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Snakes and Ladders: who climbs the rungs of the earnings ladder

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Contents

Introduction

Earnings are the biggest contributor to the living standards of families in Britain, but it is no longer the case that individuals can rely on automatic earnings growth to lift their standard of living. Median wages have been stagnating since 2003 and the share of national income that goes to the wages of low-to-middle earners has fallen from £16 of every £100 in 1977 to £12 in 2010.[1] This context makes it all the more important that individuals have the opportunity to earn their way to a better standard of living by progressing up the earnings ladder as they move on in their career. Is it becoming easier for individuals to move up? Who is more likely to move up the earnings ladder and who is at risk of falling behind? The Resolution Foundation's series of work on social mobility answers these questions.

Intragenerational social mobility, an individual's ability to work their way up to a better standard of living in their own life time, has received much less attention from researchers and policymakers than intergenerational social mobility, social mobility between generations which looks at the strength of the link between an individual's income and that of their parents. While the Government's recent social mobility strategy refers to mobility across the life course, most of the indicators that will track progress focus on improvements for children rather than for adults who are already in work. However, mobility within generations is vital: it gives people the chance to move on in their life through work.

The Resolution Foundation's work on social mobility focuses on this issue of intergenerational mobility and draws on extensive data from the *National Child Development Study* (NCDS) and the *British Cohort Study* (BCS). These studies surveyed every person born in the UK in one week of 1958 and 1970 respectively.[2] We compare earnings mobility for these two groups, looking at those born in 1958 that aged from their early 30s to their early 40s during the 1990s, and those born in 1970 that aged from 30 to 38 during the 2000s. Looking at this period captures the 'peak earnings' phase of people's working life and reduces the influence of early career effects that might lead us to overestimate mobility.[3] An individual's thirties are also a critical decade in determining career progression and whether people continue to move on in their working lives beyond the early stages of their career.

In our first paper, *Moving on Up*?, published in March this year, we found a 22 percent increase in the probability of moving significantly up the earnings ladder in the 2000s compared to the 1990s, giving individuals greater opportunity to materially improve their living standards through work in the 2000s. [4] However, around 40 percent of people in the 1990s and 2000s did not move from their original quintile position in the earnings distribution. These people were more likely to be at either end of the distribution, either stuck at the bottom or protected from moving down from the top. The increase in upwards mobility was concentrated in the middle and upper middle part of the earnings distribution.

This report presents new analysis that identifies the characteristics that influenced whether individuals moved up or down the earnings ladder during the 1990s and the 2000s. It looks at a range of factors including education, gender and region and compares the independent influence of each factor on mobility in each decade.

Overall, we find that gender, education, occupation, working part-time, experience of unemployment and region independently all play highly significant roles in determining individuals' prospects of upwards and downwards

[1] Whittaker, M. and Savage, L., (2011), *Missing Out: Why ordinary workers are experiencing growth without gain*, Resolution Foundation

[2] University of London, Institute of Education, Centre for Longitudinal Studies, *National Child Development Study: Sweep 5, 1991* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2008. SN: 5567; *National Child Development Study: Sweep 6, 1999-2000* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2008. SN: 5578; *British Cohort Study: 29 year follow-up, 1999-2000* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2008. SN: 5558; *British Cohort Study: 38 year follow-up, 2008-2009* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2010. SN: 6557

[3] This is an average figure. Some groups of individuals will find that their earnings peak earlier in life while for others they will peak later in life. Goldthorpe, J. and McKnight, A., (2004), The economic basis of social class, *CASEpaper 80*, Centre for Analysis of Social Exclusion

[4] Savage, L., (2011), *Moving on up? Social mobility in the 1990s and 2000s*, Resolution Foundation

mobility in this important phase of career progression. The findings presented here show that each of these factors is not just important in shaping the first phase of an individual's working life. They continue to be important as people move on in their careers towards their period of peak earnings. The key results are:

Gender

Men were 40 percent more likely to more up the ladder compared to women in the 2000s – a high figure, but lower than the 51 percent likelihood of upwards mobility enjoyed by men in the 1990s. Women were more likely to move down in both decades.

Education

Holding a degree is associated with significantly increased prospects of moving up the earnings ladder. Those with less than degree-level education were at least 37 percent *less* likely to move up in both the 1990s and 2000s. However, the risk of downward mobility for those who did *not* hold a degree increased substantially in the 2000s as the proportion of workers with a degree increased.

Occupation

Some occupational categories were associated with greater chances of upwards mobility. For example, professional occupations such as teachers and lawyers had a 55 percent increased chance of upwards mobility in the 2000s compared to managers. Others were associated with an increased risk of moving downwards, such as glaziers, electricians and builders.

Unemployment

Those who fell into unemployment for any length of time during their thirties – even if they subsequently returned to work – were much less likely to move up the earnings ladder and were at least 79 percent more likely to move down. The penalty for a period of unemployment was greater in the 2000s than in the 1990s.

Part-time work

Part-time work also incurred a penalty, with individuals who worked part-time for the entire decade being 87 percent more likely to move down the earnings ladder in the 2000s. The part-time penalty was greater in the 2000s than in the 1990s, although the penalty for people who shifted from full-time to part-time work during the decade was less severe in the 2000s than in the 1990s.

Region

Regional differences in mobility became more apparent in the 2000s, with people in London being significantly more likely to move up the earnings ladder than people in other regions. Those in the South West were 83 percent more likely to move down than those in London while people in the North East had a 73 percent greater risk of downward mobility, controlling for individual skill level within each decade. This change in the significance of regional background between the two decades largely reflects changes between the two decades. Between the 1990s and 2000s, London has become a focus for job growth in the types of industries that offer the greatest opportunities for earnings progression.

Trends in earnings mobility over the life course

In March 2011 the Resolution Foundation published the first report in its series on social mobility, *Moving On Up?* [5] It compared levels of mobility for our two cohorts, one that aged from 33 to 42 in the 1990s and the other that aged from 30 to 38 in the 2000s. A number of key findings emerged. First, we showed that there was a substantial increase in upwards and downwards earnings mobility in the 2000s compared to the 1990s, although this was starting from a low base. In particular, there was a 22 percent increase in the probability of moving significantly up the earnings distribution (defined as an upward movement of three or more earnings deciles) in the 2000s compared to the 1990s. In broad terms, these findings concur with research by Dickens and McKnight. Using the Lifetime Labour Market Database, their research showed that mobility increased between 1998 and 2005 but fell between 1980 and 1998.[6]

Second, our analysis showed that upwards and downwards mobility were not evenly distributed, being concentrated in the upper middle section of the earnings distribution. The highest earners in the 2000s continued to be largely sheltered from downward mobility and those at the bottom were far less likely to move up a substantial distance than those in the middle. Around 50 percent of people in the top and bottom quintiles remained in the same position in the earnings distribution throughout their thirties and into their early forties. The comparatively high level of immobility in the bottom quintile suggests that it is difficult for an individual to make a significant step up in earnings if they start from a very low base.

Some of the explanation for the increase in earnings mobility in the 2000s comes from changes in the wider economic context in Britain between the two decades. Inequality grew during the 1990s, stretching the distance between all the rungs on the earnings ladder[7]. This may have reduced mobility in the 1990s as individuals had further to travel to move from one decile to another.

Overall, the analysis in *Moving On Up?* showed some improvement in upwards mobility in the 2000s compared to the 1990s, albeit from a low initial base. However, there still remains the question of who experiences mobility and why. This paper looks beneath the headline rates of mobility presented in *Moving On Up?* to assess for the first time the individual characteristics of those who experienced upwards and downwards mobility across both decades and analyses the differences that are observed.

[5] Savage, L., (2011), *Moving on up? Social mobility in the 1990s and 2000s*, Resolution Foundation

[6] Dickens, R. and McKnight, A., (2008), Changes in earnings inequality and mobility in Great Britain 1978/9-2005/6, *Centre for the Analysis of Social Exclusion*, CASE/132

[7] This finding refers to inequality as measured by the ratio of earnings at the 90th percentile to those at the 10th percentile.

Data and methods

This report draws on data from the *National Child Development Study* (NCDS) and the *British Cohort Study* (BCS). Each of these studies surveyed every person born in the UK in one week of 1958 and 1970 respectively.[8]

We assess mobility at a key point in the working lives of individuals as they move from their early thirties to their late thirties/early forties. The rationale for this is that firstly, by the time an individual is in their early thirties early career effects that might cause increased mobility, such as graduates taking low paid, entry level positions before rapidly progressing up the ladder, should be less influential. Secondly, wage rises tend to be associated with life course evolution and research shows that on average, earnings tend to rise until a person is in their early to mid 40s.[9] There are variations within this general finding and some groups, such as those in higher managerial and professional occupations, continue to see their earnings rise into their late 50s, while others see theirs plateau from their early to mid 30s, for example individuals in routine and semi-routine occupations.[10] However, on average we can say that the period analysed in this report covers the period during which individuals move towards their *peak earning potential*.

This paper focuses on relative mobility; the position of individuals in the earnings distribution relative to their peers. For every person who moves up the earnings ladder, someone has to move down because the number of positions on the ladder are fixed. This means that, although we might expect to see an increase in absolute earnings during this period of people's working lives as they progress to their point of peak earnings, this analysis looks at the factors that help people move up relative to their peers as their careers progress or put them at greater risk of moving down (see Box 1).

Participants in the NCDS cohort aged from their thirties to their forties during the 1990s while the BCS cohort did so during the 2000s. This allows us to compare mobility across the two most recent decades. During the remainder of this report the NCDS cohort will be referred to as the '1990s cohort' while the BCS will be referred to as the '2000s cohort.'

