner, Ferri and Shepherd, 2019).

These ‘new’ jobs were defined by their transferable skills across the service sector (Bynner and Ferri, 2003). As a result, the apprenticeship scheme that was linked to traditionally heavy manufacturing highly specialised training went into decline and was eventually replaced by the Youth Training Scheme in 1983 under the management of the Manpower Services Commission (MSC). This in turn would be replaced by Youth Training (YT) in 1990 (Droy, Goodwin and O’connor, 2019). The YTS was the first time in Britain that youth had become a category of large-scale policy intervention beyond that of education (Wallace and Cross, 1990). The YTS modus opernadi was based on keeping kids off the streets and filling unemployment gaps – this became especially apparent during the recession of 1986-7 whereby the unemployment rate for men was 2.6 per cent but 12 per cent were in some form of government training, though this eventually fell below unemployment figures in 1988 post-recession (Bynner and Ferri, 2003). The YTS has experienced sociological critique (Droy, Goodwin and O’connor, 2019). The main critique of the YTS is that it was seen as an attempt at direct intervention from a collapsing youth labour market from a government that was anti-interventionist (ibid). It started out as a one-year program in 1983 (eventually to two-year program in 1986) that provided mostly low-level training that was more comparable to an alternative to unemployment than to higher education or employment (Bynner and Ferri, 2003). Whilst the YTS did maintain a steady average of 400,000 people between the years of 1985-89, it was neither an adequate replacement from the highly skilled training of a traditional apprenticeship, nor was it an adequate form of pay and employment. (Wallace and Cross (Wallace and Cross, 1990) argued that the YTS represented a ‘dual-carriageway’, attempting to complete the goals of education and work training at the same time - unsuccessfully. The YTS was also internally stratified. There were some attractive highly trained schemes that it did offer, so called ‘Model A’ schemes that worked directly with employers, however these were very hard to acquire and oftentimes went to those that did not need them the most (Wallace and Cross, 1990). The ‘Model B’ schemes were most numerous and typically what people mean when they describe the YTS. Among these unattractive schemes, individuals were typically sorted into the growing service sector, associated with insecurity and risky employment prospects. This liminal zone of the youth labour market was stratified along gender and class grounds (Droy, Goodwin and O’connor, 2019).

It was for many a stopgap – an unattractive one at that. It would not be accurate to compare the YTS – which was a training scheme, to the much more rigorous training and education of a traditional apprenticeship (Bynner et al., 2002). Most young people felt forced into the YTS scheme due to the Thatcher government cutting unemployment benefits for all people between the ages of 16-18 in 1988. This is arguably the start of the punitive approach toward unemployment and welfare in the late 20th century (Droy, Goodwin and O’connor, 2019). Due to the timing of these unemployment benefit cuts, the 1970 cohort were still able to claim benefits, though they still suffered as part of the ‘vulnerable core’ of the labour market through Thatcher’s cuts and de-regulations towards employment rights and the minimum wage (Hamnett, McDowell and Sarre, 1989). The proclamation in 1981 under the New Training Initiative of heralding in universal youth training for all was in reality a poorly thought out scheme that some compared to a stopgap, whilst harsher critiques referred to it simply as ‘slave labour’ (Bynner, Ferri and Shepherd, 2019). The YTA offered cheap, subsidised labour to employers with no requirements to continue an individual’s employment after the scheme was completed (Droy, Goodwin and O’connor, 2019). It would be fair to characterise the YTS as a short-term benefit to businesses whilst leaving the individual worker under-trained, under-paid, and often unemployed.

The initial desired purpose of the scheme was to establish a training scheme comparable alongside German lines (at the time argued to be the best apprenticeship program in Europe). The result however, was a scheme that failed to appropriately train youth, and the best form of vocational training was instead found to be employment itself (Bynner et al., 2002). In fact, the YTS has been found to have had negative consequences for men’s employment prospects (Dolton, Galinda-Rueda and Makepeace, 2004; Droy, Goodwin and O’connor, 2019; Goodwin et al., 2020), and overall a negative impact on earnings over the life course (Dolton, Galinda-Rueda and Makepeace, 2004) compared to those men that did not enter the YTS. For women the effects on earnings were small and insignificant (Dolton, Galinda-Rueda and Makepeace, 2004).

The relative decline of apprenticeship schemes and increase in education opportunities due to the increasing pressure on young people to accumulate credentials resulted in a much higher proportion of school leavers in the 1970s onwards staying on within education than their earlier cohorts (Bynner and Ferri, 2003). Those that did not choose to stay on within education and had little to no qualifications faced a harsh reality of a ‘patchwork’ career trajectory, characterised by shifting occupations and periods of unemployment (Bynner, 2005). In 1976, the number of individuals that left school without any qualifications was 21 per cent, in 1986 it was 9 per cent (Wallace and Cross, 1990). The 1970 cohort were the last to ever experience the dual O’level/CSE composition at 16 – the BCS cohort were in the middle of a massive amount of educational reform that would come in 1988 with the advent of the Education Reform Act. Men in particular saw a large increased probability of being in full-time education over employment in comparison with the 1958 cohort (Bynner and Ferri, 2003), though large members of men were also entering government training schemes like the YTS. For women too, the decreasing numbers of young women being out of the labour force saw a corresponding increase in labour market participation as well as higher education participation (Bynner and Ferri, 2003). The expansion of the university system in the late 1960s following the Robbins Report (Robbins Report, 1963) provided the supply of higher education places that this new service based labour market so often demanded (Bynner and Ferri, 2003). Compared to the continent at the time, European rates of participation in education were changing more rapidly than Britain (Bynner, Ferri and Shepherd, 2019). For most, the transition into adulthood is characterised by an initial movement from mandatory education to some form of employment. The fact that the BCS cohort appears to exhibit an elongated stay within education (Bynner et al., 2002) is some indication of the changing nature of the labour market within the UK – and also provides evidence for the development of an ‘Emerging Adulthood’ (Bynner, 2005). This transitional change is indicative of two potential sources, the first would be a major economic shock, in the form of a recession would encourage individuals to stay in education for longer in order to avoid the initial economic shocks and uncertainty that comes with being employed in a labour market experiencing a downturn. The second, relates to a degree of economic restructuring due to technological change, resulting in different skills and credentials, thus encouraging a longer stay within education to garner such skills and credentials. For the BCS cohort, they experienced two major economic shocks in their life-course by age 16 – the 1973-5 recession and the 1980-1 recession. The BCS cohort also experienced the aftereffects of economic restructuring during the post war-consensus and a growing service economy (Bynner et al., 2002). Leaving school to enter employment for minimum school age leavers was a much more difficult process compared to 10-20 years earlier – even more so for those living in industrial and manufacturing heartlands (Bynner et al., 2002).

The returns to education for the BCS cohort confer a 17 per cent average increase in income for those individuals that stayed on within education post-mandatory schooling compared to their peers (Boero et al., 2020). This is not entirely surprising considering that education is the most important single, individual predictor of adult incomes and earnings (Breen, 2022), though it does emphasise the importance of reflecting on the stratifying influences during education and their subsequent impacts on choice and opportunity post-education. This single most important predictor is a worrying phenomenon when combined with a ‘wastage of talent’ (Bukodi, Bourne and Betthäuser, 2017) whereby young people from disadvantaged backgrounds face barriers to fully realise their academic potential within the British educational system.

The changing role of education and relationship individuals had with it was not built-in isolation. The changing structure of the labour market also had other effects. Labour market restructuring was part of the increase in home ownership from the 1950s to 1990s. During the period of 1951 only 31 per cent of people owned their own home, in 1991 this rose to 67 per cent (Bynner and Ferri, 2003). Whilst home ownership did rise, that too was stratified by parental social class and income (Blanden and Machin, 2017). For the BCS cohort, having parents that were homeowners when they were aged 16 increases the probability of themselves being a homeowner at 42 by 116 per cent (ibid).

All this historic phenomenon has impacted the relative stability of youth transitions that are apparent for the NCDS cohort. The relative decline in individuals moving straight from school into work after mandatory schooling and the growth of difficult transitions and accumulating human capital via higher education suggests an increase in risk and uncertainty (Anders and Dorsett, 2017).

### Structural Barriers to successful transitions – the role of social-class and sex

#### Social Class

The BCS cohort experienced a stratified post-mandatory schooling experience. When it comes to participation in higher education, those from the most advantaged social origins background were more likely to attend higher education institutions comparative to less advantage individuals (Alcott, 2013). Prior academic attainment explains most of the variance in this stratified higher education participation (around 60%) (Alcott, 2013). With the growth of an ‘Emerging Adulthood’ and an elongated stay within education, participation in education for the BCS cohort has seen the gap between disadvantaged and privileged social origins get wider (Bynner, 2005). These apparent returns to education are stratified according to social class origins, with the advantages offered by certain qualifications differing according to class origins (Bukodi and Goldthorpe, 2011; Parsons, Green and Wiggins, 2016).

