



Social Mobility &
Child Poverty
Commission

Finding your routes: non-graduate pathways in the UK's labour market

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About the Commission

The Social Mobility and Child Poverty Commission is an advisory non-departmental public body established under the Child Poverty Act 2010 (as amended by the Welfare Reform Act 2012) with a remit to monitor the progress of the Government and others on child poverty and social mobility. It is made up of 10 commissioners and is supported by a small secretariat.

The Commission board comprises:

- The Rt. Hon. Alan Milburn (Chair).
- The Rt. Hon. Baroness Gillian Shephard (Deputy Chair).
- Paul Gregg, Professor of Economic and Social Policy, University of Bath.
- Douglas Hamilton, Director of the RS Macdonald Charitable Trust.
- David Johnston, Chief Executive of the Social Mobility Foundation.
- Catriona Williams OBE, Chief Executive of Children in Wales.

The functions of the Commission include:

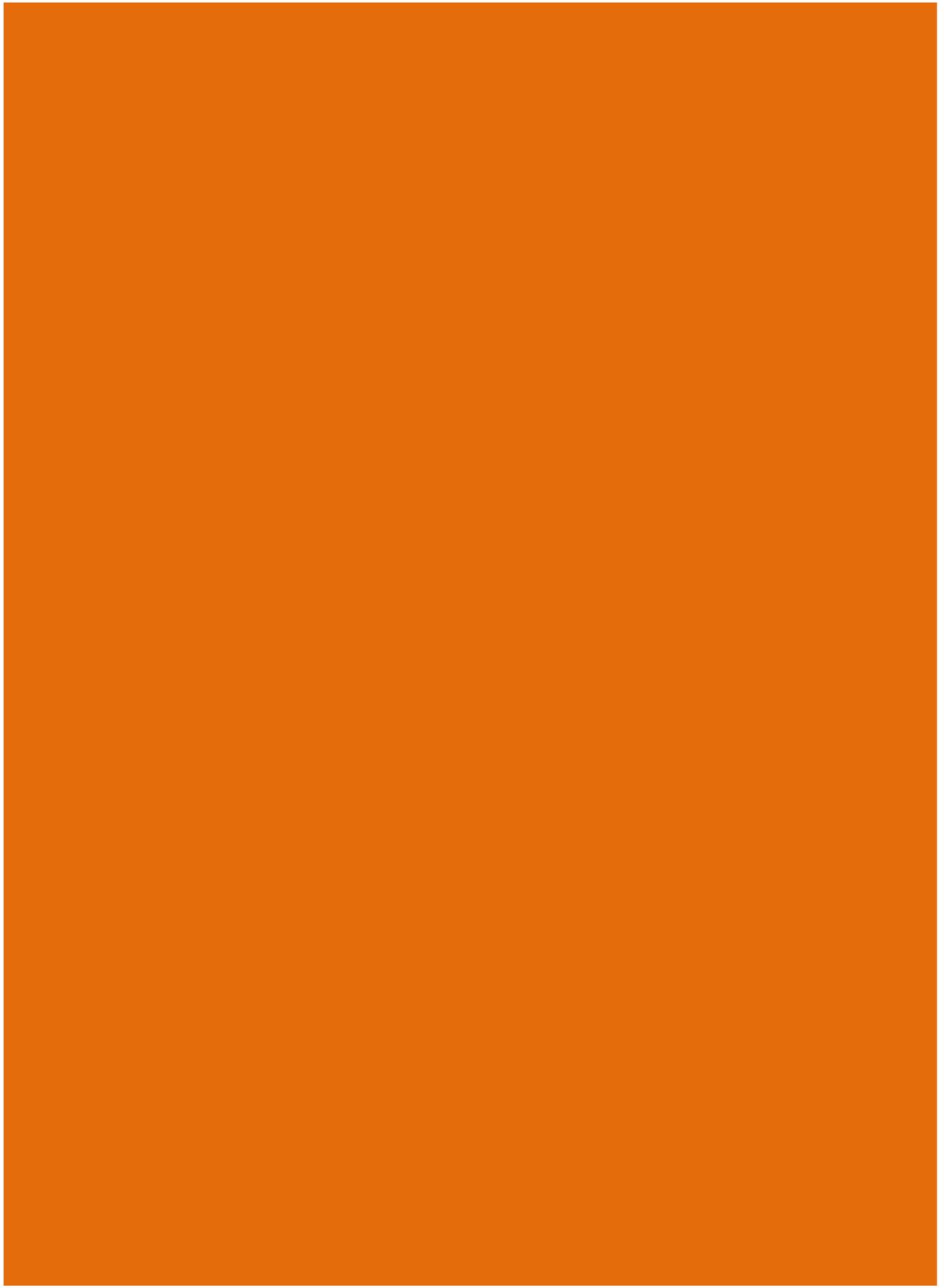
- Monitoring progress on tackling child poverty and improving social mobility, including implementation of the UK's child poverty strategy and the 2020 child poverty targets, and describing implementation of the Scottish and Welsh strategies.
- Providing published advice to ministers on matters relating to social mobility and child poverty.
- Undertaking social mobility advocacy.