For the purposes of assessing changes in earnings mobility we divide the samples into quintiles based on their **hourly earnings**. *Mobility is defined as movement up or down the distribution by at least one quintile*. The analysis in this report has been carried out using binary logistic regression. This identifies the independent influence of different variables such as education and region, holding all other variables in the model constant. This means that, for example, in the discussion of the effect of gender on upwards mobility in the 1990s, the effects of education, occupation, region, and so on are controlled for. The analysis does not permit us to assess the relative importance of one variable over the others. It simply identifies whether a specific variable has an influence over upwards or downwards mobility in the 1990s or 2000s, all other things held constant.

The birth cohort studies have some limitations. They are irregular, sometimes with large intervals between surveys. However, they have been used repeatedly in analyses of social mobility and are generally considered to be of good quality.[11] Most importantly, the birth cohort studies contain a wide range of data that is not available in alternative datasets. For example, the *Annual Survey of Hours and Earnings* panel data does not include information on individuals' education levels.

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[8] University of London, Institute of Education, Centre for Longitudinal Studies, *National Child Development Study: Sweep 5, 1991* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2008. SN: 5567; *National Child Development Study: Sweep 6, 1999-2000* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2008. SN: 5578; *British Cohort Study: 29 year follow-up, 1999-2000* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2008. SN: 5558; *British Cohort Study: 38 year follow-up, 2008-2009* [computer file]. Colchester, Essex: UK Data Archive [distributor], August 2010. SN: 6557

[9] Savage, L., (2011), *Moving on up? Social mobility in the 1990s and 2000s*, Resolution Foundation
There are variations within this general trend. For example, Goldthorpe and McKnight have shown that earnings peak later for higher social classes.

[10] Goldthorpe, J. and McKnight, A., (2006), The Economic Basis of Social Class, in Morgan, S. L., Grusky, D. B., and Fields, G. S. (eds.) *Mobility an inequality*, California: Stanford University Press

[11] See Appendix A of Savage (2011), for a discussion of attrition and measurement error in the birth cohort studies. Following the analysis in that paper, we do not believe that attrition or measurement error bias the results of the analysis in any way. The Centre For Longitudinal Studies has also conducted studies of the effect of attrition on the NCDS and BCS surveys which concluded that both samples are still representative of the original data. CLS Data Note

Box 1: Absolute and relative earnings mobility

Absolute mobility refers to the level and distribution of earnings growth within society, or in our case, cohort. If the number of higher paid jobs grows people can move up the earnings ladder without other people moving down because there is more 'room at the top'. We know Britain underwent massive structural change in the post-war period up to the 1970s and to some extent through the 1980s with growth in professional and technical jobs and the decline of manual employment. This means that absolute upward mobility would have been generally high over that period.

Relative mobility refers to whether or not people remain in the same position in the earnings distribution relative to their peers. Relative mobility is often measured by splitting the population into earnings deciles or quintiles and the number of individuals moving between deciles or quintiles is used to show the level of mobility.

Absolute and relative mobility are distinct concepts with one not necessarily influencing the other. It is possible to imagine a situation where everyone is earning more because society gets richer at every level (high absolute mobility) but nobody changes position within the earnings distribution (low relative mobility). On the other hand it is also possible that earnings could not grow at all (low absolute mobility) but everyone in the distribution changes position so that those at the top are replaced by those who were at the bottom (high relative mobility).

Description of the sample

After allowing for missing data, the sample sizes for the analysis were 5,683 for the 1990s cohort and 4,403 for the 2000s cohort. Table 1 shows the basic proportions of individuals that fell into each category of the explanatory factors discussed in the report along with the change between the two cohorts. A few of the changes are worth noting:

- The 2000s cohort is better educated than the 1990s cohort. 10 percent more of the sample have graduate-level (Level 4+) qualifications or greater and there are 3 percent fewer who have no qualifications.
- There has been a general occupational upgrading among the 2000s cohort with around 7 percent more employed in managerial, professional and associate professional jobs compared to the 1990s.
- 8 percent fewer individuals experienced a spell of unemployment in the 2000s than in the 1990s. This is a reflection of economic conditions in the respective decades with the UK emerging from a recession in the early 1990s.
- In a similar vein, 5 percent more of the 2000s cohort remained in full-time employment over the course of the decade compared to the 1990s. This is likely to be because of the more stable economic and labour market conditions in the 2000s.

The 2000s cohort also has fewer individuals employed in the public sector. While this may seem contrary to the much discussed growth of the public sector during the 2000s, the data refers to employment at the *beginning* of the 1990s and 2000s. On a national level, public sector employment in 1991 was around 6 million but by 2000 this had dropped to 5.3 million.[12]

[12] http://www.statistics.gov.uk/articles/nojournal/PSE_final.pdf

Table 1: Descriptive statistics of 1990s and 2000s sample characteristics (percentage of sample)

	1990s	2000s	Change
Gender			
Male	50.1%	50.9%	0.8%
Female	49.9%	49.1%	-0.8%
Region			
London	9.1%	8.0%	-1.1%
North East	5.9%	4.6%	-1.3%
North West	11.9%	11.8%	0.0%
Yorkshire	9.3%	9.3%	0.0%
East Midlands	7.7%	7.7%	0.0%
West Midlands	9.3%	9.4%	0.2%
East of England	9.5%	10.0%	0.5%
South East	14.2%	14.7%	0.5%
South West	8.1%	8.7%	0.6%
Wales	5.1%	5.3%	0.2%
Scotland	9.9%	10.4%	0.5%
Education			
No qualifications	8.3%	5.5%	-2.8%
NVQ Level 1	12.7%	7.2%	-5.4%
NVQ Level 2	26.7%	23.3%	-3.4%
NVQ Level 3	16.6%	18.1%	1.5%
NVQ Level 4+	35.7%	45.8%	10.1%
Occupation			
Managers and administrators	14.5%	16.4%	1.9%
Professional	10.0%	11.2%	1.2%
Associate professional and technical	11.7%	14.7%	3.0%
Clerical and secretarial	17.7%	20.3%	2.6%
Craft and related	11.5%	9.7%	-1.8%
Personal and protective services	10.5%	8.8%	-1.7%
Sales	6.5%	6.9%	0.3%
Plant and machine operatives	8.1%	8.0%	-0.2%
Other	6.1%	4.1%	-2.0%
Works in public sector	35.4%	29.9%	-5.5%
Labour market experience			
Experienced a spell of unemployment	12.4%	4.5%	-7.9%
Moved from full to part-time work	11.3%	10.3%	-1.0%
Moved from part to full-time work	8.7%	5.0%	-3.7%
Remined in full-time employment	70.1%	75.0%	4.9%
Remained in part-time employment	9.9%	9.7%	-0.2%

Note: Values are rounded to one decimal place.
Source: National Child Development Study, 1991 and 2000; British Cohort

Factors associated with mobility

A range of factors are generally assumed to influence a person's chances of progressing in their career many of which have been assessed in the sociological literature on occupational mobility.[13] The standard human capital variables of age, education and employment experience have all been considered by various studies. Others have also highlighted the way that social class background influences individuals throughout their life course, demonstrating that people from lower class backgrounds are less likely to move up the occupational ladder than people from higher class backgrounds.[14]

This report assesses both the level of education and recent employment experience of individuals as well as gender, region and their occupation in their early thirties. Some factors that may influence mobility have not been included in this analysis due to data limitations. For example, we know that people from different ethnic backgrounds tend to have differing levels of educational attainment.[15] However, the sample sizes for most ethnic groups in the NCDS and BCS surveys preclude a rigorous analysis of variations in mobility by ethnicity. Similarly, the industrial sector (as opposed to occupation) that people work in could affect mobility but information was not collected on this in some of the surveys used in this report. The effect of migration on mobility cannot be estimated from the NCDS and BCS cohort studies as they do not cover people who arrived in the UK after 1958 and 1970 (respectively). This means that the large number of migrants that entered the UK in the 2000s are not included in the analysis.

This section outlines the influence we would expect each of the factors above to have on earnings mobility based on current evidence.

Education

We look at the likelihood that a person will move up or down the earnings distribution according to the level of their highest qualification.[16] We look at the influence of education on mobility over and above the earning's position attained by the age of 30 which is in itself affected by an individual's level of education. We may expect that those with higher level qualifications, particularly degrees, not only earn a higher wage by the age of 30, but that their qualifications also put them on a higher wage trajectory so that they experience faster wage growth. The literature on occupational mobility has repeatedly indicated that level of education in particular is linked to movements up the occupational ladder[17] and there is a well-developed literature on the wage returns to holding a degree.[18] It has also been shown that higher levels of education can reduce the risk of downward occupational mobility.[19]

Holmes has analysed which individuals move up the occupational ladder. He shows that the process of job routinisation is an important driver of mobility out of routine occupations. This is to be expected as the employment share in routine jobs falls. Holmes showed that routine workers with a degree are more likely to move into professional occupations but not managerial occupations. Furthermore, they find that Level 3 qualifications do not significantly increase an individual's chances of progression compared to Level 2.[20]

We would therefore, expect that people who hold degrees are more likely to move up the earnings ladder while those with lower levels of education will suffer a penalty in terms of a reduced likelihood of upward mobility and increased risk of downward mobility. In the period analysed here, the fact that many more people held degree-level

[13] Blossfeld, H-P., Mills, M., and Bernrdi, F. (eds.) (2006), *Globalization, uncertainty, and men's careers*, Cheltenham: Edward Elgar

[14] Bukodi, E. and Goldthorpe, J. H., (2011), Social class returns to higher education: chances of access to the professional and managerial salariat for men in three British birth cohorts, *Longitudinal and Life Course Studies*, Vol. 2, No. 2, pp 185-201

[15] Hills, J. et al., (2010). *An anatomy of economic inequality in the UK*, London: Government Equalities Office

[16] We are grateful to Brian Dodgeon of the *Centre for Longitudinal Studies* for providing the code to obtain highest NVQ level from the NCDS and BCS datasets.