#### Sex

The experience for women within the 1970 cohort saw a continuing weakening of gender differences in processes of occupational attainment – a similar trend seen within the 1958 cohort (Bukodi, 2009), though the strength of education in this process appears to remain the same across cohorts (Bukodi and Goldthorpe, 2009). The weakening of gender differences is seen both at the educational level and occupational level in the form of take home income (Bynner, 2005). However, whilst the BCS cohort experienced a decline in gender segregated occupational sorting (Lekfuangfu and Lordan, 2022), those occupations that have the highest share of males maintained relatively high levels of segregation. Whilst it has been emphasised that social class origins have had an impact upon the BCS youth, the changing nature of the labour market has also had ramifications for men and women with regards to their biographical agency and their ability to find routes to stability and security (Schoon, Martin and Ross, 2007).

#### Conclusion

The BCS cohort is one that can be characterised by choice. Comparative to previous generations, that choice was much more numerous in the options presented to the BCS youth on what to do next after mandatory education had finished. The ‘Emerging Adult’ could theoretically choose any number of these options; however, the reality is that many of these options constrained the individual either immediately or down their life course. If the desired route from education was to find stable employment, the NCDS cohort would find that simply entering employment itself would provide a viable route to success. For the BCS cohort however, this was not strictly the case. Labour market restructuring and technological innovation on top of a major recession provided a much more complex, elongated transition to a stable occupation (Martin, Schoon and Ross, 2008), resulting in a ‘winding road’ school-to-work transition (Leuze, 2010). Entering employment immediately after mandatory education had the potential to lead to periods of unemployment due to a lack of skills in a new economic landscape (Bynner, 2005). Entering a government training program like the YTS would provide for some equally unsatisfactory results (ibid). Unemployment was a route that was even more restrictive than earlier cohorts due to the cutting off young people from benefits. Thus, the BCS cohort can be characterised as one of an educational turn. Staying within education, to both weather the recession storm and to pick up relevant and sometimes required qualifications was most likely the best option to lead to a stable and successful occupational career. Unfortunately, education – particularly post-mandatory education – was highly stratified. This stratified nature impacted the most privileged – by giving them advantages in the labour market, and the least privileged – by incurring further disadvantage. It should be assumed that, with this context, those individuals that entered education as a route post-mandatory schooling would thus be from more privileged backgrounds, perhaps in an even more striking ‘haves and have nots’ fashion than previously seen post 1944 Education Act reform.

## Data and Methods

Chapter two is a replication analysis of the models presented in chapter one using the NCDS. Therefore, similar to chapter one, the relationship between social origins and economic activity after mandatory schooling is examined used the large-scale, nationally representative data collected from the British Cohort Study. Educational attainment, housing tenure, and sex are also included in the model, as they were in the NCDS model. This is to assess choice and opportunity into different forms of economic activity: employment, education, training & apprenticeships, and unemployment & out of the labour force. BCS data is available using the UK Data Service.

Prior to any modelling it is important to note that the BCS sample has issues with longitudinal linkage to earlier and later datasets. The unique case identifier included with the BCS70 datasets is the 6-digit variable [KEY] derived from combining the 5 digit variable [chesno] and one digit twin code [tc] together (Dodgeon, 2002). All participants taken at the Birth sweep were given KEYs ranging up to 200,000. Those added to the survey at age 5 were given KEYs from 300,010-450490, the 10-year-old sweep KEYs 600020-703560, and the 16-year-old sweep KEYs 800020-804890 (Dodgeon, 2002). KEYs were added up to age 30 but after age 16 the process of expanding the population base was limited to going back to those already located but not already interviewed (Dodgeon, 2002). The inclusion of new participants or new KEYs at later points post-birth sweep means that some individuals have important information missing at earlier as well as later sweeps within the BCS. As one example, the 21 sub-sasmple sweep has 92.59 per cent of cases originally collected at Birth. The remaining 7.41 per cent were collected from age 5 onwards (ibid).

Another issue to note with the BCS data is that those in the original birth sample included 626 children living in Northern Ireland. After the initial survey the Northern Ireland population was excluded from all subsequent sweeps, except for the small amount that moved to Great Britian in the meantime (Dodgeon, 2002). Thus any substantive interpretations of the dataset using data post-birth-sweep cannot draw on any Northern Irish data.

Whilst this chapter has attempted its best to replicate the analysis in chapter one there are some substantive differences. Firstly, and most substantially, is that the outcome variable of economic activity after mandatory schooling in chapter two only has four categories to chapter ones five. Chapter two is missing a ‘post-education schooling’ category that encapsulates non-traditional forms of education that did not follow the traditional route of university. For the BCS cohort these non-traditional forms of education had decreased in popularity on top of not being appropriately recorded In the BCS survey. The second substantive change relates to the construction of social class measures (NS-SEC and RGSC) within chapter two. Whilst both chapter one and chapter two use occupational coding data from (Gregg, 2012), for the NCDS codes are only available for fathers of participants, for the BCS cohort both fathers and mothers are made available. Due to this both NS-SEC and RGSC are coded by using mothers’ occupational data to fill in any missing data entries from the father’s data. Other than these two differences, the model presented for analysis in chapter two is identical to that of chapter one. The reason for this is to start to build a historical picture of the changes and developments in choice and opportunities for different cohorts across different time periods.

As with chapter one, after an initial exploration of descriptive statistics multinominal logistic regression will be used to understand the choice and opportunities of BCS youth when it comes to economic activity post-mandatory schooling. After this initial model, a sensitivity analysis of social stratification measures will be employed to assess the most appropriate measure. Finally, an analysis of missing data involving multiple imputation will be conducted to assess the impact of missingness on the substantive findings of the model.

### Introduction to the BCS data

This chapter will use data from the British Cohort Study (University College London, 2022). The BCS70 began in 1970 with data originally collected on 17,198 babies born in England, Scotland, Wales, and Northern Ireland in the week of 5-11th April. This chapter will use data from participants up to the age of 30. Full cohort sweeps were gathered when participants were aged 5, 10, 16, 26, and 30 – with a subsample taken at 21 (Bynner, 2017). Originally, the data was collected by a mixture of medical records, and mother’s input. As the cohort member got older however they started to actively participate in answering some survey questions. Age 26 was the first time the cohort member took direct control of answering the survey itself. This was also a period of transition for the BCS, it typically relied on school records to keep in contact with its cohort members through their registered addresses but after the age 16 sweep when most left mandatory education a large amount of respondents were lost when it came time to contact them for the age 26 sweep (Elliott and Shepherd, 2006).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | 1970 | 1980 | 1991 | 1996 | 2000 |
| Sweep | 0 | 2 | (sub-sample) | 4 | 5 |
| Age | Birth | 10 | 21 | 26 | 30 |

Alongside the standard sweeps that are detailed in the table below, two other aspects of the BCS are the 21-year-old sub-sample sweep and the BCS economic activity dataset. Both were considered supplementary to the full sample sweeps. The former consisted of a sub-sample of 10 per cent of the participants in the full sample and covered aspects such as economic activity since age 16. The BCS economic activity datasets sole focus was on creating a monthly economic activity record of participants since they left mandatory schooling up to 2016. The economic activity dataset was constructed using activity related data from sweeps 5-10 (Hancock and Peters, 2021). Barring the 21-subsample sweep, economic activity history on the type of activity individuals did post-mandatory schooling at age 16 was not collected until participants were aged 30 in sweep 5. The content covered in the age 30 sweep and the economic activity dataset for the time period of this analysis is virtually identical. The 21 subsample however does provide additional data that is missing in both the economic activity dataset and the sweep 6 dataset. Data was thus merged with the sweep 5 and the subsample to boost the overall sample size of the outcome variable of interest.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Total cohort | Dead | Permanent Emigrants | Non-Response | Other[[2]](#footnote-2) | Participants | (% of eligible sample)[[3]](#footnote-3) | Data Collected From |
| Birth – 1970 | 17,287 | 0 | 0 | 91 | 0 | 17,196 | 96 | Mother and Medical Records |
| Age 5 – 1975 | 16,720 | 567 | 0 | 2,812 | 360 | 12,981 | 79 | Parents, medical records, cohort members |
| Age 10 – 1980 | 16,700 | 587 | 0 | 588 | 655 | 14,870[[4]](#footnote-4) | 89 | Parents, school, tests, medical exam, cohort member |
| Age 16 – 1986 | 16,690 | 597 | 0 | 2,884 | 1,594 | 11,615 | 70 | Parents, school, tests, medical exam, cohort member |
| Age 26 – 1996[[5]](#footnote-5) | 16,545 | 697 | 45 | 4,416 | 2,384 | 9,003 | 55 | Cohort member |
| Age 30 – 2000 | 16,253 | 747 | 287 | 2,439 | 2,553 | 11,261 | 70 | Cohort member |

Information on permanent emigrants prior to sweep 4 was not recorded by the BCS, some have attempted to estimate this number in prior sweeps (Plewis, 2004) but it remains an estimation. Another to mention is that unlike the NCDS cohort where the number of participants has a steady decline as the sweeps go by, for the BCS there is a much more tumultuous story. The BCS went through many states of management and many states of how the data was exactly collected, this combined with the rather large period of 10 years from age 16 to age 26 has meant that attrition has been less that steady for the BCS cohort. This, even prior to analysis, suggests that missing data may present itself as a problem for the models to come.