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Executive summary

The UK's workforce is now more highly educated than ever before. Graduates are a large and still growing part of the population and the number of adults with no qualifications has tumbled. But while analysis and policy has tended to focus on these two groups – boosting high-level skills and improving the employment prospects of the least educated – those in between, who have historically represented the majority of the workforce and now account for around 40 per cent, have frequently been overlooked.

Despite this non-graduate group – those whose highest qualification is at least Level 2 (equivalent to five A*-C GCSEs) but not higher than Level 3 (A Levels or equivalent) – making up more than one-third of the working-age population, much less is known about which education and employment routes are offering pay progression over the long-term, which routes aren't and who the current system is failing. With the government putting an emphasis on boosting the UK's productivity and improving life chances, non-graduate education – especially apprenticeships – is set to play a central role in both challenges. A better understanding of these pathways is more important now than ever.

This report uses a combination of quantitative – analysis of the *Labour Force Survey* and the *British Household Panel Survey* – and qualitative research – focus groups of non-graduates – to explore these questions and the attitudes of non-graduates towards their education and career histories and prospects. As well as separating out those with Level 2 and 3 qualifications, a further distinction is made between those whose qualifications were primarily vocational and those who were academic.

Assessing non-graduate routes

Much research on education has focused on the return to qualifications. In line with previous evidence, our analysis finds that, typically, higher qualifications do bring higher earnings for non-graduates. In 2015 among men aged 23 and over, median hourly earnings for those with Level 3 academic qualifications was £12.90 compared to £11.05 for those with Level 2 academic qualifications. Looking at which kinds of qualifications tend to boost earnings most, non-graduates with primarily academic qualifications tend to do better than those with vocational, with a typical 'academic premium' of £1.35 per hour at Level 3 and £1.30 at Level 2. We find a similar pattern for non-graduate women, although they have lower typical earnings overall. This more academic route also appears to offer both *faster* earnings growth at a younger age and *longer* earnings growth, with the average earnings peak of non-graduates with an academic focus coming later in life than for those with primarily vocational qualifications.

Despite this, our study finds that the level and type of qualification a person has is not the sole, or even the most important determinant of non-graduate earnings. First,

how a non-graduate's education gels with the sector they work in is of vital importance. For men, vocational qualifications do reap a higher return in traditionally vocational sectors such as construction or manufacturing than in more academic sectors. Our analysis identifies working in a large firm, gaining managerial experience and taking part in employer-funded training as other hallmarks of successful routes for non-graduate men.

For non-graduate women, their educational base has less of an impact on their earnings than for men but a variety of other considerations are significant. Having children has the largest negative effect on pay for women in this group. Women with vocational qualifications tend to be concentrated in either lower-paying sectors or in industries with lower returns for vocational qualifications such as health, public administration, hospitality and distribution. A more promising route for women appears to be having a Level 3 academic qualification, working in local government and participating in work-related training opportunities. As with a degree, these factors all help to minimise, at least to some extent, the downward pressure that motherhood places on long-run earnings.

The long and the short: the ongoing impact of social background and the recession

In any analysis that considers earnings in recent years, the huge and ongoing effect of the recession must be central. The pay squeeze affected workers of all qualification levels. A wider variation was seen across age groups. Pay fell in all cohorts but because the early part of a career often sets the long-term earnings trajectory, the total downward effect has been and is likely to continue to be much greater for younger workers. For instance, in a change from a longstanding pattern of successive cohorts earning more than their predecessors, those born in 1980, when at age 35, typically earn less than those born in 1970 when they were at the same age, despite the younger cohort having earned more at age 23. Typical earners born in 1990 both entered the labour market at a lower level of pay than previous cohorts and have remained below.

While this has affected younger workers regardless of their qualifications, a recent added pressure for non-graduates has been the greater proportion of graduates working in non-graduate roles. In part, this is due to the increased number of graduates in the population, but since the downturn the share of graduates in non-graduate roles has risen significantly. Focus group participants saw a double disadvantage in this trend: not only did it become harder to find employment in the first place but routes to progression were blocked with graduates preferred to non-graduates for management positions, with having such responsibilities shift already identified in the quantitative research as one of the key factors contributing to earnings growth for non-graduates. This suggests the emergence of a new group of non-graduates: those who had yet to establish themselves in the labour market when the recession hit and now find their path upward blocked by lower frequency of job-to-job moves and graduates in non-graduate roles.