[17] Breen, R. and Goldthorpe, J., (1999), Class, mobility and merit: The experience of two birth cohorts, *European Sociological Review*, 17(2), pp 81-101; Bukodi, E. and Goldthorpe, J. H., (2011), Social class returns to higher education: chances of access to the professional and managerial salariat for men in three British birth cohorts, *Longitudinal and Life Course Studies*, Vol. 2, No. 2, pp 185-201

[18] O'Leary, N. C. and Sloane, P. J., (2005), *The changing wage return to an undergraduate education in Great Britain*, IZA Discussion Papers No. 1549; Blundell, R., Dearden, L., and Sianesi, B., (2001), *Estimating the returns to education: Models, methods and results*, London: LSE Centre for the Economics of Education

[19] Golsch, K., (2006), Women's employment in Britain, in Blossfeld, H-P. and Hofmeister, H., (eds.), *Globalization, uncertainty, and women's careers: An international comparison*, Cheltenham: Edward Elgar

[20] Holmes, C., (2011), *The route out of the routine: Where do displaced routine workers go?* SKOPE Research Paper No. 100

qualifications in the 2000s compared to the 1990s could mean that the mobility premium that might come with holding a degree is reduced due to the greater supply of graduates in the labour market. On the other hand, the spread of degree level qualifications could have exacerbated the differences in downward mobility between those who have this level of qualification and those who do not. With greater numbers holding degree level qualifications, it may be even harder for an individual with lower level qualifications to move upwards.

Employment related factors

Experience of unemployment: Employment experience has also been considered in studies of wage progression. Many have found that spells of unemployment have a negative effect on wage levels with some highlighting the 'wage scar' that prolonged spells of youth unemployment leave on individuals as they go through to adulthood.[21] In this paper we concentrate on the impact on mobility of experiencing a spell of unemployment over the period of study – as individuals age from their early thirties to their early forties. A spell of unemployment is defined as any period – regardless of length – spent out of the workforce over that timeframe.

The proportion of people that experienced a spell of unemployment was much lower during the 2000s than the 1990s. The potential effect of this is difficult to gauge. With greater employment opportunities during the 2000s, it could be that a stint of unemployment did not have as negative an effect on a person's mobility prospects as it did in the 1990s when unemployment was higher, especially at the start of the decade. However, the opposite may also be true. We assess mobility through earnings in this paper and earnings grew every year during the 1990s but, as we have noted, real earnings growth stagnated for much of the 2000s. It is, therefore, possible that those who fell into unemployment in the 1990s did not suffer as great a wage penalty because of rising real wages which was reflected in their earnings when they returned to the workforce, while the opposite may be true for individuals who experienced unemployment during the 2000s.

Part-time and full-time employment: Another aspect of labour market experience that is examined is transitions to and from part-time employment. Research into levels of pay of part and full-time workers has shown that part-time employees earn less per hour than full-time employees even after allowing for different levels of education and occupation.[22] The 'part-time wage penalty' would suggest that those in part-time work are more at risk of being overtaken by their peers who work full-time or move from part to full-time employment. To compare part and full-time workers together, we use hourly wages when assessing earnings mobility.

Public or private sector employment: The effect of working in the public or private sector could also be relevant. Many parts of the public sector have structured career progression that can aid mobility. For example, teachers have pre-set pay spines which they work their way up before progressing onto a higher-rated pay spine. However, public sector wages are also generally lower than private sector wages at the top of the distribution so it may be that public sector employment aids mobility in certain parts of the earnings spectrum, but not in others.

Gender

Gender is an important part of the mobility equation. Previous research has produced mixed findings with some suggesting that mobility is generally lower among women,[23] while others have shown that men experience as much downward occupational mobility as women over the course of their careers.[24] We do, however, have reason to believe that women will fare worse than men when it comes to mobility over the life course. Women are more likely to have career paths interrupted by childbirth which Dex has shown can significantly increase prospects for downward mobility.[25]

Furthermore, women are more likely to be employed part-time with the most recent figures showing that 42 percent of women in employment were working part-time compared to 11 percent of men.[26] Bukodi and Dex have shown that women who move from full to part-time employment and those who continuously work in part-time

[21] Bell, D. N. F. and Blanchflower, D. G., (2010) *Youth unemployment: Déjà vu?* IZA Discussion Paper Series No. 4705; Gregg, P and Tominey, E (2004), *The wage scar from youth unemployment*, CMPO Working Paper Series No. 04/097

[22] http://cep.lse.ac.uk/pubs/download/dp0679.pdf

[23] Dex, S., (1987) *Women's occupational mobility*, Basingstoke: Macmillan

[24] Dex, S., War, K. and Joshi, H., (2006) *Changes in women's occupations and occupational mobility over 25 years*, Centre for Longitudinal Studies: Women and Employment Survey Working Paper

[25] Dex, S., (1987) *Women's occupational mobility*, Basingstoke: Macmillan. This effect is most pronounced after the birth a person's first child.

[26] *Annual Population Survey*, January 2010-December 2010, *Nomis*

employment are at greater risk of downward mobility than those in full-time jobs or people who move from part to full-time work.[27] We would therefore expect women to be less likely than men to move *up* the earnings ladder and more likely to move *down*.

Region

The notion of a North/South divide in the UK is often discussed in relation to the labour market and earnings. It is well established that certain regions in the North of the country, as well as in Wales and Scotland, suffered disproportionately from the effects of high unemployment in the 1980s. These regions also underwent a period of massive structural change in their local labour markets as the heavy industries that dominated the areas slowly disappeared. In many instances these jobs were replaced by service sector and public sector jobs. In London and the South East the proliferation of business services and finance sector jobs helped to increase wage levels and attract a greater number of highly skilled workers to the capital and surrounding areas. We might therefore expect that London and the South East offer greater opportunities for people to move up the earnings ladder.

Occupation

It seems intuitive that some occupations have greater opportunities associated with them while others have potential barriers and limits to progression. For example, we would expect greater scope to progress for people employed in professional occupations compared to those working in unskilled manual jobs. In this research we use the Standard Occupational Classification (SOC) 1990 as this is the only classification of occupations that is consistent across all surveys.

The growth of higher level jobs between the 1990s and 2000s may have meant that there was more room at the top in the 2000s to facilitate upwards mobility, while the decline in manufacturing jobs could have limited the chances of upwards mobility for people who worked in those occupations (craft and related occupations and plant and machine operatives in terms of the categories in Table 1). If people working in those industries and occupations that were in decline wished to move up they would have faced a limited set of possibilities unless they chose to re-skill or change career.

[27] Dex, S. and Bukodi, E., (2010) *The effects of part-time work on women's occupational mobility in Britain: Evidence from the 1958 Birth Cohort Study*, GeNet Working Paper No. 37

Results of the analysis

The first part of this results section looks at the influence of the factors discussed above on the likelihood of individuals moving up the earnings ladder in the 1990s compared to the 2000s. The second part looks at the influence of the same set of factors on the likelihood of individuals moving down the earnings distribution.

Who moves up?

In this section we assess the independent effect that certain factors have on an individual's likelihood of moving up the earnings ladder. This is expressed as the percentage chance of moving up for someone who possesses that characteristic compared to someone who possesses another characteristic in the same category. In the simplest example, from Table 2 we can say that men in the 1990s were 51 percent more likely to move up than women, controlling for other differences between men and women such as education or occupation.

Where a characteristic has multiple categories we select a reference category to compare all other categories against. In the case of education, for example, people who hold graduate level (NVQ Level 4+) qualifications are the reference category. Looking again at Table 2, this means that we can say that people with A Levels (NVQ Level 3 qualifications) were 37 percent *less* likely to move up than people with graduate level education. The reference category for each characteristic is labelled in Table 2. Where the statistics are positive there is a greater likelihood that individuals will move up compared to the reference category. Where the statistics are negative there is less of a likelihood that individuals with that characteristic will move up compared to the reference category.

The percentages are obtained through logistic regression and **only those that are denoted with asterisks in Table 2 are statistically significant in determining the likelihood of upwards mobility**.[28] Upwards mobility is defined here as whether or not an individual moves up the earnings distribution by at least one quintile.[29]

Upwards mobility across two decades

Table 2 reports the likelihood of moving up the earnings ladder in the 1990s and 2000s by an individual's key characteristics. The influence of each characteristic is discussed below, including any change in its influence between the two decades.

[28] The full logistic regression results can be found in Appendix A.

[29] Individuals in quintile five at the start of each study period (1991 and 2000) are excluded from the analysis of upward mobility as it is not possible to move up from the top quintile.