#### Introduction to measures for subsequent analysis

The following section provides an overview of key variables used for subsequent multivariate analysis. Variable selection was a process that involved a combination of using the CLOSER search platform, digital codebooks, and manual searching of the individual BCS databases. This search was made much easier in chapter two compared to chapter one as the analytical variables in question were already chosen in chapter one – thus the goal of variable selection in chapter two was attempting to find the most appropriate similar measurements used in the BCS.

##### Economic Activity

As the main purpose of this chapter is to replicate the analysis of chapter one with a different cohort from a different period of time, the economic activity outcome variable has been selected in much the same way it was for chapter one. The variable of interest was economic activity data for individuals of month 201 – in other words when participants were 16 in September. As the BCS cohort’s mandatory schooling period ended when participants were 16, this was a natural month selection to measure economic activity. The month of September gives enough time for O-level results to be received and have any potential impact upon an individual’s economic activity circumstances.

Economic activity was recorded retrospectively in the 21-year-old sub-sweep. It contained 10% of participants in the sample. The 21-sub-sample sweep was drawn from cohort members where resident in England and Wales – no data on Scottish residents was included, thus interpretations of data using this sweep is restricted to England and Wales only. Interviews were conducted face to face in 25 clusters based on 26 post code areas (Bynner, 2017).

The original raw economic activity variable in the 21 sub-sample sweep if provided below. Some recoding was required. In total, the economic activity variable has four outcomes: employment, education, training & apprenticeships, and unemployment & out of the labour force. Employment is defined as any individual that after mandatory education, entered employment. Education was coded as any individual that stayed within some form of schooling or education post-mandatory period, this for most would be individuals taking A-level examinations. The training & apprenticeships category is coded as all those training schemes that do not fall under education. Finally, the unemployment and out of the labour force category codes anyone that is either unemployed, out of the labour force, or otherwise economically inactive. The response level for this last category is very small and has the potential to adversely impact the statistical power of the model. Unfortunately, there is no viable alternative to this.

[insert raw economic activity variables]

##### Educational Attainment

The BCS cohort members reached compulsory school leaving age in 1986. The BCS cohort were the last group to experience the O-level/CSE split system (XXXX). By virtue of being the last cohort to experience this, the variable dictated as educational attainment is directly replicated from chapter one. The variable itself is a binary variable of number of O-level passes. The construction of educational attainment in the BCS cohort is complicated by the fact that attainment for individuals was first coded when participants were 26 years old. At that point in the cohort there were only 9,003 participants responding and of those only 5,438 responded to an educational attainment variable. The BCS documents O’level attainment in two ways. The first is a variable of the number of O’level passes ranging from A-C grade [b960169]. The second is a variable of the number of O’level passes ranging from D onwards [b960157]. The educational attainment variable takes all data from the former variable and codes that into a binary less than five/five or more variable. There are instances where there is data missing in the former variable but available in the latter. In these instances, it is assumed that individuals only received ‘other’ O’level grades. When this is the case, this data is coded as individuals receiving less than five O'levels. Unlike the NCDS, where O’level passes were coded for all individuals in the UK (Scottish equivalents were automatically coded into the O’level variable), the BCS data separates Scottish educational data from the rest of the UK. This meant that the Scottish equivalent for O’levels at the time of the BCS – Ordinary Grades, or O’grades were merged with the original O’level passes variable. The procedure for dealing with Scottish grades was identical to O’level grades. It had two variables, one that hosted the number of O’grades A-C [b960169], and another variable that hosted the number of O’grades D-onwards [b960172]. All these variables were combined to make an O’level attainment variable as a measure of educational attainment. As stated however, this only accounts for 5,438 individuals in the total cohort. At age 30, individuals were once again asked to record their educational attainment and number of O’level passes. This is merged with the educational attainment variable to boost observations. The educational attainment variable takes a semi-dominance approach to this merging. The underlying thought process is that at age 26 an individual will be more likely to accurately recall their educational attainment compared to at age 30. Thus, in cases where there are repeated observations and they differ age 26 is given dominance. At age 30 a variable [edolev1] gives a count of number of O’level passes. Unfortunately, at age 30 the BCS decided not to document how many O’grade passes Scottish students attained – instead opting for a simple ‘Did you complete a Scottish qualification’ variable. This could lead to a substantive amount of missingness amongst Scottish individuals.

Comparative to the NCDS cohort, a majority of the BCS cohort gained five or more O-level passes. The table below illustrates that proportionally, more of the BCS cohort were able to gain five or more O-level passes compared to the NCDS cohort.

[insert comparison of O-level passes for NCDS and BCS]

##### Sex

Sex is a variable taken from the birth sweep to ensure the largest possible number of responses. Sex measures the sex of the respondent in a binary male/female format. As seen with chapter one, sex as a variable played an important analytical role in understanding the structural inequalities and barriers that play an important role in choice and opportunity for youth. It’s inclusion in the BCS model is important not just for replication, but as seen in the literature review, the role of women and men in the labour market was still undergoing systematic changes. Sex as a variable is taken at birth [a0255] though not all people included in following sweeps have data for sex available, thus this original sex variable is supplemented through a variable at age 26 [b960337] and age 30 [dmsex].

##### Housing Tenure

Housing tenure was taken from when respondents were aged 10. There was information on tenure when respondents were aged 16 although the responses were scattered across a number of binary variables that overall had a low level of responses. The age 10 variable on housing tenure was a multiple category variable that has few overall missing cases. Housing tenure as a measure for inclusion in this model is the most important measure to focus upon. The arguments of Saunders (Saunders, 2002, 2003, 2021) and other new-structuralists were born from the time the BCS cohort were economically activity. Arguments related to the ‘death of class’ (XXXX) and the rise of tenure as the most substantive structural explanation for inequality is central to this chapter. As a variable housing tenure is taken at age 10 [d2] – similar to the NCDS cohort, this is again like other variables supplemented by a set of variables on housing tenure at age 16 [of3\_1, of3\_2, of3\_3, of3\_4, of3\_5].

[insert comparison of Tenure]

#### Social Stratification and Socio-Economic Background: NS-SEC, CAMSIS, RGSC

A core component of this chapter, as in chapter one, is conducting a sensitivity analysis of social stratification measures. The continuation of a sensitivity analysis in chapter two provides a basis for comparison with chapter one. As seen in chapter one, each of the three models that used a different social stratification measure were relatively and substantively identical to one another. Chapter two seeks to understand if that is a unique phenomenon for the NCDS cohort or is it a pattern that replicates itself in different time periods also.

As mentioned prior, the RGSC and NS-SEC measures for chapter two are slightly different compared to their chapter one counterparts. Whilst the basis of each measure is upon the father’s social class position when the respondent was 10 years old, missing responses are filled in with the mother’s social class position when the respondent was 10 years old. This accomplishes three things. The first is that mother’s social class position is used to fill potential item missingness. The second is that it offers those respondents that do not come from a traditional nuclear family the ability to enter the model itself through taking the mother’s social class position where a father’s is not present. Finally, through both of these accomplishments, the level of missingness and overall responses is increased within the model, enhancing the statistical power of the model overall.

All social stratification codes are taken from Gregg’s documentation of the NCDS and BCS (Gregg, 2012). For the NS-SEC construction, a semi-dominance approach was used, thus a variable on father’s NS-SEC position at age 14 [B3FSNSSEC] and mother’s NS-SEC position at age 14 [B3MSNSSEC] are combined (when father’s data is not available, mothers’ data is used instead. The same procedure is used for the RGSC construction, with father’s data [B3FSRGSC] and mother’s data [B3MSRGSC] being used. CAMSIS is gender sensitive (Bergman and Joye, 2001) and as such a semi-dominance approach is unwise, this a single measure using father’s CAMSIS at age 14 was used [B3FSSOC90]. Similarly to the NCDS construction of CAMSIS, the files produced by Gregg (Gregg, 2012) erroneously erased the qualitative distinctions in CAMSIS by shifting the decimal point one to the left and rounding up to one decimal point. CAMSIS was reconstructed using SOC90 codes provided by Gregg (ibid).

The overall patterns of social class position between the NCDS and BCS have not changed substantively. This lack of change is worth noting considering the relatively large-scale changes that the British economy and society underwent during the years 1958-1980 (XXXX). Below is a table comparing each social stratification measure between the NCDS and BCS cohort.