Another factor that appears to have a lasting impact is a person's background. Overall, non-graduates appear to have improved on their parents' occupations, as would be expected given there are now more higher-paying roles in the UK economy than in previous decades. But despite this trend, there remains a powerful link across generations. Having a parent that worked in a 'professional' role particularly boosted the likelihood of a person being in a 'professional' position themselves, regardless of their own education.

From our analysis, it appears that while education can play an important role in positive social mobility, other factors play an important role in that upward movement. Gaining a degree has a large effect on occupational outcomes, with graduates far more likely to work in the top-paying occupational groups regardless of their parents' occupations. This suggests that while a parent's job plays a role in determining a child's earnings, university education can be a more decisive factor, although children of parents in higher occupations are more likely to be graduates. But little evidence of such a positive effect was evident for non-graduate qualifications. There is thus a limited impact of non-graduate qualifications on upward inter-generational mobility, on top of limits to progression once in work.

The ongoing impact of background is also visible in earnings. Regardless of their qualifications, non-graduates tend to have higher typical pay if their parents worked in higher-level occupations. This 'privilege premium' for non-graduates means men from poorer backgrounds earn £80 a week less on average than similarly skilled workers with wealthier parents with that gap rising to £100 a week for women. Yet despite differences within occupations for current non-graduates, those with higher qualifications typically earn more regardless of the occupation their father worked in. A similar gap is apparent for graduates though it is greatest among those with a Level 3 academic qualification.