Table 2: Chances of moving up the earnings ladder by individual characteristics, 1990s and 2000s

	1990s		2000s	
Gender				
Female (reference)				
Male	51.0%	**	40.0%	**
Region				
London (reference)				
North East	-10.2%		-52.5%	**
North West	-29.5%		-34.4%	*
Yorkshire	-13.9%		-27.5%	
East Midlands	-21.2%		-48.7%	**
West Midlands	-9.3%		-24.0%	
East of England	-6.0%		-24.6%	
South East	-11.2%		-31.3%	*
South West	-23.1%		-37.2%	*
Wales	-29.9%		-32.9%	
Scotland	-19.9%		-35.7%	*
Education				
NVQ4+ (reference)		**		**
No quals	-53.8%	**	-52.2%	**
NVQ 1	-49.4%	**	-46.6%	**
NVQ 2	-36.2%	**	-34.3%	**
NVQ 3	-37.0%	**	-36.6%	**
Occupation				
Managers and administrators (reference)		**		**
Professional	9.9%		54.7%	**
Associate professional	-31.8%	**	50.0%	**
Clerical	-26.7%	**	18.2%	
Craft and related	-43.4%	**	-3.5%	
Personal and protective services	-37.8%	**	15.4%	
Sales	-12.5%		12.5%	
Plant and machine operatives	-23.6%		-45.5%	**
Other	-27.9%	*	-0.2%	
Works in public sector	-13.5%		3.5%	
Labour market experience				
Did not experience unemployment (reference)				
Experienced spell of unemployment	-8.8%		-30.5%	*
Worked part-time at one survey (reference)				
Full-time employed at both surveys	-10.4%		25.2%	*
Did not change from part- to full-time employment (reference)				
Moved from part- to full-time employment	-22.2%	*	-2.2%	

Note: Significance = **p<.01, *p<.05
Figures are odds ratios from logistic regression models.

Gender

Men were much more likely to move up than women in the 2000s but the magnitude of this likelihood fell to 40 percent from 51 percent in the 1990s. This change in the influence of gender between the two decades may be due to the changing nature of female labour market participation which has moved closer to, but is still very different from, that of men over successive generations in terms of the types of occupations women are employed in, hours worked, and pay. In *Moving On Up?*, we found that overall male mobility was lower than female mobility in the 1990s. The results in Table 2 tell us that even though overall female mobility was higher in the 1990s, it was much more likely to be downwards. Men, on the other hand, were more likely to move up.

This is not a surprising result given the work of Dex and others which suggests that women experience interrupted careers from childbirth.[30] The effect of pregnancy on upwards mobility was examined for this report but was limited to children conceived during the study periods when women were in their thirties. Surprisingly, no significant effects on women's mobility patterns from childbirth were found in this analysis. This may be because our data does not differentiate between first and other children. Dex has shown that the mobility penalty from childbirth is most apparent at the birth of a person's *first* child. Given the age group of the cohorts (30+) it is likely that many would have had their first child prior to the study period and, therefore, the mobility penalty experienced by women who have children is not apparent in this data.

Education

The effects of education are just as striking as those of gender. Independent of other factors, holding a degree significantly increased an individual's chances of upwards mobility compared to any other type of education in both the 1990s and 2000s. People with no qualifications in the 1990s were 54 percent *less likely* to move up than people with degree level qualifications. People with Level 2 (approximately GCSEs) and Level 3 (A Level) qualifications were 36 and 37 percent less likely to move up than individuals with degrees. The chances of moving upwards for people with Level 3 qualifications were not significantly higher than those with no more than a Level 2 education. This echoes the findings of Holmes' analysis of occupational mobility.[31] In the 2000s, those who held a degree were at least 37 percent more likely to move up the earnings ladder than those with lower level qualifications. Once again, there is no significant difference between those who held Level 2 and Level 3 qualifications in terms of their likelihood of experiencing upwards mobility. Other research has shown that some Level 3 qualifications do have a significantly greater return in terms of *wage levels* compared to Level 2 qualifications.[32] However, this increase in wages may not result in a quintile move up the earnings ladder and, therefore, may not be reflected in this analysis which assesses the prospects for earnings *mobility* associated with different levels of qualifications.

Degree level education was much more widespread in the 2000s than in the 1990s. Table 1 shows that 36 percent of the sample held degrees in the 1990s but this increased to 46 percent in the 2000s. But a significant increase in the supply of graduates between the two decades did not reduce the influence of having a degree on upwards mobility, as might be expected. On the contrary, the upward mobility premium of a degree increased in the 2000s. This is reflected in Figure 1 which shows that in the 1990s 37 percent of those who moved up held a degree but by the 2000s this had increased to 52 percent. At every other level of education except Level 3 upwards mobility decreased between the 1990s and 2000s.

[30] Dex, S., War, K. and Joshi, H., (2006) *Changes in women's occupations and occupational mobility over 25 years*, Centre for Longitudinal Studies: Women and Employment Survey Working Paper

[31] Holmes, C., (2011), *The route out of the routine: Where do displaced routine workers go?* SKOPE Research Paper No. 100

[32] Jenkins, A., Greenwood, C., and Vignoles, A., (2007), *The returns to qualifications in England: Updating the evidence base on Level 2 and Level 3 vocational qualifications*, LSE Centre for the Economics of Education; Blundell, R., Dearden, L., and Sianesi, B., (2001), *Estimating the returns to education: Models, methods and results*, London: LSE Centre for the Economics of Education

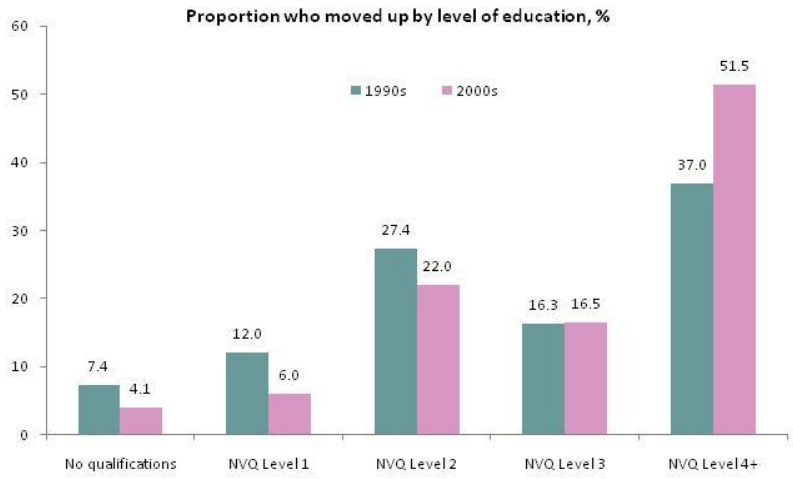

Figure 1: Overall upwards mobility by level of education
Source: NCDS and BCS

Occupation

Occupation was also highly significant in determining the chances of moving upwards in the 1990s. Managers and administrators were more likely to move up the earnings ladder than people working in any other occupation except professionals. Associate professional occupations such as computer programmers and lab technicians, clerical positions such as bank cashiers, craft occupations such as builders and electricians and personal service positions such as waiters and care workers were all significantly less likely to move up than managers. People in craft and related occupations were 43 percent less likely to experience upwards mobility than managers, while those in personal and protective services were 38 percent less likely to move up.

Occupation also had an independent influence on levels of upwards mobility in the 2000s though somewhat differently to the 1990s. In the 2000s those working in professional occupations such as doctors, lawyers and teachers and associate professional occupations were the most likely to be upwardly mobile with a 50 percent greater chance of moving up than individuals in managerial occupations. The continued decline of manufacturing had an effect on a person's chances of upward mobility as those working in plant and machine operating occupations became 46 percent *less* likely to move up than managers.[33]

The changing fortunes of professionals and associate professionals between the 1990s and 2000s is most likely related to the increasing returns to education that gathered pace in the 2000s[34] rather than because of the changing skills profile of these groups between decades. Data from both cohorts show that the skills profiles of the managerial, professional and associate professional occupational categories hardly changed between the 1990s and the 2000s (Figure 2). However, there was an expansion of jobs in the economy in the 2000s that required higher skill levels in part because of Skills Biased Technological Change (SBTC).[35] Therefore, there were greater opportunities and higher wages available to those with the requisite skills. This will have had a greater effect on the 2000s cohort who entered the labour market between 1985 and 1991 and were therefore close to the beginning of their careers as the process of SBTC gathered pace. The 2000s cohort were entering into a changing labour market just as the wage premium for higher skills was growing and more of the jobs that required higher skills were emerging. By contrast, the 1990s cohort were already well established in their careers by that point and would have required greater effort in terms of a career-change and probable upskilling in order to make the most of the new opportunities provided by the expansion of higher paying, higher skilled jobs.