## Descriptive Statistics

Table xxxx shows the frequencies and summary statistics for the BCS. Overall, 26.31 per cent of the sample is in employment. Whilst 60.30 per cent are in education – making up the plurality of the sample. When it comes to training & apprenticeships, 11.94 per cent of respondents are in this form of economic activity. Only 1.44 per cent of respondents are unemployed & out of the labour force – this is potentially the influence of the YTS.

|  |  |  |
| --- | --- | --- |
| Table 1: Descriptive Statistics for Economic Activity | | |
|  | n | % |
| Economic Activity of Respondent |  |  |
| Employment | 118 | 17.18% |
| Education | 441 | 64.19% |
| Training & Apprenticeships | 108 | 15.72% |
| Unemployment & OLF | 20 | 2.91% |
| Educational Attainment O'levels |  |  |
| Less than Five O'Levels | 391 | 56.91% |
| Five or More O'Levels | 296 | 43.09% |
| Sex of Respondent |  |  |
| Female | 401 | 58.37% |
| Male | 286 | 41.63% |
| Housing Tenure of Respondent when a Child |  |  |
| Own Home | 547 | 79.62% |
| Don't Own Home | 140 | 20.38% |
| Semi-Dominant NS-SEC Social Class of Parents when Respondent was 10 |  |  |
| Large Employers and higher managerial occupations | 40 | 5.82% |
| Higher professional occupations | 54 | 7.86% |
| Lower Managerial and professional occupations | 137 | 19.94% |
| Intermediate occupations | 72 | 10.48% |
| Small employers and own account workers | 71 | 10.33% |
| Lower supervisory and technical occupations | 125 | 18.20% |
| Semi-routine occupations | 85 | 12.37% |
| Routine occupations | 103 | 14.99% |
| Semi-Dominant RGSC Social Class of Parents when Respondent was 10 |  |  |
| Professional | 39 | 5.68% |
| Managerial and Technical | 211 | 30.71% |
| Skilled non-manual | 78 | 11.35% |
| Skilled manual | 247 | 35.95% |
| Partly skilled | 84 | 12.23% |
| Unskilled | 28 | 4.08% |
|  |  |  |
|  | Mean | SD |
| CAMSIS of Father when Respondent was 10 | 50.12 | 14.47 |
|  |  |  |
| n |  | 687 |
| Data Source: BCS [Sweeps 0-4] | | |

When it comes to educational attainment, 57.28 per cent of individuals received less than five O-levels, with the remaining 42.72 per cent receiving five or more O-levels. Sex illustrates a slight overrepresentation of men (55.05 per cent) compared to women (44.95 per cent). When it comes to home ownership, 22.51 per cent of individuals grew up in a home that wasn’t owned by their parents compared to 77.49 per cent that did. The NS-SEC categories all see a relatively even distribution of respondents between 10-20 per cent except for ‘Intermediate occupations’ that has a very small 36 respondents – or 1.70 per cent. This will cause issues related to statistical power within the model and due to this category being split over four outcome categories the standard errors for this category are most likely going to be very high. The level of interpretation that will be able to be gained from this specific category within NS-SEC will be low. RGSC is much more unevenly distributed in comparison to NS-SEC. Skilled manual occupations make up 44.70 per cent of respondents, with professional and unskilled occupations making up 4.38 and 5.70 per cent respectively. Similar to comments made about NS-SECs intermediate occupations, the same can be equally said about RGSCs professional occupations. CAMSIS as a metric measure does not have these issues, it has a mean of 4.54. Given its metric nature, alongside the potentially problematic statistical power issues related to some of the categories within both NS-SEC and RGSC, if the sensitivity analysis concludes, similar to chapter one, that all three models are substantively identical it would thus be best to select CAMSIS for further study over NS-SEC and RGSC.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Descriptive Statistics by Economic Activity | | | | | |
|  | Economic Activity of Respondent | | | | |
|  | Employment | Education | Training & Apprenticeships | Unemployment & OLF | Total |
| N | 118.00 (17.18%) | 441.00 (64.19%) | 108.00 (15.72%) | 20.00 (2.91%) | 687.00 (100.00%) |
| Educational Attainment O'levels |  |  |  |  |  |
| Less than Five O'Levels | 90.00 (76.27%) | 191.00 (43.31%) | 91.00 (84.26%) | 19.00 (95.00%) | 391.00 (56.91%) |
| Five or More O'Levels | 28.00 (23.73%) | 250.00 (56.69%) | 17.00 (15.74%) | 1.00 (5.00%) | 296.00 (43.09%) |
| Sex of Respondent |  |  |  |  |  |
| Female | 65.00 (55.08%) | 264.00 (59.86%) | 64.00 (59.26%) | 8.00 (40.00%) | 401.00 (58.37%) |
| Male | 53.00 (44.92%) | 177.00 (40.14%) | 44.00 (40.74%) | 12.00 (60.00%) | 286.00 (41.63%) |
| Housing Tenure of Respondent when a Child |  |  |  |  |  |
| Own Home | 88.00 (74.58%) | 371.00 (84.13%) | 74.00 (68.52%) | 14.00 (70.00%) | 547.00 (79.62%) |
| Don't Own Home | 30.00 (25.42%) | 70.00 (15.87%) | 34.00 (31.48%) | 6.00 (30.00%) | 140.00 (20.38%) |
| Semi-Dominant NS-SEC Social Class of Parents when Respondent was 10 |  |  |  |  |  |
| Large Employers and higher managerial occupations | 2.00 (1.69%) | 34.00 (7.71%) | 4.00 (3.70%) | 0.00 (0.00%) | 40.00 (5.82%) |
| Higher professional occupations | 5.00 (4.24%) | 45.00 (10.20%) | 2.00 (1.85%) | 2.00 (10.00%) | 54.00 (7.86%) |
| Lower Managerial and professional occupations | 21.00 (17.80%) | 102.00 (23.13%) | 13.00 (12.04%) | 1.00 (5.00%) | 137.00 (19.94%) |
| Intermediate occupations | 8.00 (6.78%) | 55.00 (12.47%) | 9.00 (8.33%) | 0.00 (0.00%) | 72.00 (10.48%) |
| Small employers and own account workers | 12.00 (10.17%) | 37.00 (8.39%) | 17.00 (15.74%) | 5.00 (25.00%) | 71.00 (10.33%) |
| Lower supervisory and technical occupations | 25.00 (21.19%) | 69.00 (15.65%) | 27.00 (25.00%) | 4.00 (20.00%) | 125.00 (18.20%) |
| Semi-routine occupations | 19.00 (16.10%) | 44.00 (9.98%) | 18.00 (16.67%) | 4.00 (20.00%) | 85.00 (12.37%) |
| Routine occupations | 26.00 (22.03%) | 55.00 (12.47%) | 18.00 (16.67%) | 4.00 (20.00%) | 103.00 (14.99%) |
| Semi-Dominant RGSC Social Class of Parents when Respondent was 10 |  |  |  |  |  |
| Professional | 4.00 (3.39%) | 31.00 (7.03%) | 2.00 (1.85%) | 2.00 (10.00%) | 39.00 (5.68%) |
| Managerial and Technical | 28.00 (23.73%) | 160.00 (36.28%) | 22.00 (20.37%) | 1.00 (5.00%) | 211.00 (30.71%) |
| Skilled non-manual | 8.00 (6.78%) | 58.00 (13.15%) | 12.00 (11.11%) | 0.00 (0.00%) | 78.00 (11.35%) |
| Skilled manual | 52.00 (44.07%) | 133.00 (30.16%) | 48.00 (44.44%) | 14.00 (70.00%) | 247.00 (35.95%) |
| Partly skilled | 20.00 (16.95%) | 44.00 (9.98%) | 18.00 (16.67%) | 2.00 (10.00%) | 84.00 (12.23%) |
| Unskilled | 6.00 (5.08%) | 15.00 (3.40%) | 6.00 (5.56%) | 1.00 (5.00%) | 28.00 (4.08%) |
| CAMSIS of Father when Respondent was 10 | 46.17 (12.87) | 52.62 (14.80) | 45.38 (12.45) | 43.89 (13.46) | 50.12 (14.47) |

From table XXXX, some observations can be made. An individual’s educational attainment is stratified by their economic activity grouping. The only economic activity category that has a majority of individuals with five or more O’levels is the continuing education category. For employment, training & apprenticeships, and unemployment & OLF there is a majority of individuals that received less than five O’levels at school. With respect to respondents’ sex by economic activity, the only category that has a majority male respondents is the unemployment & OLF category – with employment, education, and training & apprenticeship categories having majority women. With respect to housing tenure, all categories see a majority of respondents living in homes their parents owned – though the largest majority of these categories resides within the education category.

Moving on to NS-SEC, the most relevant observation to be made is that for NS-SEC 1.1 and 3 have zero observations at unemployment & OLF category. This will pose statistical power problems when it comes to modelling economic activity – the standard errors will also be very high. The distribution of NS-SEC changes depending upon the economic activity category that is looked at. For example, those that enter education as an economic activity see a larger proportion of respondents from NS-SEC 1.1-3 compared to all other economic activity categories. Conversely, NS-SEC 7 has a larger proportion of respondents within employment compared to education.

Moving on to RGSC, the most relevant observation to be made here is that like NS-SEC some categories within economic activity have zero observations and will thus impact statistical power going into the sensitivity analysis. This is true for RGSC 3 non-manual within the unemployment & OLF category. Beyond this, like the NCDS analysis, there is a clear manual/non-manual divide that becomes apparent look at these descriptive statistics. For the unemployment & OLF category 85 per cent of respondents reside within manual occupations. Comparatively, over 55 per cent of respondents within the education category reside within non-manual occupations.

For CAMSIS, there is a base total mean of 50.12. The only economic activity category that has a mean above this relates to the education category at 52.62. With employment, training & apprenticeships, and unemployment & OLF categories having a mean CAMSIS below 50.12 – the lowest being unemployment & OLF with a mean CAMSIS of 43.89.

## Modelling Main Economic Activity:

The main outcome variable is the main economic activity of individuals in September of 1986. This is the first month individuals were in when they received their O’level results after mandatory schooling. The first set of analyses estimate a multinominal logistic regression model. Table XXXX details the deviance, change in deviance, change in degrees of freedom, the McFadden’s Adjusted Pseudo R2, AIC, and BIC measures to compare the null model with models of one explanatory variable. Table XXXX details the same statistics but through a sequential building of the null model with each subsequent independent variables added.