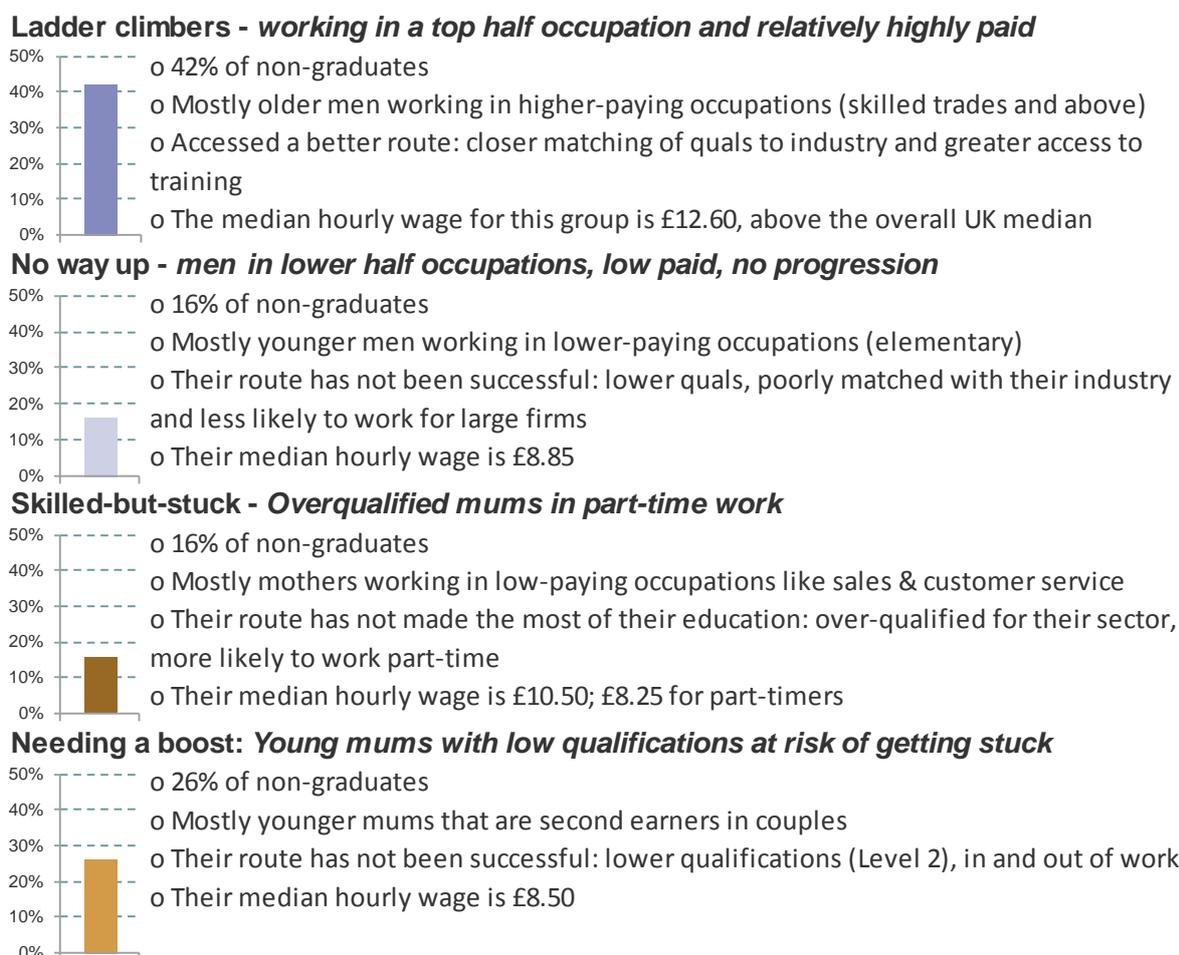
Non-graduate routes and who takes them

From the perspective of policy-makers and non-graduates, what matters is how these different factors and choices combine to affect a person's life. Taking the findings presented above to illustrate this, we present four 'typical' groups of non-graduates and the extent to which the routes they have taken have proved successful.

Some – like the 'ladder climbers' – have worked in industries where their skills are more valued and opportunities to progress have been in greater supply, resulting in higher overall pay. For others – like the 'skilled-but-stuck' – despite having generally higher qualifications, the sector they work in and their higher likelihood of working part-time means they have failed to make headway. Non-graduate mothers have limited work choices. The group with 'no way up' are less qualified and tend to work in sectors with fewer upward routes for non-graduates. The final group, those 'needing a boost', tend to be mothers. Their lower qualifications make them less well

paid but weak incentives from in-work support for second earners – a large proportion of this group – mean seeking longer hours or higher-paid work is less attractive than it could be. An important additional group are those with ‘crashed careers’: younger workers who due to the recession have missed out on the relatively rapid earnings growth most would expect in their early twenties.

Figure 1: Non-graduate typologies



Source: Resolution Foundation analysis of the Labour Force Survey 1996 to 2015 and British Household Panel Survey, 1998 to 2008

An important group not included in our discussion so far are non-graduates who are not in work. As might be expected non-graduates are less likely to be inactive than those with lower or no qualifications and more likely than graduates. Around 11 per cent of non-graduate men are inactive regardless of qualification. For women, inactivity is at around 20 per cent for those with a Level 3 qualification but higher for at around 25 per cent if they have a Level 2 qualification.

How to improve non-graduate routes

To provide today's non-graduates and those of the future with genuinely attractive career prospects, our analysis suggests there are three key tasks facing the government: encouraging the spread of pathways that work; reopening routes that

have become blocked; and creating new routes for the groups for whom the existing routes are not working.

Some routes have offered non-graduates steady earnings growth and the opportunity to rise into higher-paying occupations. Many non-graduates – characterised by those in our ‘ladder climbers’ group – have been able to develop successful careers. But given having the right qualification in the right sector is important, identifying how to spread the lessons from these industries across the economy will be vital as our work suggests that in most sectors, there are not well-developed non-graduate tracks.

For new entrants taking the non-graduate route, it is key that vocational courses offer both an appropriate skills match to better paying sectors of the labour market, while a clear career progression path is offered to continually improve skills once in work. The focus groups raised their disappointment with careers guidance, both for current employees who had already moved through the education system and for teenagers today. Given this and the importance of appropriate matches between skills and sectors, the National Careers Service’s role in helping lower earners and non-graduates to discover pathways and funding opportunities to reach higher-paying positions is just one approach that could be considered.

Ensuring that routes which worked in the past are made to function well again is another challenge, one that is key in the context of the downturn. Our research has highlighted the influx of graduates into non-graduate roles, blocking progression opportunities for non-graduates. In part this is due to the long term trend of an increasing proportion of graduates in the workforce but also due to more limited graduate job opportunities since the downturn. This is of particular concern to our ‘crashed careers’ group, young non-graduates at the start of their careers looking to make rapid earnings progression. For employers, the approach taken by some in giving lower prominence to degrees than aptitude could be one way of addressing this issue, and government can also challenge the use of degrees primarily as signalling tools for management jobs. At an overall level, it will require ensuring that graduates can find appropriate graduate positions, making the best use of their skills and the creation of complementary roles for non-graduates providing a clear route for them to progress. Ensuring that non-graduate qualifications provide a trusted signal of ability to employers is also important.

But for many non-graduates, few opportunities currently exist. In some instances, these difficulties are more systemic, with the creation of new routes badly required. Chief among these is reducing the impact that having children has on non-graduate women’s careers, of particular relevance for the ‘skilled-but-stuck’ group. The high cost of childcare compounded by the limited availability of better paid part-time positions, with mothers unable to make the most of their qualifications, act as significant barriers to finding a progression route. Though relevant to all women, it is especially vital for non-graduate women compared to (generally higher-paid)

graduates. Policies that help boost the supply of better-quality part-time roles which can provide a better balance between employment and childcare would give a greater chance for this on average over-qualified group to fulfil their earnings potential and achieve higher earnings. For others, particularly those in the 'needing a boost' group, new skills may be required. But a benefits system that incentivises them to seek more hours and higher-paid work could also pay dividends.