[33] It should also be acknowledged that changes in the classification of occupations may have had some effect on the results here though the Standard Occupational Classification theoretically takes into account occupational change such as changes in job titles. However, these changes can be subtle and may not have been picked up by the SOC coding given the large changes in the labour market that occurred over the course of two decades.
[34] Machin, S., and Van Reenan, J., (2007), *Changes in wage inequality*, LSE Centre for Economic Performance Special Paper No. 18
[35] Autor, D., Katz, L. and Kearney, M., (2006a) The polarisation of the US labour market, *American Economic Review*, Vol. 96, No. 2, pp 189-194

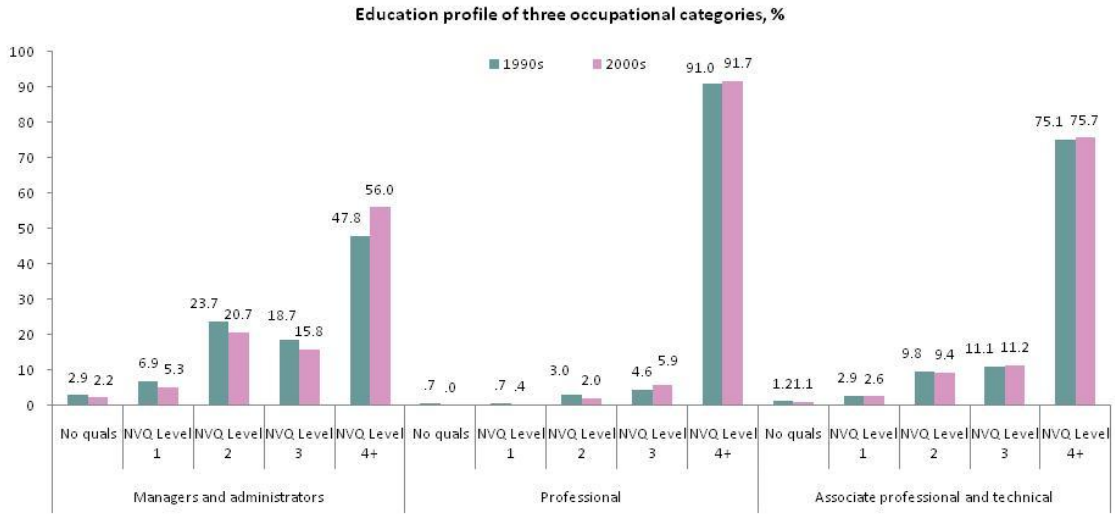

Figure 2: Level of education by occupational category
Source: NCDS and BCS

Another related explanation for the changing impact of occupation on mobility is the routinisation of jobs which occurred during the 1980s and 1990s.[36] 'Routinisation' refers to the replacement of middle ranking routine occupations by computers or programmed machines.[37] These routine jobs were largely manufacturing and clerical occupations and it would therefore seem likely that individuals employed in those occupations would find opportunities more limited and chances of progression stifled. This could perhaps account for the upwards mobility penalty associated with these occupations during the 1990s.

Region

Regional variations in earnings mobility were highly significant in the 2000s but not in the 1990s. The most striking results in the 2000s were that individuals in the North East were 53 percent *less* likely to move up than those in London while those in the East Midlands were 49 percent less likely to move upwards. However, it is not just a case of North and South as those in the South East and South West were also significantly less likely to climb the earnings ladder than people in London.

It is likely that the increased significance of regional background in the 2000s compared to the 1990s can be explained by changes that took place between the two decades, notably a combination of the effects of the recession in the early 1990s and the growing dominance of London in the UK economy in the 2000s. The recession of the early 1990s hit the South and South East particularly hard with white collar workers, who were more likely to be based in London and the South East, suffering high levels of unemployment.[38] Over the period from 1991 to 1994/5 average wages also declined in London compared to the UK average while in all other regions average wages grew or at least remained stagnant.[39] This arguably created conditions that reduced prospects for earnings mobility in London.

[36] Goos, M. and Manning, A., (2007) Lousy jobs and lovely jobs: the rising polarization of work in Britain, *The Review of Economics and Statistics*, Vol. 89, No. 1, pp 118-133
[37] Autor, D., Katz, L. and Kearney, M., (2006a) The polarisation of the US labour market, *American Economic Review*, Vol. 96, No. 2, pp 189-194
[38] Income Data Services, (2006) *The impact of economic recession on pay increases and the low paid*, London: Low Pay Commission
http://www.lowpay.gov.uk/lowpay/research/pdf/t0001eds.pdf
[39] Brewer, M. and Wren-Lewis, L., (2009) *Accounting for changes in inequality since 1968: decomposition analyses for Great Britain*, London: Institute for Fiscal Studies
http://sta.geo.useconnect.co.uk/pdf/Accounting%20for%20changes%20in%20inequality.pdf

In the 2000s, the UK economy became ever more London centric with financial and business activities growing to the point where that sector accounted for 34 percent of UK GDP by 2010.[40] Wage rises in London were higher than anywhere in the UK except Scotland over the period from 2000 to 2008 with real hourly earnings rising by 92 pence compared to 15 pence in the North East (Figure 3). Wages also increased faster in absolute terms in London than anywhere else in England in the 2000s. This was during a period of relatively low wage growth nationally that included a period of stagnation (from 2003 to 2008).[41] Disposable income also grew in London over the period 2003 to 2008 even as it fell or stagnated in every other region.[42]

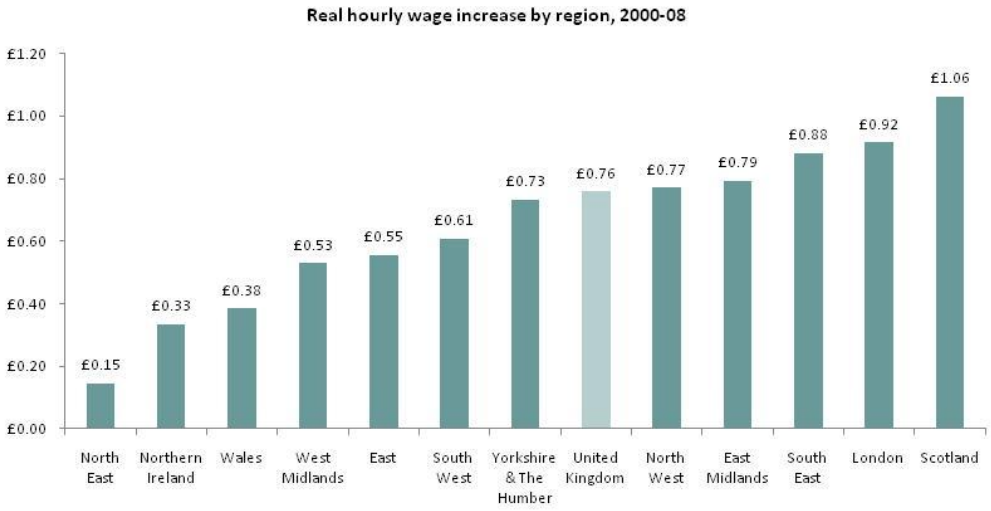

Figure 3: Regional median hourly wage increase over the 2000s
Note: Constant 2010 prices, RPI-adjusted
Source: ONS, Annual Survey of Hours and Earnings

Other factors have also influenced the increasing likelihood of a person moving up the earnings scale in London compared to the rest of the UK. First, the process of industrial change continued in the 1990s from its height in the 1980s, with regions heavily reliant on heavy and manufacturing industries suffering compared to those that already had a thriving service sector. These wider structural changes in the economy are likely to have influenced mobility between regions.

Second, the distribution of occupations and skills between regions changed between the 1990s and 2000s. As with the rest of this report, our analysis controls for the impact of occupation and skills within decades, to make sure the results on the influence of region are independent, and are not simply reflecting, for example, the impact of higher skills levels in one region over another. But the overall distribution of occupations and skills in different regions will have changed between the 1990s and the 2000s and this is likely to partially account for the changing significance of region between the two decades. For example, there was a shift in the number of professional and associate professional jobs in London from 27 percent in the 1990s to 33 percent in the 2000s. As we have seen, such roles significantly increased an individuals' chances of upwards mobility in the 2000s. Similarly, the proportion of each cohort holding a degree in London increased from 44 percent in the 1990s to 58 percent in the 2000s. Degree level qualifications are a critical driver of upwards mobility.

Taken together it would seem that when it comes to employment and earnings, London was very different from the rest of the UK during the 2000s. Opportunities for progression and increased earnings were much higher in the capital than in other regions, all other things being equal. This goes some way to explaining the increased likelihood of upward mobility in London compared to other UK regions in the 2000s compared to the 1990s.

[40] Whittaker, M. and Savage, L., (2011), *Missing Out: Why ordinary workers are experiencing growth without gain*, Resolution Foundation
[41] Plunkett, J., (2011) *Growth Without Gain: The faltering living standard of people on low-to-middle incomes*, Resolution Foundation
[42] http://www.resolutionfoundation.org/blog/2011/Apr/01/digging-beneath-figures-household-disposable-incom/

Unemployment

In the 1990s there was no upwards mobility penalty for falling into unemployment but in the 2000s people who experienced unemployment were significantly less likely to move upwards. Table 1 shows that overall, much less of the 2000s cohort (5 percent) experienced a spell of unemployment than the 1990s cohort (12 percent) but the mobility penalty for unemployment increased. One possibility is that because overall upwards mobility was higher in the 2000s, it became more difficult for those who dropped out of the labour market to catch up with their peers. In the 1990s, with comparatively fewer of their peers moving up, it may have been easier for those who fell into unemployment to re-enter the workforce without losing too much ground. Unemployment would also have had a much more negative signalling effect for employers in the 2000s than in the 1990s when there was greater unemployment. Furthermore, because of rising wages in the 1990s, those who became unemployed may even have re-entered the workforce on higher real earnings than they had previously. In contrast wage increases in the 2000s were less impressive and in fact, stagnant for much of the decade.

Full and part-time employment

It is also interesting to note from Table 2 that moving from part- to full-time employment had no significant impact on increasing a person's likelihood of moving up the earnings ladder in either decade, despite evidence of a part-time wage penalty. In fact, in the 1990s, individuals who made such a move were less likely to experience upwards mobility. Those who worked full-time during the entire period, compared to those who worked part-time during the entire period were however more likely to have moved up in the 2000s, by 25%.

Who moves down?

Of course, upwards mobility is only part of the picture. We are assessing movement between defined boundaries (quintiles) which means that for everyone who moves up, someone must move down. Downwards mobility is defined here as moving down the earnings distribution by at least one quintile. **Only those characteristics marked with asterisks in Table 3 are statistically significant in determining an individuals' risk of downward mobility**. Where the statistics are positive, there is a greater likelihood that individuals will move down compared to the reference category. Where the statistics are negative, there is less of a likelihood that individuals will move down compared to the reference category.