This model has been tested for the goodness of fit of two competing statistical models based on the ratio of their likelihoods in a likelihood-ratio test, and again with a Wald test. Both found that the hypothesis that all the coefficients associated with educational attainment, sex, tenure and NS-SEC are simultaneously equal to 0 and can be rejected at the 0.01 level.

The model output is using the reference category of education. The category of education has a contrast with all other economic activity categories because it has the largest barrier to entry, continuing schooling has an expectation of previous educational merit. Less than five O’levels is the reference category for educational attainment, Female is the reference category for Sex, Own home is the reference category for housing tenure, and finally NS-SEC 7 is the reference category for NS-SEC.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome Variable: Economic Activity | Deviance | Deviance (from Null) | d.f. (from Null) | McFadden’s R2 | AIC | BIC |
| Null Model | 1347.84 | - | - | - | 1353.84 | 1367.44 |
| Null Model + Educational Attainment | 1243.36 | 104.48 | 3 | 0.08 | 1255.36 | 1282.55 |
| Null Model + Sex | 1344.15 | 3.69 | 3 | 0.00 | 1356.15 | 1383.44 |
| Null Model + Tenure | 1331.84 | 16 | 3 | 0.01 | 1343.84 | 1371.04 |
| Null Model + NS-SEC | 1283.65 | 64.19 | 21 | 0.05 | 1331.65 | 1440.42 |

Explanatory variables are entered sequentially in the subsequent multiple logistic model following (Gayle and Lambert, 2009) example.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome Variable: Economic Activity | Deviance | Deviance (from Previous) | d.f. (from Previous) | McFadden’s Adjusted Pseudo R2 | AIC | BIC |
| Null Model | 1347.84 | - | - | - | 1353.84 | 1367.44 |
| Null Model + Educational Attainment | 1243.36 | 104.48 | 3 | 0.08 | 1255.36 | 1282.55 |
| Null Model + Educational Attainment + Sex | 1237.24 | 6.12 | 3 | 0.08 | 1255.24 | 1296.03 |
| Null Model + Educational Attainment + Sex + Tenure | 1230.88 | 6.36 | 3 | 0.09 | 1254.88 | 1309.27 |
| Null Model + Educational Attainment + Sex + Tenure + NS-SEC | 1190.52 | 40.36 | 21 | 0.12 | 1256.52 | 1406.09 |

The model fit statistics demonstrate that there are normally distributed residuals and that the model is correctly specified. Table XXXX suggests that for the full proposed model, deviance is reduced by 157.32 from the null. AIC and BIC statistics suggest unlike the NCDS model that the full proposed model is not the best fit model amongst those entered – however the difference in such statistics is small. Finally, the full model presents with an adjusted pseudo R2 of 0.12. In other words, the full model explains 12 per cent of the variance of economic activity, leaving 88 per cent unexplained. This is a 12 per cent drop in R2 compared to the NCDS model, suggesting that a temporal element of explanation may be important to the story of economic activity sorting. The following analysis with the full model is a complete records analysis with 687 observations.

As with the NCDS models, log odds will be presented alongside average marginal effects, and quasi-variance statistics. On top of this, predicted probabilities, log odds and quasi-variance statistics are also graphed for a more intuitive understanding of the model.

The results of the multinominal logistic regression model are reported in table XXXX. The output for employment demonstrates that individuals that received five or more O’levels have a decreased log odds of being in employment over education. Using average marginal effects there is a 12 per cent decreased probability for individuals to be in employment over education if they received five or more O’levels. Sex and housing tenure had no statistically significant effect upon an individual being in employment over being in education. Apart from NS-SEC 1.1, parental social class also had no statistically significant effect on an individual being in employment over education. For those individuals whose parents inhabit NS-SEC 1.1 compared to those in NS-SEC 7 there is a decreased log odds of being in employment over education. Using average marginal effects, this translates to a 17 per cent decreased probability for an individual to be in employment over education for individuals that came from NS-SEC 1.1 origins compared to NS-SEC 7 origins.

The output for training & apprenticeship category demonstrates that individuals that received five or more O’levels have a decreased log odds of being in training & apprenticeships compared to education. Using average marginal effects there is a 16 per cent decreased probability for individuals to be in training & apprenticeships over education if they received five or more O’levels. Neither sex, housing tenure, nor NS-SEC are statistically significant and as such their substantive results will not be interpreted.

Finally, the output for unemployment & OLF category demonstrates that individuals that received five or more O’levels have a decreased log odds of being in unemployment & OLF over education. Using average marginal effects, this translates to a 4 per cent decreased probability of being in unemployment & OLF category over education if individuals received five or more O’levels. Sex is statistically significant; men have an increased log odds of being unemployed & OLF over being in education compared to women. Translated to average marginal effects, men have a 3 per cent increased probability of being unemployed & OLF over education compared to women. Neither housing tenure nor NS-SEC are statistically significant.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NS-SEC | | | Average Marginal Effects | | Quasi-variance | | |
| Economic Activity | Coef. | S.E | Sig. | Prob. | S.E | S.E | LCI | UCI |
| Employment |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Five or More O’levels | -1.33 | (0.25) | \*\*\* | -0.12 | (0.03) |  |  |  |
| Sex |  |  |  |  |  |  |  |  |
| Female | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Male | 0.37 | (0.22) |  | 0.04 | (0.03) |  |  |  |
| Housing Tenure |  |  |  |  |  |  |  |  |
| Own Home | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Don't Own Home | 0.23 | (0.27) |  | 0.01 | (0.04) |  |  |  |
| NS-SEC |  |  |  |  |  |  |  |  |
| 1.1 | -1.78 | (0.78) | \* | -0.17 | (0.06) | 0.78 | -3.29 | -0.28 |
| 1.2 | -1.02 | (0.55) |  | -0.11 | (0.06) | 0.55 | -2.01 | -0.04 |
| 2 | -0.46 | (0.36) |  | -0.05 | (0.05) | 0.36 | -0.98 | 0.05 |
| 3 | -0.85 | (0.46) |  | -0.10 | (0.06) | 0.46 | -1.64 | -0.06 |
| 4 | -0.17 | (0.42) |  | -0.06 | (0.06) | 0.42 | -0.87 | 0.53 |
| 5 | 0.03 | (0.35) |  | -0.02 | (0.05) | 0.35 | -0.46 | 0.53 |
| 6 | -0.09 | (0.38) |  | -0.02 | (0.06) | 0.38 | -0.68 | 0.50 |
| 7 | Ref. | (.) |  | (.) | (.) | 0.00 | -0.51 | 0.51 |
| Intercept | -0.66 | (0.28) | \* | (.) | (.) | (.) | (.) |  |
|  |  |  |  |  |  |  |  |  |
| School | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
|  |  |  |  |  |  |  |  |  |
| Training & Apprenticeships |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Five or More O’levels | -1.82 | (0.29) | \*\*\* | -0.16 | (0.03) | (.) | (.) |  |
| Sex |  |  |  |  |  |  |  |  |
| Female | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Male | 0.21 | (0.24) |  | 0.01 | (0.03) | (.) | (.) |  |
| Housing Tenure |  |  |  |  |  |  |  |  |
| Own Home | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Don't Own Home | 0.50 | (0.27) |  | 0.05 | (0.03) | (.) | (.) |  |
| NS-SEC |  |  |  |  |  |  |  |  |
| 1.1 | -0.54 | (0.62) |  | -0.01 | (0.06) | 0.62 | -1.66 | 0.59 |
| 1.2 | -1.36 | (0.79) |  | -0.09 | (0.05) | 0.79 | -2.86 | 0.14 |
| 2 | -0.41 | (0.42) |  | -0.02 | (0.04) | 0.42 | -1.04 | 0.22 |
| 3 | -0.25 | (0.47) |  | 0.00 | (0.05) | 0.47 | -1.02 | 0.52 |
| 4 | 0.62 | (0.42) |  | 0.08 | (0.06) | 0.42 | -0.02 | 1.25 |
| 5 | 0.61 | (0.38) |  | 0.08 | (0.05) | 0.38 | 0.11 | 1.10 |
| 6 | 0.22 | (0.41) |  | 0.03 | (0.05) | 0.41 | -0.39 | 0.83 |
| 7 | Ref. | (.) |  | (.) | (.) | 0.00 | -0.58 | 0.58 |
| Intercept | -1.02 | (0.32) | \*\* | (.) | (.) | (.) | (.) |  |
|  |  |  |  |  |  |  |  |  |
| Unemployment & Out of Labour Force |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Five or More O’levels | -3.17 | (1.04) | \*\* | -0.04 | (0.01) | (.) | (.) |  |
| Sex |  |  |  |  |  |  |  |  |
| Female | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Male | 1.07 | (0.49) | \* | 0.03 | (0.01) | (.) | (.) |  |
| Housing Tenure |  |  |  |  |  |  |  |  |
| Own Home | Ref. | (.) |  | (.) | (.) | (.) | (.) |  |
| Don't Own Home | 0.31 | (0.54) |  | 0.00 | (0.01) | (.) | (.) |  |
| NS-SEC |  |  |  |  |  |  |  |  |
| 1.1 | 14.09 | (879.61) |  | -0.03 | (0.01) | 879.61 | -1809.97 | 1782.86 |
| 1.2 | 0.20 | (0.94) |  | 0.02 | (0.04) | 1.02 | -0.52 | 3.64 |
| 2 | -1.43 | (1.15) |  | -0.02 | (0.02) | 1.05 | -3.15 | 1.12 |
| 3 | 13.85 | (651.74) |  | -0.03 | (0.01) | 651.75 | -1344.63 | 1317.45 |
| 4 | 0.95 | (0.73) |  | 0.03 | (0.03) | 0.51 | -0.72 | 1.38 |
| 5 | 0.21 | (0.75) |  | 0.00 | (0.02) | 0.54 | -1.50 | 0.72 |
| 6 | 0.17 | (0.75) |  | 0.00 | (0.02) | 0.56 | -1.20 | 1.10 |
| 7 | Ref. | (.) |  | (.) | (.) | 0.00 | -1.14 | 1.14 |
| Intercept | -2.78 | (0.63) | \*\*\* | (.) | (.) | (.) | (.) |  |
|  |  |  |  |  |  |  |  |  |
| Number of observations | 687 | | | | | | | |
| McFadden’s R2 | 0.12 | | | | | | | |
| McFadden’s Adjusted Pseudo R2 | 0.03 | | | | | | | |
| Cox-Snell Pseudo R2 | 0.21 | | | | | | | |
| Nagelkerke Pseudo R2 | 0.24 | | | | | | | |
| AIC | 1256.52 | | | | | | | |
| BIC | 1406.09 | | | | | | | |
| \*\*\* p<.001, \*\* p<.01, \* p<.05 Data Source: BCS [Birth-Age30]  Note: Complete Records Analysis | | | | | | | |  |