Headwinds

Though the above approaches offer much potential to improve the prospects of non-graduates, a number of labour market trends and policies are set to act as headwinds to achieving this goal of spreading, reopening and creating successful routes. The National Living Wage and Universal Credit are chief among them.

The National Living Wage is a welcome policy that will boost the wages of the lowest-earning non-graduates over the rest of this parliament. But because of the size of the increases, employers are unlikely to maintain all of the gap between the wages of the lowest earners and those on the next rung up. This compressing effect is set to reduce the incentives to progress, and some employers may continue a trend seen over recent decades of removing grades which acted as a rung on the pay ladder. This could mean that routes offering genuine pay progression, particularly in low-paying sectors, are harder to maintain for employers. Yet this also opens up the opportunity for employers to reassess routes to higher levels of pay. Encouraging progression should be a key part of the government's implementation strategy for the National Living Wage.

Universal Credit will have a vital part to play in future because the 'in-work support' it is expected to offer is likely to touch the longer-term low paid as well as mothers in lower-paid part-time work. The introduction of a 'work allowance' – an amount that can be earned before a person's Universal Credit entitlement begins to be tapered away – will improve the financial return from working a small number of hours. This should prove to be of particular help for single parents or people with disabilities who may struggle to meet the 16-hour requirement in the current tax credit system.

However, the significant cuts to work allowances announced at the 2015 Summer Budget risk trapping these people once they are in work at a low level of earnings with little incentive to progress. And for second earners, there is little incentive to work at all. These are key barriers for our 'needing a boost' group. As it is currently designed, the introduction of in-work conditionality in UC aims to a most move people into low-paid *full-time* roles, rather than placing the focus on helping recipients find better-paid work. Looking again at financial incentives for second earners and the support on offer to help this often low-skilled group to improve their skills and find a path to higher earnings could be vital in developing new routes for these non-graduates who currently have few attractive pathways open to them.

Opportunities

The issue of non-graduate routes is one where important policy shifts are already in motion, and with opportunities for real improvement available. Although the implementation of the policy will be critical, the apprenticeship levy could be a positive development for those pursuing a non-graduate route, with the expansion potentially incentivising employers to make the most of the training they offer. The focus of apprenticeships on youth, those entering work and those already in work will be important given the lower rate of job-to-job moves since the downturn, an indicator that is particularly important for younger workers and their progress into higher-paying roles.

But ensuring the quality of these apprenticeships – especially in light of the government's 3 million target and the doubts expressed in our focus groups about the value of many apprenticeships today – will be vital to making sure non-university routes are seen as a genuine alternative. A huge effort will be required to make the policy a success. Failing to do so risks inflicting permanent damage on the apprenticeship brand.

However, the apprenticeship levy will not solve the wider issues in the vocational sector. The government must also turn to the development of better educational options for non-academic pathways to truly see a shift in low achievement and social mobility of non-graduates. Both challenges and opportunities lie ahead but policymakers must ensure that non-graduates – both those already in the labour market and the next generation – are offered routes that provide the promise of earnings progression. At this crucial juncture, making the right decisions now could elevate the value of non-graduate education and routes for years to come. A failure to act risks leaving those without university degrees behind.

Background and methodology

Context

In a speech given in January 2016, the Prime Minister stated that his government had a “mission to create an education system that is genuinely fit for the 21st century.”¹ A prerequisite to ensuring this mission can be a success is an understanding of which combinations of non-graduate education and career choices are currently working and for whom. In some areas, the evidence base is strong. Reams of research has been dedicated to analysing the ‘graduate premium’: the earnings advantage that graduates are observed to hold over those without degrees. At the other end of the education spectrum, the importance of achieving basic skills to ensure people, particularly younger people, can find sustainable employment has also been the subject of much policy attention.

But for the group in between – those with some qualifications but without a university education – the qualification and career combinations that offer the best chance of progression out of low pay and positive long-term outcomes in the labour market and beyond are less clear. The need for clear information on those routes that work and the development of new routes that do work where there are none for this non-graduate group is more vital now than ever. As well as the government’s focus on life chances, improving non-graduate education and the paths open to those who undertake it is central to another major challenge facing government: poor productivity growth. A “failure to equip people with adequate intermediate skills” has been identified as one of the reasons the UK’s productivity lags that of many other advanced economies.²

While the share of graduates in the population has risen quickly over recent decades and the proportion of people with no qualifications has plummeted, the group in between has consistently comprised roughly two-fifths of UK adults. What that relatively static headline figure conceals however is a change in the kinds of people who are non-graduates and the types of qualifications they hold. The expansion of higher education and the broader upskilling of the British workforce in tandem with major shifts in the make-up of the UK’s industrial structure all mean that the options facing young non-graduates today are radically different from those facing people with intermediate qualifications in previous decades.