Downwards mobility across two decades

The characteristics that increased an individual's chances of moving downwards in the 1990s and 2000s are largely the inverse of those that improved their chances of upwards mobility.

Table 3: Characteristics associated with the likelihood of downward mobility

	1990s		2000s	
Gender				
Male (reference)				
Female	41.6%	**	38.4%	**
Region				
London (reference)				
North East	-35.0%	*	73.3%	**
North West	-3.4%		42.7%	*
Yorkshire	-20.1%		26.1%	
East Midlands	-0.3%		52.2%	*
West Midlands	-14.9%		38.9%	
East of England	-7.8%		30.9%	
South East	-8.2%		27.0%	
South West	-19.4%		83.0%	**
Wales	-6.7%		49.3%	
Scotland	-8.2%		34.9%	
Education				
NVQ4+ (reference)		**		**
No quals	90.0%	**	132.9%	**
NVQ 1	60.5%	**	95.3%	**
NVQ 2	42.2%	**	67.5%	**
NVQ 3	20.1%		49.6%	**
Occupation				
Managers and administrators (reference)		*		**
Professional	2.0%		-12.8%	
Associate professional	13.9%		-4.2%	
Clerical	4.6%		-28.2%	**
Craft and related	38.7%	**	39.0%	*
Personal and protective services	22.8%		7.6%	
Sales	72.5%	**	0.8%	
Plant and machine operatives	28.2%		78.2%	**
Other	13.1%		114.7%	**
Works in public sector	12.7%		-22.7%	**
Labour market experience				
Did not experience unemployment (reference)				
Experienced spell of unemployment	79.1%	**	123.3%	**
Did not move from full to part-time employment (reference)				
Moved from full- to part-time employment	52.2%	**	30.1%	*
Employed full-time at one survey (reference)				
Employed part-time at both surveys	76.9%	**	87.3%	**

Note: Significance = **p<.01, *p<.05
Figures are odds ratios from logistic regression models.

Gender

The influence of gender on downward mobility was similar in both decades. All other things being equal, women were 38 percent more likely to move down the earnings distribution in the 2000s; a small improvement compared to the 1990s when the risk of downward mobility for women was 42 percent compared to men.

Occupation

Occupation provided fewer significant, independent associations with downward mobility in the 1990s than it did for upwards mobility. But it is clear that some lower ranking occupations greatly increased the risk of downward mobility for individuals. For example, those working in sales were 73 percent more likely to experience downward mobility than managers and administrators in the 1990s. The same is true of craft and related occupations (e.g. builders and electricians) which carried a 39 percent greater risk of downward mobility.

The influence of occupation on downward mobility in the 2000s highlights the ongoing decline of the manufacturing industry. Those in craft occupations and plant and machine operating occupations were at a much greater risk of

downward mobility than managers (39 percent and 78 percent respectively). As the manufacturing sector contracted, opportunities for progression for those working in such occupations become more limited.

One of the key differences between the two decades is the reduced likelihood of moving down for people working in the public sector in the 2000s. Those working in the public sector were 23 percent *less* likely to move down than those employed in the private sector. In the 1990s working in the public sector had no discernible independent impact on an individual's likelihood of moving down. The effect of this characteristic also varied by quintile. People in quintiles two and four of the earnings distribution in the 2000s were around 40 percent less likely to experience downward mobility if they worked in the public sector. In contrast, those in the top quintile had a 56 percent *greater* risk of moving down if they worked in the public sector.

A possible reason for this is that private sector pay tends to be higher than public sector pay at the higher end of the distribution.[43] In addition, this research focuses on a period when people are moving towards their peak earnings period and differences in earnings at various points in the distribution begin to widen. A wage that would have placed a 30 year old working in the public sector in the top quintile of the earnings distribution in 2000 could easily have been overtaken by top salaries in the private sector come the end of the decade.

Region

Regional factors were important in the 2000s for downwards mobility though negligible in the 1990s. In the 2000s, people in London were significantly less likely to move down than those in other regions. Individuals in the North East, North West, East Midlands and South West were at a much greater risk of downward mobility than people in London. Those in the South West were 83 percent more likely to move down than those in London while people in the North East had a 73 percent greater risk of downward mobility. It is difficult to understand why region did not also influence downwards mobility in the 1990s. However, as discussed above, the greater impact of the early-90s recession on London and the South East coupled with the growing economic dominance of London in the 2000s may help explain the fact that region was less significant in the 1990s than in the 2000s. The changing distribution of educational qualifications between the two decades may also provide an explanation, although we control for education when looking at the impact of region within each decade.

Education

Education was a particularly important factor for downwards mobility. In the 1990s, those with no qualifications had a 90 percent greater risk of downward mobility than people with degree level qualifications, while individuals with a GCSE level education were 42 percent more likely to move down than those with a degree. The independent effect of education became even more pronounced in the 2000s with large increases in the risk of downward mobility for individuals with anything less than a degree. Those with no qualifications were 133 percent or 2.3 times more likely to move down than people who held a degree, while those with a GCSE equivalent education were 68 percent more likely to experience downward mobility.[44]

Our analysis of upwards mobility showed that holding a degree gave individuals an increased likelihood of moving up in both the 1990s and 2000s, despite a greater supply of graduates in the 2000s. This may have diminished the standing of other qualifications and reduced the mobility returns associated with lower level qualifications. If there are more people with degrees, employers can increase the qualification requirements for jobs. Figure 4 provides some evidence of this. It shows the probability of moving down associated with each qualification level in the 1990s and 2000s. The likelihood of moving down barely changed from one decade to the next for people with degrees. For every other level of education, the probability of moving down increased in the 2000s. In other words, the mobility penalty for not having a degree increased across the board.

[43] *Annual Survey of Hours and Earnings*, 2010

[44] The finding that those with no qualifications were 133% more likely to move down than those with Level 4 qualifications may seem peculiar since it exceeds 100 percent. This is simply a vagary of interpreting odds ratios as percentages. Another way of looking at this is to say that someone with no qualifications is 2.33 times more likely to move down than someone with a degree.

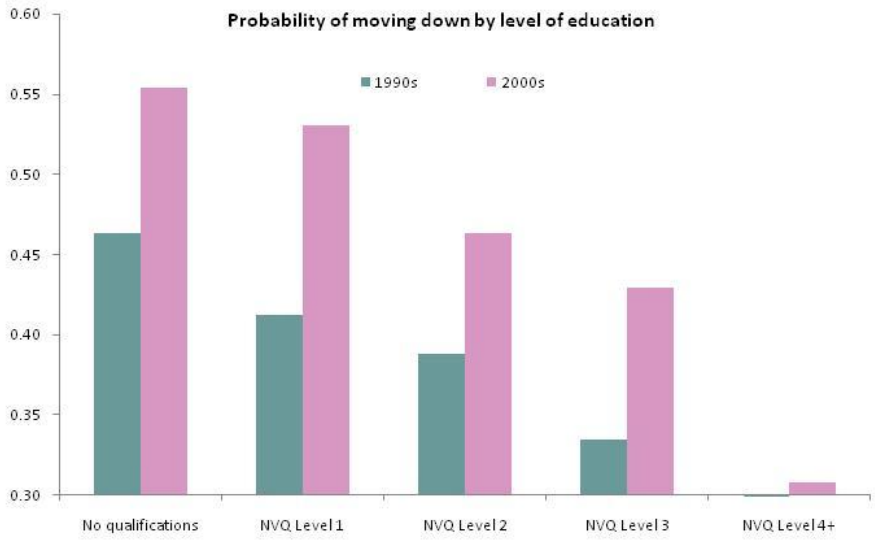

Figure 4: Change in probability of downward mobility at different levels of qualification
Note: Predicted probabilities derived from a logistic regression model containing the variables in Appendix Table A2.

If we go back to the increased importance of geographical region in explaining downward mobility in the 2000s, this may be, in part, related to a change in the distribution of qualifications between the two decades. Figure 5 shows the distribution of qualifications below degree level across the UK. The 2000s saw a large decline in the number of people holding qualifications below degree level in London even though London started from the lowest base in the 1990s. The proportion of individuals with less than degree level qualifications fell by 14 percentage points between the 1990s and 2000s cohorts. Only in Scotland was there a comparable decline, but this was from a high initial base; 66 percent had lower level qualifications in the 1990s.

The difference between the region with the lowest and highest proportion of people without a degree was also much greater in the 2000s. In the 1990s the proportion holding a degree in London was 12 percentage points higher than the region with the lowest proportion (Wales). By the 2000s this gap had increased to 22 percentage points (between London and the East Midlands). So although every region experienced a level of upskilling of the workforce, some regions benefited much less than others and this partially reflects the increasing significance of region on downwards mobility in the 2000s compared to the 1990s.