To understand these results in a more manageable format, each variable is graphically visualised with their predicted probabilities. This allows for a more intuitive understanding of the multinominal logistic regression as well as providing a different outlook for interpretation. Each graph focuses on one variable within the model: educational attainment, sex, housing tenure, and NS-SEC with each of the four economic activity outcome categories graphed using predicted probabilities.

A graph showing the number of probabilities

Description automatically generatedA graph showing the number of probabilities of economic activity

Description automatically generatedA graph showing the number of individuals in the same age

Description automatically generated with medium confidenceA graph showing the number of individuals in the economic activity

Description automatically generated with medium confidence

Alongside the graphical presentation of predicted probabilities, the following figures also visualise the log odds of NS-SEC within each outcome category (except the reference category of education) alongside quasi-variance statistics to overcome the reference category problem.

A graph showing the number of numbers and the number of numbers

Description automatically generated with medium confidenceA graph showing the number of numbers and the number of the numbers

Description automatically generated with medium confidence

A graph with red and black lines

Description automatically generated

### Discussion and Conclusion

The multinominal logositic regression model indiates that some structural inequaltiies do indeed have an impact upon an individual’s choice sorting into economic activity post-mandatory schooling. Educational attainment was statsitically and substnatively signficiant across all economic activity categories. NS-SEC was also partially statistically signfiicant within the employment outcome category. Sex and Housing tenure were not statistically significant at any point across the model…

## Sensitivity Analysis of Independent Variables

Following the NCDS chapter, this following section seeks to presenta senetiivity analysis of social stratification measures to provide an informed assessment about which social stratification measure to use within the given BCS model. As with the NCDS, NS-SEC, CAMSIS, and RGSC are the three measures that will be used within subsequent sentisitivty analysis…

Testing Measures of Parental Social Class

Three separate multinominal lgoistic regressions are presnted in tbale XXXX. The first model has been described at length in the previous section and uses NS-SEC. The second model uses CAMSIS and the third model uses RGSC. These models are all presetned using log odds and average marginal effects to enhance interpretation and comparison between models.

Across all models, educational attainment is substnatively identical across NS-SEC, CAMSIS, and RGSC models. All three models also present substnatively identical results for sex at the unemployment & OLF. The RGSC model presents no statistically signfiicant results for social class – compared to the NS-SEC model being statistically signfiicant at NS-SEC 1.1 at the employment category. The CAMSIS model presents stastically significant results for CAMSIS across employmnet and training & apprenticeship categories but substnativelly there is no per cent change in the models when looking at average marginal effects.