Accurately capturing how that landscape has shifted and what that means for the outlook for ‘prime age’ non-graduates – those who are in work and will be in the labour market for years to come – as well as for young people currently in the education system or about to enter work is crucial. The government’s focus on providing 3 million new apprenticeships and the apprenticeship levy only serves to make the issue more urgent. Building this evidence should allow policymakers to assess which non-graduate routes are and aren’t working, and for whom. Armed with this information, the government will be best-placed to ensure that the

¹ <https://www.gov.uk/government/speeches/prime-ministers-speech-on-life-chances>

² Van Reenen, J. “Profiting from productivity: ensuring investment and productivity growth feed through to wages” in eds. G. Kelly and C. D’Arcy, *Securing A Pay Rise: The Path Back to Shared Wage Growth*, 2015.

non-graduates of today and tomorrow can make the right decisions, and that policymakers can assess which groups need more support and the best way to provide that assistance.

In order to contribute to the development of this evidence base, the analysis presented in this report has three aims:

- To identify education and career routes that appear to be proving successful for non-graduates, and those that are not.
- To understand how influential the different parts of those routes – particularly qualification type and level, sex, the sector you work in and social background – are on your outcomes.
- To explore how these patterns have changed over time, taking account of the different challenges facing younger and older cohorts, with a specific focus on the ongoing impact of the 2008 recession.

To answer these questions, a mixed methods approach is utilised, drawing upon both quantitative and qualitative research. The quantitative element – explained below and in more depth in the annex at the end of this report – focuses on the earnings of non-graduates and the determinants of strong or weak earnings progression. The qualitative element explores the factors affecting the decisions made by non-graduates and their views both on how the structure of the labour market and the value of non-graduate education has changed over time.

Methodology

Given non-graduates are such a large part of the UK's population, there is obviously a huge variety of ways in which the group could be subdivided. This digging down into groups of non-graduates allows us to better comment on which routes are working and for whom. Which groups we investigate is to a large extent determined by the data available however.

The quantitative element of this report relies upon two datasets: the *Labour Force Survey* and the *British Household Panel Survey*. In order to have groups within the total non-graduate population that can be consistently identified in each dataset and are large enough to enable statistical analysis, the approach taken in this report first breaks the total adult population into three high-level categories, defined by their highest qualification level achieved as reported in the most recent data:³

- *Graduates* – those with Level 4 qualifications or higher, that is, those with some higher education and beyond. This ranges from those with, for example, non-honours degrees like Higher National Diplomas up to those with PhDs.

³ For a full definition of qualifications included in these groups see Annex A. In analysis of the *Labour Force Survey*, we restrict the population to those aged 23 to 64 to consider those who will have left education and begun to establish themselves in the labour market.

- *Non-graduates* – those for whom their highest qualification ranges from Level 2 (five A*-Cs at GCSE or equivalent) to Level 3 (A Levels). We discuss this group in greater detail below.
- *Low qualifications* – those for whom their highest qualification is below five A*-Cs at GCSE level or an equivalent Level 2 qualification.

The non-graduate group are subdivided into those whose highest qualification is at Level 2 (49 per cent) or Level 3 (the remaining 51 per cent). The majority of those in the Level 2 group (70 per cent) have at least five A*-C GCSEs, with the remainder obtaining vocational Level 2 qualifications without reaching the GCSE threshold. Similarly, the Level 3 group are a mix of those who have at least some A Levels (35 per cent) and those with Level 3 qualifications without A Levels.

Rather than repeat previous research which has explored the return to much more specific qualifications,⁴ and because of our focus on career trajectories and the importance of other factors, we follow an approach taken by Brunello and Rocco.⁵ We differentiate between non-graduates for whom academic qualifications are their highest qualification and those with vocational qualifications as their highest qualification achieved. Vocational qualifications refer to work-related qualifications designed to enable the learner to acquire the knowledge and skills that are needed to be able to perform a particular job. Vocational education can take place at the secondary, post-secondary, further education and higher education level; and can interact with the apprenticeship system. We include completed apprenticeships within the relevant Level 2 or 3 vocational qualification grouping, the distinction with apprenticeships being that the learner must be working to take part in the scheme. Some in work may gain vocational qualifications but not be on an apprenticeship.

This approach provides a hierarchy of different qualification levels:⁶

- Level 4 ('graduates')
 - Level 3 academic and Level 3 vocational
 - Level 2 academic and Level 2 vocational
 - Below Level 2 ('low qualifications')
- } ('non-graduates')

The qualitative research for this report builds upon these groupings though does not differentiate between those for whom academic or vocational qualifications were dominant.