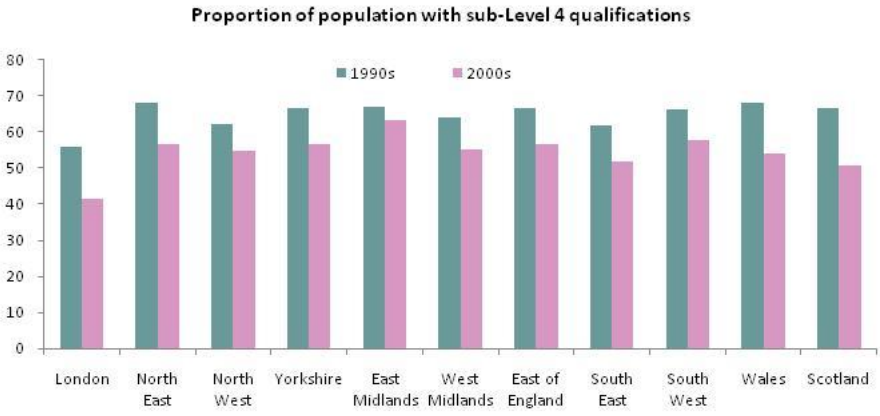

Figure 5: The distribution of sub-NVQ Level 4 qualifications by region
Source: NCDS and BCS

Unemployment

The penalty for a spell of unemployment increased between the 1990s and 2000s, even if individuals subsequently returned to work. In the 1990s, experiencing a period of unemployment at some point in the decade increased an individual's risk of downward mobility by 79 percent. In the 2000s, the risk of downward mobility from a spell of unemployment increased to 123 percent or 2.2 times compared to those who stayed in employment throughout the decade. [45]

Full-time and part-time work

Part-time employment also carried a greater risk of downward mobility in the 2000s compared to the 1990s. Individuals who worked part-time for the entire decade were 87 percent more likely to experience downward mobility in the 2000s compared to people who were employed full-time for the entire decade, up from 79 percent in the 1990s. However, the penalty for switching from full to part-time employment declined in the 2000s, with individuals facing a 30 percent greater likelihood of moving down compared to those employed full-time for the entire decade. In the 1990s, the risk of downwards mobility for those who reduced their hours was 22 percentage points greater, perhaps suggesting an increase in quality part-time work in the 2000s compared to the 1990s. [46]

[45] Similar to Footnote 41, the 123 percent risk of downward mobility for those experiencing a spell of unemployment in the 2000s can also be stated as a 2.23 times greater risk.

[46] Quintile-by-quintile results of the risk of downward mobility can be found in supplementary Table 2. These broadly reflect the overall findings with some variations in effect sizes.

Earnings mobility and low to middle income households

One of the questions that arises from the findings described above is how the characteristics that we have looked at are distributed across the earnings quintiles and what this means for an individual's chances of moving up or down from different quintiles.

A quintile-by-quintile analysis showed that the same characteristics influence mobility right across the earnings distribution.[47] For example, having a degree is significant to an individual's chances of upwards mobility whether they are in the bottom quintile or in the middle (quintile three). However, the characteristics of individuals in each quintile vary significantly. Table 4 shows the characteristics of both the 1990s and 2000s cohorts, split by quintile. Some differences between quintiles are immediately apparent and these are important for our understanding of why certain groups experience greater upwards (and downwards) mobility than others.

In relation to education, for example, our analysis has shown that degree level qualifications greatly improve a person's prospects for upwards mobility while those with lower level qualifications are much more likely to move down the earnings ladder. Looking at Table 4, it is not surprising that we find a far greater proportion of people in the lower quintiles have qualifications below degree level than in the top two quintiles. For example, in the 1990s, less than 20 percent of people in quintiles one and two held a degree compared to 53 percent of those in quintile four and 65 percent of those in quintile five.

It is not just education that differentiates the quintiles. Individuals in the top two quintiles in both the 1990s and 2000s were more likely to work in professional occupations which facilitate upwards mobility, while those in the lower quintiles were more likely to work in manufacturing and sales occupations that are more likely to increase the risk of downwards earnings mobility. Similar findings can also be observed in relation to region with people in London more likely to be in the top two earnings quintiles. Finally, in both the 1990s and 2000s, individuals in quintile one were more likely to have experienced a spell of unemployment than those in any other quintile, while individuals in the top two quintiles were the least likely to have slipped into unemployment. A spell of unemployment significantly reduces an individual's chances of experiencing upwards mobility.

Overall, the distribution of characteristics across earnings quintiles helps explain why in our first paper on social mobility, *Moving On Up?*, we found that people in quintiles three and four were more likely to move up than people at the extremes of the distribution. Individuals in the middle quintiles are more likely to possess the characteristics that aid upwards mobility than those in quintile one. Those in the top quintile are also more likely to have these characteristics than those further down the distribution. This helps to protect them from downwards mobility and means that they are more likely to stay at the top of the earnings ladder over the decade.

The findings of our analysis highlight the challenges that individuals in low to middle income households face in improving their earnings. Around nine in ten of all adults in low to middle income (LMI) households can be found in the bottom three earnings quintiles.[48] This indicates that adults from low to middle income households are less likely to possess the characteristics that facilitate upwards mobility such as having a degree or being continuously employed full-time. At the same time, individuals from LMI households are more likely to have the characteristics that increase their risk of moving down the earnings ladder.

[47] The results of this analysis are not shown in this report but are available from the author on request.

[48] Around two-thirds of low-to-middle income adults are located in the bottom two earnings quintiles.
Whittaker, M. and Savage, L., (2011), *Missing Out: Why ordinary workers are experiencing growth without gain*, Resolution Foundation

Table 4: Sample characteristics of the 1990s and 2000s cohorts by earnings quintile

1990s	Quintile				
	1	2	3	4	5
Region					
London	2.8%	5.5%	8.7%	10.9%	18.0%
North East	8.8%	7.0%	5.4%	4.7%	3.7%
North West	12.5%	13.5%	12.7%	11.5%	8.9%
Yorkshire	10.9%	11.2%	9.2%	9.7%	5.4%
East Midlands	7.5%	8.1%	8.9%	7.5%	6.4%
West Midlands	9.7%	8.9%	10.9%	9.1%	7.5%
East of England	8.7%	10.4%	8.6%	8.9%	10.9%
South East	10.0%	12.2%	12.5%	15.5%	21.1%
South West	9.5%	9.6%	8.2%	7.1%	5.9%
Wales	7.2%	5.0%	4.3%	5.5%	3.6%
Scotland	12.4%	8.7%	10.6%	9.6%	8.5%
Education					
No quals	18.5%	12.5%	6.6%	2.6%	1.3%
NVQ Level 1	20.6%	18.3%	12.4%	7.7%	4.1%
NVQ Level 2	33.9%	35.1%	28.7%	19.8%	15.5%
NVQ Level 3	12.3%	16.4%	22.6%	17.5%	13.8%
NVQ Level 4+	14.7%	17.7%	29.7%	52.5%	65.3%
Occupation					
Managers and administrators	5.1%	9.8%	13.7%	17.7%	26.7%
Professional	2.3%	2.2%	6.7%	15.7%	24.0%
Associate professional and technical	3.2%	6.6%	10.8%	18.7%	19.7%
Clerical and secretarial	20.5%	25.9%	22.6%	12.0%	6.3%
Craft and related	7.3%	11.2%	18.2%	13.5%	6.6%
Personal and protective services	19.7%	11.6%	8.3%	7.6%	5.6%
Sales	15.9%	7.5%	2.7%	3.0%	3.7%
Plant and machine operatives	9.2%	12.5%	10.0%	5.8%	2.7%
Other	14.3%	10.3%	3.2%	1.7%	0.9%
Employed in public sector	22.3%	35.1%	37.9%	42.0%	38.7%
Labour market experience					
Proportion working part-time	35.7%	24.5%	14.8%	9.4%	8.5%
Experienced spell of unemployment	19.5%	13.8%	10.9%	10.1%	7.9%

2000s	Quintile				
	1	2	3	4	5
Region					
London	3.2%	4.9%	6.5%	9.2%	16.6%
North East	5.2%	5.5%	5.8%	4.0%	2.4%
North West	12.6%	13.1%	13.2%	11.4%	8.7%
Yorkshire and The	12.2%	10.1%	7.8%	9.7%	6.6%
East Midlands	8.0%	9.1%	7.8%	7.5%	6.0%
West Midlands	10.6%	10.9%	9.3%	8.3%	8.2%
East of England	7.9%	10.0%	8.6%	11.6%	12.1%
South East	11.0%	10.4%	15.9%	16.1%	20.4%
South West	10.0%	9.0%	8.9%	7.9%	7.8%
Wales	6.6%	6.4%	5.4%	5.0%	2.9%
Scotland	12.9%	10.6%	10.9%	9.4%	8.2%
Education					
No quals	11.3%	6.8%	4.2%	2.7%	2.9%
NVQ Level 1	10.9%	10.4%	7.3%	4.2%	3.3%
NVQ Level 2	34.5%	30.7%	21.6%	15.9%	13.7%
NVQ Level 3	18.2%	22.2%	20.6%	15.5%	13.8%
NVQ Level 4+	25.1%	29.9%	46.3%	61.6%	66.3%
Occupation					
Managers and administrators	9.4%	9.6%	15.9%	18.6%	29.2%
Professional	3.2%	4.0%	9.6%	17.8%	21.8%
Associate professional and technical	6.6%	7.4%	16.5%	22.3%	20.8%
Clerical and secretarial	19.8%	35.1%	25.1%	12.9%	7.3%
Craft and related	7.7%	11.6%	10.0%	10.1%	8.7%
Personal and protective services	17.8%	10.9%	6.9%	6.0%	2.3%
Sales	14.1%	6.3%	5.1%	4.6%	4.4%
Plant and machine operatives	10.9%	11.1%	7.9%	5.6%	4.3%
Other	10.4%	3.9%	3.0%	1.9%	1.2%
Employed in public sector	19.6%	29.7%	31.2%	35.5%	25.2%
Labour market experience					
Proportion working part-time	27.6%	17.8%	10.6%	9.6%	7.9%
Experienced spell of unemployment	6.2%	4.9%	5.4%	3.8%	2.2%

Note: Values are rounded to one decimal place.
Source: National Child Development Study, 1991 and 2000; British Cohort Study, 2000 and 2008

Conclusion

This paper has shown that gender, education, geographical region, occupation, and labour market experience all have a significant, independent influence over an individual's likelihood of experiencing both upwards and downwards earnings mobility. Some of these factors remained important between the 1990s and 2000s and the impact of others, especially region and occupation, changed between the decades, with the former becoming more decisive in the 2000s.