The goodness-of-fit statisticas are similar for all three models. Differences in R2 measures exist but the small nature of these differences indicate the amount of variance explained acorrss the three models remains fairly consistent. AIC and BIC statistics are also small very small. The most parsimonious model is the RGSC model when using AIC and CAMSIS when using BIC. BIC penalises mdels for estimating additional parameters it is not suprrising that CAMSIS is a better fit than either NS-SEC or RGSC models – the very marginal difference in BIC statistics between the models does not make a convincing case for selecting CAMSIS over the other two models. As such, there is a general preference when considering both AIC and BIC statstics towards the RGSC model. As such, going forward the preferred model of choice for subsequent analysis will be the RGSC model.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NS-SEC | | | | | CAMSIS | | | | | RGSC | | | | |
| Economic Activity | Coef. | S.E | Sig. | Prob. | S.E | Coef. | S.E | Sig. | Prob. | S.E | Coef. | S.E | Sig. | Prob. | S.E |
| Employment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Five or More O’levels | -1.33 | (0.25) | \*\*\* | -0.12 | (0.03) | -1.30 | (0.24) | \*\*\* | -0.12 | (0.03) | -1.35 | (0.24) | \*\*\* | -0.12 | (0.03) |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Female | Ref. | (.) |  | (.) | (.) |  |  |  | (.) | (.) |  |  |  | (.) | (.) |
| Male | 0.37 | (0.22) |  | 0.04 | (0.03) | 0.35 | (0.22) |  | 0.03 | (0.03) | 0.33 | (0.22) |  | 0.03 | (0.03) |
| Housing Tenure |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Own Home | Ref. | (.) |  | (.) | (.) |  |  |  | (.) | (.) |  |  |  | (.) | (.) |
| Don't Own Home | 0.23 | (0.27) |  | 0.01 | (0.04) | 0.24 | (0.26) |  | 0.01 | (0.04) | 0.28 | (0.27) |  | 0.02 | (0.04) |
| NS-SEC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.1 | -1.78 | (0.78) | \* | -0.17 | (0.06) |  |  |  |  |  |  |  |  |  |  |
| 1.2 | -1.02 | (0.55) |  | -0.11 | (0.06) |  |  |  |  |  |  |  |  |  |  |
| 2 | -0.46 | (0.36) |  | -0.05 | (0.05) |  |  |  |  |  |  |  |  |  |  |
| 3 | -0.85 | (0.46) |  | -0.10 | (0.06) |  |  |  |  |  |  |  |  |  |  |
| 4 | -0.17 | (0.42) |  | -0.06 | (0.06) |  |  |  |  |  |  |  |  |  |  |
| 5 | 0.03 | (0.35) |  | -0.02 | (0.05) |  |  |  |  |  |  |  |  |  |  |
| 6 | -0.09 | (0.38) |  | -0.02 | (0.06) |  |  |  |  |  |  |  |  |  |  |
| 7 | Ref. | (.) |  | (.) | (.) |  |  |  |  |  |  |  |  |  |  |
| CAMSIS |  |  |  |  |  | -0.02 | (0.01) | \*\* | -0.00 | (0.00) |  |  |  |  |  |
| RGSC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  | -0.68 | (0.75) |  | -0.07 | (0.09) |
| 2 |  |  |  |  |  |  |  |  |  |  | -0.48 | (0.55) |  | -0.04 | (0.08) |
| 3NM |  |  |  |  |  |  |  |  |  |  | -0.83 | (0.63) |  | -0.08 | (0.08) |
| 3M |  |  |  |  |  |  |  |  |  |  | 0.17 | (0.53) |  | 0.01 | (0.07) |
| 4 |  |  |  |  |  |  |  |  |  |  | 0.19 | (0.57) |  | 0.03 | (0.08) |
| 5 |  |  |  |  |  |  |  |  |  |  | Ref. | (.) |  | (.) | (.) |
| Intercept | -0.66 | (0.28) | \* | (.) | (.) | 0.13 | (0.42) |  |  |  | -0.81 | (0.53) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| School |  |  |  |  |  | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Training & Apprenticeships |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Five or More O’levels | -1.82 | (0.29) | \*\*\* | -0.16 | (0.01) | -1.77 | (0.29) | \*\*\* | -0.16 | (0.03) | -1.80 | (0.29) | \*\*\* | -0.16 | (0.03) |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Female | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Male | 0.21 | (0.24) |  | 0.01 | (0.02) | 0.20 | (0.23) |  | 0.01 | (0.03) | 0.21 | (0.23) |  | 0.01 | (0.03) |
| Housing Tenure |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Own Home | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Don't Own Home | 0.50 | (0.27) |  | 0.05 | (0.02) | 0.48 | (0.26) |  | 0.05 | (0.03) | 0.51 | (0.27) |  | 0.05 | (0.03) |
| NS-SEC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.1 | -0.54 | (0.62) |  | -0.01 | (0.04) | (.) | (.) |  |  |  | (.) | (.) |  |  |  |
| 1.2 | -1.36 | (0.79) |  | -0.09 | (0.03) |  |  |  |  |  |  |  |  |  |  |
| 2 | -0.41 | (0.42) |  | -0.02 | (0.03) |  |  |  |  |  |  |  |  |  |  |
| 3 | -0.25 | (0.47) |  | 0.00 | (0.03) |  |  |  |  |  |  |  |  |  |  |
| 4 | 0.62 | (0.42) |  | 0.08 | (0.03) |  |  |  |  |  |  |  |  |  |  |
| 5 | 0.61 | (0.38) |  | 0.08 | (0.03) |  |  |  |  |  |  |  |  |  |  |
| 6 | 0.22 | (0.41) |  | 0.03 | (0.03) |  |  |  |  |  |  |  |  |  |  |
| 7 | Ref. | (.) |  | (.) | (.) |  |  |  |  |  |  |  |  |  |  |
| CAMSIS |  |  |  |  |  | -0.02 | (0.01) | \*\* | -0.00 | (0.00) |  |  |  |  |  |
| RGSC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  | (.) | (.) |  |  |  | -1.15 | (0.91) |  | -0.10 | (0.08) |
| 2 |  |  |  |  |  |  |  |  |  |  | -0.54 | (0.57) |  | -0.04 | (0.07) |
| 3NM |  |  |  |  |  |  |  |  |  |  | -0.33 | (0.61) |  | -0.01 | (0.08) |
| 3M |  |  |  |  |  |  |  |  |  |  | 0.20 | (0.55) |  | 0.01 | (0.07) |
| 4 |  |  |  |  |  |  |  |  |  |  | 0.14 | (0.59) |  | 0.01 | (0.07) |
| 5 |  |  |  |  |  |  |  |  |  |  | Ref. | (.) |  | (.) | (.) |
| Intercept | -1.02 | (0.32) | \*\* | (.) | (.) | 0.13 | (0.45) |  |  |  | -0.85 | (0.54) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unemployment & Out of Labour Force |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Five or More O’levels | -3.17 | (1.04) | \*\* | -0.04 | (0.01) | -3.09 | (1.04) | \*\* | -0.04 | (0.01) | -3.19 | (1.04) | \*\* | -0.04 | (0.01) |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Female | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Male | 1.07 | (0.49) | \* | 0.03 | (0.01) | 1.04 | (0.48) | \* | 0.03 | (0.01) | 1.04 | (0.49) | \* | 0.02 | (0.01) |
| Housing Tenure |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Own Home | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Don't Own Home | 0.31 | (0.54) |  | 0.00 | (0.01) | 0.30 | (0.53) |  | 0.00 | (0.01) | 0.48 | (0.55) |  | 0.01 | (0.02) |
| NS-SEC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.1 | -14.09 | (879.61) |  | -0.03 | (0.01) | (.) | (.) |  |  |  | (.) | (.) |  |  |  |
| 1.2 | 0.20 | (0.94) |  | 0.02 | (0.04) |  |  |  |  |  |  |  |  |  |  |
| 2 | -1.43 | (1.15) |  | -0.02 | (0.02) |  |  |  |  |  |  |  |  |  |  |
| 3 | -13.85 | (651.74) |  | -0.03 | (0.01) |  |  |  |  |  |  |  |  |  |  |
| 4 | 0.95 | (0.73) |  | 0.03 | (0.03) |  |  |  |  |  |  |  |  |  |  |
| 5 | 0.21 | (0.75) |  | 0.00 | (0.02) |  |  |  |  |  |  |  |  |  |  |
| 6 | 0.17 | (0.75) |  | 0.00 | (0.02) |  |  |  |  |  |  |  |  |  |  |
| 7 | Ref. | (.) |  | (.) | (.) |  |  |  |  |  |  |  |  |  |  |
| CAMSIS |  |  |  |  |  | -0.03 | (0.02) |  | -0.00 | (0.00) |  |  |  |  |  |
| RGSC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  | (.) | (.) |  |  |  | 0.72 | (1.35) |  | 0.05 | (0.06) |
| 2 |  |  |  |  |  |  |  |  |  |  | -1.87 | (1.49) |  | -0.02 | (0.03) |
| 3NM |  |  |  |  |  |  |  |  |  |  | -14.51 | (866.66) |  | -0.03 | (0.03) |
| 3M |  |  |  |  |  |  |  |  |  |  | 0.73 | (1.12) |  | 0.02 | (0.03) |
| 4 |  |  |  |  |  |  |  |  |  |  | -0.35 | (1.29) |  | -0.01 | (0.03) |
| 5 |  |  |  |  |  |  |  |  |  |  | Ref. | (.) |  | (.) | (.) |
| Intercept | -2.78 | (0.63) | \*\*\* | (.) |  | -1.45 | (0.93) |  |  |  | -2.89 | (1.15) | \* |  |  |
| Number of observations | 687 | | | | | 687 | | | | | 687 | | | | |
| McFadden’s R2 | 0.12 | | | | | 0.10 | | | | | 0.11 | | | | |
| McFadden’s Pseudo R2 | 0.03 | | | | | 0.05 | | | | | 0.03 | | | | |
| Cox-Snell Pseudo R2 | 0.21 | | | | | 0.17 | | | | | 0.19 | | | | |
| Nagelkerke Pseudo R2 | 0.24 | | | | | 0.20 | | | | | 0.23 | | | | |
| AIC | 1256.52 | | | | | 1247.39 | | | | | 1251.81 | | | | |
| BIC | 1406.09 | | | | | 1315.37 | | | | | 1374.18 | | | | |
| \*\*\* p<.001, \*\* p<.01, \* p<.05 Data Source: BCS [Birth-Age 30]  Note: Complete Records Analysis for NS-SEC, CAMSIS, RGSC | | | | | | | | | | | | | | | |

### Discussion and Conclusions

## Missing Data in the BCS

There are 1,616 individuals identified in the BCS who indicated some form of economic activity within the 21-sub-sample sweep. With all variables added to the model there are 958 observations with missing data on at least one of the variables included for analysis – the model itself is 42 per cent complete according to table XXXX. Of the missingness amongst the variables: 29 were missing in economic activity, 805 were missing at educational attainment, 85 were missing at housing tenure, 0 were missing at sex, and 251 were missing at RGSC. By far the single largest level of missingness can be attributed to the educational attainment variable. This is primarily because of a failure of the BCS survey to ask all participants to answer the relevant educational attainment questions – and a lack of follow up.

Patterns of missing data are presented in table XXXX. Within the BCS sample, 42 per cent have complete records on all variables, 36 per cent are missing values at educational attainment, a further 5 per cent were missing at both educational attainment and RGSC, and finally 4 per cent were missing at solely RGSC. All other missingness is at 3 per cent or lower.

Educational attainment is the only variable within the model that takes data from individuals post-16 years of age. This is important considering the development of the BCS as a survey…

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| N | Percent Complete (%) | Educational Attainment | Economic Activity | Housing Tenure | RGSC | Sex |
| 687 | 42 | ✓ | ✓ | ✓ | ✓ | ✓ |
| 599 | 36 |  | ✓ | ✓ | ✓ | ✓ |
| 85 | 5 |  | ✓ | ✓ |  | ✓ |
| 61 | 4 | ✓ | ✓ | ✓ |  | ✓ |
| Total = 1645 |

|  |  |  |
| --- | --- | --- |
| Outcome Variable: Economic Activity | Obs=. | Obs<. |
| Economic Activity | 29 | 1616 |
| Educational Attainment | 805 | 840 |
| Housing Tenure | 85 | 1560 |
| Sex | 0 | 1645 |
| RGSC | 251 | 1394 |

Given that a complete records analysis can only be undertaken if data is confidently considered to be MCAR, the patterns of missingness related to this model suggests that data may be MAR, educational attainment has already been discussed but looking more closely to the distribution of other variables within the model suggests missingness may have an impact upon the substantive interpretation of results. Sex, housing tenure, and RGSC…

A graph showing the number of numbers

Description automatically generated with medium confidenceA graph of different colored lines

Description automatically generated with medium confidenceA graph of a number of numbers

Description automatically generated with medium confidenceA graph showing different colored lines