⁴ See for example Greenwood, C, Jenkins, A and Vignoles, A. *The Returns to Qualifications in England: Updating the Evidence Base on Level 2 and Level 3 Vocational Qualifications*, 2007.

⁵ Brunello, G. and Rocco, L. *The Labour Market Effects of Academic and Vocational Education over the Life Cycle: Evidence from Two British Cohorts*, 2015.

⁶ Our construction of qualification levels will inevitably mean that some of those with academic qualifications at a particular level may also have vocational qualifications at that level. However, we consider the achievement of the academic qualification to be likely to signal greater ability than those with a vocational qualification but no academic qualification at the same level.

Two focus groups were conducted in different parts of England in December 2015. The participants were a representative mix of ages, gender and ethnicity. All were in employment with a selection of full-time and part-time workers in each group, along with self-employed people.

The rest of this report is structured as follows:

In the second section of this report we review the key literature relating to non-graduates, their education and their labour market outcomes.

The third section provides descriptive analysis of the non-graduate group, their outcomes in the labour market and the importance of social background, using the *Labour Force Survey*.

The fourth section explores the impact of the recent downturn on non-graduate earnings and the effect of an ever increasing number of graduates on non-graduate outcomes.

The fifth section explores the extent to which wider factors affect earnings outcomes over the lifecycle, using the *British Household Panel Survey*. It then brings together the findings together from throughout the report to produce a number of typologies reflecting the key pathways and challenges for the non-graduate population.

The sixth section provides detailed findings from the qualitative research conducted which explored the views of the non-graduate population.

The final section summarises our findings, sets them within the wider policy debate and suggests avenues which employers and policy-makers should consider.

Literature review

The routes taken by non-graduates have been neglected to some extent in policymaking and analysis. While a large body of research has documented the returns to specific qualifications, this has usually centred on further education and the added value it offers on top of GCSEs or A Levels, rather than considering them alongside 'additional' qualifications. The match between specific skills and sectors, along with the interplay between sex, social background and other factors, are other important pieces of the puzzle, with some previous research touching on these areas outlined below.

A number of studies have explored the impact on earnings of further education, beyond GCSE and A Levels. A study by McIntosh concludes that "a wide range of qualifications, in particular vocational qualifications at levels 2 and 3... yield no benefit to individuals who achieved five or more good GCSEs or A levels at school."⁷ This question of what the best baseline for assessing the returns to such qualifications – should it be relative to school-based qualifications or to those with no qualifications at all? – recurs frequently in the literature. One review of the literature on returns to vocational education concludes that there is a significant wage return to most vocational qualifications, relative to not having any qualifications.⁸ These findings suggest that the non-graduate group do on average earn more than those with low qualifications but that within the non-graduate group, the picture is less conclusive.

Similarly, Brunello and Rocco⁹ do not find a significant disadvantage to men with primarily vocational education versus those with the same level academic qualification.

In part, because of the changing nature both of the labour market and the composition of the workforce over time, identifying returns to qualifications are something of a moving target for researchers. If a particular qualification becomes less in-demand from employers or more generally as the workforce becomes more highly qualified, with the positional advantage of lower-level qualifications thereby diminished, the returns to the same qualification may fall over time. Despite this, a study by McIntosh found that the returns to almost all qualifications were flat between 1996 to 2002¹⁰ with a subsequent study updating that analysis for 2004 to 2010 producing broadly similar results.¹¹ This suggests that the demand for qualified workers rose in line with the growing supply of those workers.

But McIntosh does find differing results when splitting groups into cohorts rather than taking the aggregate view. Graduates in younger cohorts receive higher returns than older graduate cohorts and those for whom GCSEs are their highest qualification were found to have lower

⁷ McIntosh, S. "Further Analysis of the Returns to Academic and Vocational Qualifications", *Oxford Bulletin of Economics and Statistics*, 68, 2, 2006.

⁸ Lynch, S., Sims, D. and Wespieser, K. *A Literature Review of the Value of Vocational Qualifications*, 2015.

⁹ Brunello and Rocco, 2015.

¹⁰ McIntosh, S., 2006.

¹¹ Blanden, J. and Macmillan, L. "Education and Intergenerational Mobility: Help or Hindrance?", 2014.

returns than older cohorts. This may reflect a change in the labour market and in the demand for highly-skilled workers.

As well as the issue of *levels* of earnings, the trajectory of earnings is also vital in understanding how non-grads are faring. McIntosh finds that the earnings of graduates rise consistently throughout their twenties before “reaching a plateau” when they reach their mid-thirties or early forties.¹² This rise-and-plateau pattern visible for graduates is much less pronounced for those with vocational qualifications, with earnings remaining “fairly constant” throughout the working life.