Individuals that held less than graduate level qualifications were significantly *less* likely to experience upwards mobility and *more* likely to move down the earnings ladder compared to those who held a degree, all other things being equal. The effect of this arguably increased with the expansion of higher education over the decades. With an increase in the supply of graduates the penalty for not holding a degree also increased. The results for gender and mobility are equally stark. Women were much *less* likely to move up than men and much *more* likely to move down in both decades.

Regional differences in mobility became more apparent in the 2000s. In the 2000s, people in the North East and East Midlands in particular were significantly less likely to move up the ladder than individuals in London. One reason for this is that London became a greater focus for job growth in the types of industries that offer the greatest opportunities for earnings progression in the 2000s compared to the 1990s. This in turn led to a greater concentration of highly skilled workers in the capital.

Occupations have also played a role in determining who moves up and down the ladder with professionals much more likely to move up than those working in other occupations during the 2000s. Across both decades jobs at the lower to middle end of the occupational scale such as builders, electricians and machine operators offered reduced opportunities for upwards mobility and an increased risk of downwards mobility.

An individual's own experience of the labour market also significantly affects their prospects for upwards and downwards mobility. Those who slipped into unemployment over the course of the study periods were significantly less likely to move up the ladder and more likely to move down once they returned to the workplace in both decades. Those who remained in part-time employment over the study period were much more likely to move down the earnings ladder. The penalty for unemployment and for working part-time for the entire decade were both greater in the 1990s than in the 2000s.

These changes in an individual's chances of upwards and downwards mobility cannot be seen in isolation from wider economic and social changes. They are, in part, a reflection of wider economic and labour market trends. Skills-biased technological change has engendered an increasing wage return to high level skills. At the same time, routinisation has reduced the opportunities for in-work progression for those who work in many mid-level clerical and manufacturing occupations.

In the past, it was safe to assume that when the economy grew, wages for ordinary workers would also rise. Individuals could rely on earnings growth to lift their standard of living over time. This is no longer the case. We know that wages for workers in the bottom half of the earnings distribution have failed to grow since 2003, even when the economy was growing and that ordinary workers have been taking a declining share of the national income that goes to wages.[49] This means that individuals are dependent on moving up the earnings ladder if they are to see a substantial improvement in their standard of living. However, people from low to middle income households are much less likely to possess the characteristics that promote upwards mobility and protect against downwards mobility. Only 16 percent of adults from low to middle income households hold a degree compared to 39 percent in higher income households and only 5 percent are employed in professional occupations that offer the greatest prospects for moving up.[50] In this context, the prospects of adults in low to middle income households working their way up to higher paid employment look daunting.

[49] Whittaker, M. and Savage, L., (2011), *Missing Out: Why ordinary workers are experiencing growth without gain*, Resolution Foundation

[50] Resolution Foundation, (2010), *Squeezed Britain: The 2010 audit of low-to-middle earners*, Resolution Foundation

Appendix A: Logistic regression results

Table A1: Results of the logistic regression for upwards mobility

	1990s		2000s	
Male	.412/1.510	***	.337/1.400	***
	(.089)		(.094)	
London (ref)				**
North East	-.107/.898		-.743/.475	***
	(.172)		(.227)	
North West	-.350/.705	**	-.421/.656	**
	(.172)		(.181)	
Yorkshire	-.150/.861		-.322/.725	*
	(.155)		(.188)	
East Midlands	-.239/.788		-.668/.513	***
	(.167)		(.202)	
West Midlands	-.098/.907		-.275/.760	
	(.157)		(.189)	
East of England	-.061/.940		-.282/.754	
	(.158)		(.190)	
South East	-.119/.888		-.376/.687	**
	(.149)		(.179)	
South West	-.263/.769		-.465/.628	**
	(.162)		(.195)	
Wales	-.355/.701		-.399/.671	*
	(.184)		(.214)	
Scotland	-.222/.801		-.442/.643	**
	(.156)		(.186)	
NVQ4+ (ref)		***		***
No quals	-.773/.462	***	-.738/.478	***
	(.136)		(.180)	
NVQ 1	-.681/.506	***	-.627/.534	***
	(.118)		(.159)	
NVQ 2	-.449/.638	***	-.420/.657	***
	(.095)		(.102)	
NVQ 3	-.462/.630	***	-.455/.634	***
	(.105		(.108)	
Experienced spell of unemployment	-.093/.912		-.363/.695	**
	(/096)		(.181)	
Managers and administrators (ref)		***		***
Professional	.094/1.099		.436/1.547	***
	(.154)		(.162)	
Associate professional	-.383/.682	***	.405/1.500	***
	(.139)		(.143)	
Clerical	-.311/.733	***	.167/1.182	
	(.120)		(.130)	
Craft and related	-.570/.566	***	-.036/.965	
	(.131)		(.156)	
Personal and protective services	-.475/.622	***	.143/1.154	
	(.137)		(.161)	
Sales	-.134/.875		.118/1.125	
	(.153)		(.172)	
Plant and machine operatives	-.270/.764	*	-.607/.545	***
	(.140)		(.177)	
Other	-.327/.721	**	-.002/.998	
	(.158)		(.209)	
Works in public sector	-.145/.865	**	.035/1.035	
	(.075)		(.087)	
Full-time employed at both surveys	-.110/.896		.225/1.252	**
	(.097)		(.186)	
Moved from part- to full-time employment	-.251/.778	**	-.022/.978	
	(.128)		(.186)	
Constant	.212/.1236		-.325/.723	
	(.172)		(.205)	
Hosmer Lemeshow (sig.)	.77		.81	
N	4424		3395	
-2 Log Likelihood	5570.941		4249.632	

Notes: Dependent variable (moved up one or more quintiles = 1)
***p<.01, **p<.05, *p<.10. Format of entries into the table is logistic regression coefficient/odds ration and standard errors in parentheses

Table 5: Results of the logistic regression for downwards mobility

	1990s		2000s	
Female	.348/1.416	***	.325/1.384	***
	(.082)		(.094)	
London (ref)				
North East	-.430/.650	**	.550/1.733	***
	(.180)		(.215)	
North West	-.035/.966		.355/1.427	**
	(.136)		(.169)	
Yorkshire	-.225/.799		.232/1.261	
	(.148)		(.181)	
East Midlands	-.003/.997		.420/1.522	**
	(.154)		(.186)	
West Midlands	-.161/.851		.328/1.389	*
	(.147)		(.178)	
East of England	-.081/.922		.269/1.309	
	(.143)		(.173)	
South East	-.085/.918		.239/1.270	
	(.129)		(.161)	
South West	-.216/.806		.604/1.830	***
	(.154)		(.181)	
Wales	-.069/.933		.401/1.493	*
	(.180)		(.211)	
Scotland	-.086/.918		.299/1.349	*
	(.145)		(.177)	
NVQ4+ (ref)		***		***
No quals	.642/1.900	***	.845/2.329	***
	(.152)		(.187)	
NVQ 1	.473/1.605	***	.669/1.953	***
	(.123)		(.159)	
NVQ 2	.352/1.422	***	.516/1.675	***
	(.096)		(.105)	
NVQ 3	.183/1.202	*	.402/1.496	***
	(.104)		(.107)	
Experienced spell of unemployment	.583/1.791	***	.803/2.233	***
	(.102)		(.189)	
Managers and administrators (ref)		**		***
Professional	.020/1.020		-.137/.872	
	(.135)		(.144)	
Associate professional	.130/1.139		-.043/.958	
	(.124)		(.129)	
Clerical	.045/1.046		-.331/.718	***
	(.119)		(.126)	
Craft and related	.327/1.387	***	.329/1.390	**
	(.127)		(.146)	
Personal and protective services	.206/1.228		.073/1.076	
	(.143)		(.177)	
Sales	.545/1.725	***	.007/1.008	
	(.172)		(.182)	
Plant and machine operatives	.248/1.282	*	.578/1.782	***
	(.145)		(.162)	
Other	.123/1.131		.764/2.147	***
	(.181)		(.247)	
Works in public sector	.120/1.127		-.257/.773	***
	(.075)		(.088)	
Employed part-time at both surveys	.570/1.769	***	.628/1.873	***
	(.129)		(.147)	
Moved from full to part-time employment	.420/1.522	***	.263/1.301	**
	(.124)		(.132)	
Constant	-1.225/.294		-1.240/.289	
	(.133)		(.161)	
Hosmer Lemeshow (sig.)	.21		.32	
N	4399		3370	
-2 Log Likelihood	5473.429		4271.859	

Notes: Dependent variable (moved down one or more quintiles = 1)
***p<.01, **p<.05, *p<.10. Format of entries into the table is logistic regression coefficient/odds ration and standard errors in parentheses

The Resolution Foundation

The Resolution Foundation is an independent research and policy organisation. Our goal is to improve the lives of people with low-to-modest incomes by delivering change in areas where they are currently disadvantaged. We do this by:

- undertaking research and economic analysis to understand the challenges facing LMEs;
- developing practical and effective policy proposals; and
- engaging with policy makers and stakeholders to influence decision-making and bring about change.

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