Description automatically generated with medium confidence

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CRA RGSC | | | Average Marginal Effects | | Imputed RGSC | | | Average Marginal Effects | |
| Economic Activity | Coef. | S.E | Sig. | Prob. | S.E | Coef. | S.E | Sig. | Prob. | S.E |
| Employment |  |  |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Five or More O’levels | -1.35 | (0.24) | \*\*\* | -0.12 | (0.03) | -1.34 | (0.24) | \*\*\* | -0.10 | (0.04) |
| Sex |  |  |  |  |  |  |  |  |  |  |
| Female |  |  |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Male | 0.33 | (0.22) |  | 0.03 | (0.03) | 0.64 | (0.14) | \*\*\* | 0.07 | (0.02) |
| Housing Tenure |  |  |  |  |  |  |  |  |  |  |
| Own Home |  |  |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Don't Own Home | 0.28 | (0.27) |  | 0.02 | (0.04) | 0.58 | (0.16) | \*\*\* | 0.06 | (0.03) |
| RGSC |  |  |  |  |  |  |  |  |  |  |
| 1 | -0.68 | (0.75) |  | -0.07 | (0.09) | -0.65 | (0.51) |  | 0.00 | (0.08) |
| 2 | -0.48 | (0.55) |  | -0.04 | (0.08) | -0.49 | (0.35) |  | -0.00 | (0.05) |
| 3NM | -0.83 | (0.63) |  | -0.08 | (0.08) | -0.42 | (0.38) |  | 0.00 | (0.05) |
| 3M | 0.17 | (0.53) |  | 0.01 | (0.07) | 0.39 | (0.33) |  | 0.08 | (0.04) |
| 4 | 0.19 | (0.57) |  | 0.03 | (0.08) | 0.13 | (0.36) |  | 0.06 | (0.05) |
| 5 | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Intercept | -0.81 | (0.53) |  | (.) | (.) | -0.57 | (0.33) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| School | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
|  |  |  |  |  |  |  |  |  |  |  |
| Training & Apprenticeships |  |  |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Five or More O’levels | -1.80 | (0.29) | \*\*\* | -0.16 | (0.03) | -2.02 | (0.26) | \*\*\* | -0.22 | (0.03) |
| Sex |  |  |  |  |  |  |  |  |  |  |
| Female | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Male | 0.21 | (0.23) |  | 0.01 | (0.03) | 0.52 | (0.14) | \*\*\* | 0.03 | (0.02) |
| Housing Tenure |  |  |  |  |  |  |  |  |  |  |
| Own Home | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Don't Own Home | 0.51 | (0.27) |  | 0.05 | (0.03) | 0.54 | (0.16) | \*\*\* | 0.04 | (0.03) |
| RGSC |  |  |  |  |  |  |  |  |  |  |
| 1 | -1.15 | (0.91) |  | -0.10 | (0.08) | -2.02 | (0.69) | \*\* | -0.24 | (0.07) |
| 2 | -0.54 | (0.57) |  | -0.04 | (0.07) | -0.90 | (0.34) | \*\* | -0.11 | (0.05) |
| 3NM | -0.33 | (0.61) |  | -0.01 | (0.08) | -0.70 | (0.37) |  | -0.07 | (0.06) |
| 3M | 0.20 | (0.55) |  | 0.01 | (0.07) | -0.05 | (0.33) |  | -0.04 | (0.05) |
| 4 | 0.14 | (0.59) |  | 0.01 | (0.07) | -0.36 | (0.35) |  | -0.06 | (0.06) |
| 5 | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Intercept | -0.85 | (0.54) |  |  |  | 0.11 | (0.32) |  | (.) | (.) |
|  |  |  |  |  |  |  |  |  |  |  |
| Unemployment & Out of Labour Force |  |  |  |  |  |  |  |  |  |  |
| Educational Attainment |  |  |  |  |  |  |  |  |  |  |
| Less than five O’levels | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Five or More O’levels | -3.19 | (1.04) | \*\* | -0.04 | (0.01) | -3.33 | (1.06) | \*\* | -0.06 | (0.01) |
| Sex |  |  |  |  |  |  |  |  |  |  |
| Female | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Male | 1.04 | (0.49) | \* | 0.02 | (0.01) | 0.69 | (0.26) | \*\* | 0.01 | (0.01) |
| Housing Tenure |  |  |  |  |  |  |  |  |  |  |
| Own Home | (.) | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Don't Own Home | 0.48 | (0.55) |  | 0.01 | (0.02) | 0.68 | (0.29) | \* | 0.01 | (0.01) |
| RGSC |  |  |  |  |  |  |  |  |  |  |
| 1 | 0.72 | (1.35) |  | 0.05 | (0.06) | -0.84 | (0.91) |  | -0.00 | (0.06) |
| 2 | -1.87 | (1.49) |  | -0.02 | (0.03) | -1.52 | (0.62) | \* | -0.05 | (0.03) |
| 3NM | -14.51 | (866.66) |  | -0.03 | (0.03) | -2.69 | (1.10) | \* | -0.07 | (0.03) |
| 3M | 0.73 | (1.12) |  | 0.02 | (0.03) | -0.18 | (0.53) |  | -0.02 | (0.03) |
| 4 | -0.35 | (1.29) |  | -0.01 | (0.03) | -0.92 | (0.59) |  | -0.04 | (0.03 |
| 5 | Ref. | (.) |  | (.) | (.) | (.) | (.) |  | (.) | (.) |
| Intercept | -2.89 | (1.15) | \* |  |  | -1.38 | (0.53) | \*\* | (.) | (.) |
|  |  |  |  |  |  |  |  |  |  |  |
| Number of observations | 687 | | | | | 1645 | | | | |
|  |  | | | | | Average RVI | | | 0.33 | |
|  |  | | | | | Largest FMI | | | 0.62 | |
| \*\*\* p<.001, \*\* p<.01, \* p<.05 Data Source: BCS [Birth-Age 30]  Note: Comparison of CRA RGSC vs Imputed RGSC model | | | | | | | | | | |

# Appendix:

Table A.1 Goodness-of-fit summaries for explanatory variables and Economic Activity (CAMSIS)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome Variable: Economic Activity | Deviance | Deviance (from Null) | d.f. (from Null) | McFadden’s Adjusted Pseudo R2 | AIC | BIC |
| Null Model | 1347.84 | - | - | - | 1353.84 | 1367.44 |
| Null Model + Educational Attainment | 1243.36 | 104.48 | 3 | 0.08 | 1255.36 | 1282.55 |
| Null Model + Sex | 1344.15 | 3.69 | 3 | 0.00 | 1356.15 | 1383.44 |
| Null Model + Tenure | 1331.84 | 16 | 3 | 0.01 | 1343.84 | 1371.04 |
| Null Model + CAMSIS | 1309.03 | 38.81 | 3 | 0.03 | 1321.03 | 1348.22 |

Table A.2 Model building goodness-of-fit summaries for multiple logistic regression model of Economic Activity (CAMSIS)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome Variable: Economic Activity | Deviance | Deviance (from Previous) | d.f. (from Previous) | McFadden’s Adjusted Pseudo R2 | AIC | BIC |
| Null Model | 1347.84 | - | - | - | 1353.84 | 1367.44 |
| Null Model + Educational Attainment | 1243.36 | 104.48 | 3 | 0.08 | 1255.36 | 1282.55 |
| Null Model + Educational Attainment + Sex | 1237.24 | 6.12 | 3 | 0.08 | 1255.24 | 1296.03 |
| Null Model + Educational Attainment + Sex + Tenure | 1230.88 | 6.36 | 3 | 0.09 | 1254.88 | 1309.27 |
| Null Model + Educational Attainment + Sex + Tenure + CAMSIS | 1217.39 | 13.49 | 3 | 0.10 | 1247.39 | 1315.37 |

Table A.3 Goodness-of-fit summaries for explanatory variables and Economic Activity (RGSC)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome Variable: Economic Activity | Deviance | Deviance (from Null) | d.f. (from Null) | McFadden’s Adjusted Pseudo R2 | AIC | BIC |
| Null Model | 1347.84 | - | - | - | 1353.84 | 1367.44 |
| Null Model + Educational Attainment | 1243.36 | 104.48 | 3 | 0.08 | 1255.36 | 1282.55 |
| Null Model + Sex | 1344.15 | 3.69 | 3 | 0.00 | 1356.15 | 1383.44 |
| Null Model + Tenure | 1331.84 | 16 | 3 | 0.01 | 1343.84 | 1371.04 |
| Null Model + RGSC | 1295.18 | 52.66 | 15 | 0.04 | 1331.18 | 1412.76 |

Table A.4 Model building goodness-of-fit summaries for multiple logistic regression model of Economic Activity (RGSC)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome Variable: Economic Activity | Deviance | Deviance (from Previous) | d.f. (from Previous) | McFadden’s Adjusted Pseudo R2 | AIC | BIC |
| Null Model | 1347.84 | - | - | - | 1353.84 | 1367.44 |
| Null Model + Educational Attainment | 1243.36 | 104.48 | 3 | 0.08 | 1255.36 | 1282.55 |
| Null Model + Educational Attainment + Sex | 1237.24 | 6.12 | 3 | 0.08 | 1255.24 | 1296.03 |
| Null Model + Educational Attainment + Sex + Tenure | 1230.88 | 6.36 | 3 | 0.09 | 1254.88 | 1309.27 |
| Null Model + Educational Attainment + Sex + Tenure + RGSC | 1197.81 | 33.07 | 15 | 0.11 | 1251.81 | 1374.18 |

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1. Former President of the European Commission speaking about the dramatic change of British society in the Guardian. [↑](#footnote-ref-1)
2. Other includes those respondents that cannot be accurately traced through any of the aforementioned categories. [↑](#footnote-ref-2)
3. Percentages are based on the participants divided by total cohort. [↑](#footnote-ref-3)
4. The reason sweep 3 has higher participant numbers than sweep 2 etc is due to the way tracking and sampling was handled. Across the BCS, difference organisations took control over this aspect of the survey. [↑](#footnote-ref-4)
5. Age 26 was the first time the cohort member themselves were in complete control of answering the survey itself [↑](#footnote-ref-5)