This overall picture becomes more complicated however when other characteristics and their impact on non-graduate routes are included. Some research into the returns to education focuses exclusively on men.¹³ This is intended to minimise the larger impact that having children has on women’s careers and earnings trajectories than men’s, and thereby diluting the positive effect of education. Separating out women from men in such analyses is a sensible approach. Failing to analyse women’s earnings and careers at all however misses out half of the non-graduate group. This is all the more important given that research has generally shown that returns to education tend to be higher for women than men, from broader lifelong learning¹⁴ to Level 2 qualifications¹⁵ to university degrees¹⁶. Past analysis has also highlighted that having children can halve a woman’s earnings over a lifetime but that effect is on average much smaller for those with higher qualifications.¹⁷

Women’s working patterns have also changed, with female employment rates rising steadily since the mid-1990s. The interaction between sex and industry worked in is also critical: if women are more likely to work in low-paying industries, whatever their qualification level, then comparing the impact of education on their earnings is less straightforward. Research has suggested that for more recent cohorts, women and men’s working life trajectories and career progression have converged to some extent, though much variation remains across and within the sexes, as well as timing issues with cohorts’ earnings affected by the recessions.¹⁸

Apprenticeships are a major part of the government’s skills strategy. With a target of 3 million new apprenticeships by 2020, the requirement on public sector bodies to employ apprentices and the apprenticeship levy, which is expected to raise £2.5 billion to be spent on apprenticeships in England, understanding their value is more important than ever. Recent

¹² McIntosh, 2006.

¹³ See for example Dearden, L. “The effects of families and ability on men's education and earnings in Britain”, *Labour Economics*, vol. 6(4), pp.551-567, 1999 or Brunello, G. and Rocco, L. “The Labour Market Effects of Academic and Vocational Education over the Life Cycle: Evidence from Two British Cohorts”, IZA, 2015.

¹⁴ Blanden, J., Buscha, F., Sturgis, P. and Urwin, P. “Measuring the Earnings Returns to Lifelong Learning in the UK”, 2012.

¹⁵ De-Coulon, A. and Vignoles, A. *An analysis of the benefit of NVQ2 qualifications acquired at age 26-34*, *Centre for the Economics of Education Discussion Paper 106*, 2008.

¹⁶ Walker, I and Zhu, Y, “The impact of university degrees on the lifecycle of earnings: some further analysis,” BIS, 2013.

¹⁷ Joshi, H. *Production, reproduction and education: women, children and work in a British perspective*, 2002.

¹⁸ Bukodi, E, Dex, S and Joshi, H, “Changing career trajectories of women and men across time” in *Gendered lives: gender inequalities in production and reproduction*, 2012.

reports into their quality by Ofsted however underlined concerns that many apprenticeships offer weak training and prospects for apprentices.¹⁹ In its submission to the Apprenticeships Inquiry by the subcommittee on Education, Skills and the Economy, the Social Mobility and Child Poverty Commission drew specific attention to failings in the current outlook for apprentices.²⁰ It reports that most apprenticeship starts by young people do not represent an increase in qualification levels from their last level of study. Again, the importance of the sector worked is also central, with the most popular frameworks for apprentices under 19 often being Business Administration, Construction Skills, Hairdressing and Children's Care, all of which typically are lower paid than other apprenticeships.

While research into the actual impact of the differing qualifications of non-graduates is essential to understanding how successful a route they provide, nearly as important is the extent to which young people and their parents value them. A survey conducted by the Edge Foundation found that parents were more supportive of their children taking academic routes, with schools advising some pupils that they were "too clever" for vocational education or would be less successful on that path.²¹ ²²

The literature clearly finds a broad range of outcomes for different parts of the non-graduate population with a variety of factors including gender, specific qualifications held, age and cohort all influencing whether people find a successful career path. While certain qualifications have been found to provide a significant return over others, such a return alone may not be enough to move people out of low pay and onto higher levels of earnings. In the next section of this report, we explore the characteristics and labour market outcomes of the non-graduate population.

¹⁹ Ofsted, *Apprenticeships: Developing Skills for Future Prosperity: How Well Do Apprenticeships Meet the Needs of Young People, Their Employers and the Economy?*, 2015.

²⁰ Social Mobility and Child Poverty Commission, *Apprenticeships, young people, and social mobility: The Social Mobility and Child Poverty Commission's submission to the Apprenticeships Inquiry by the subcommittee on Education, Skills and the Economy*, 2016.

²¹ Edge Foundation, *Children Labelled 'Too Clever' for Vocational Education*, 2014.

²² D'Arcy, C and Hurrell, A. *Escape Plan: Understanding who progresses from low pay and who gets stuck*, Social Mobility and Child Poverty Commission/Resolution Foundation, 2014.

Non-graduates in the labour market

Who are non-graduates?

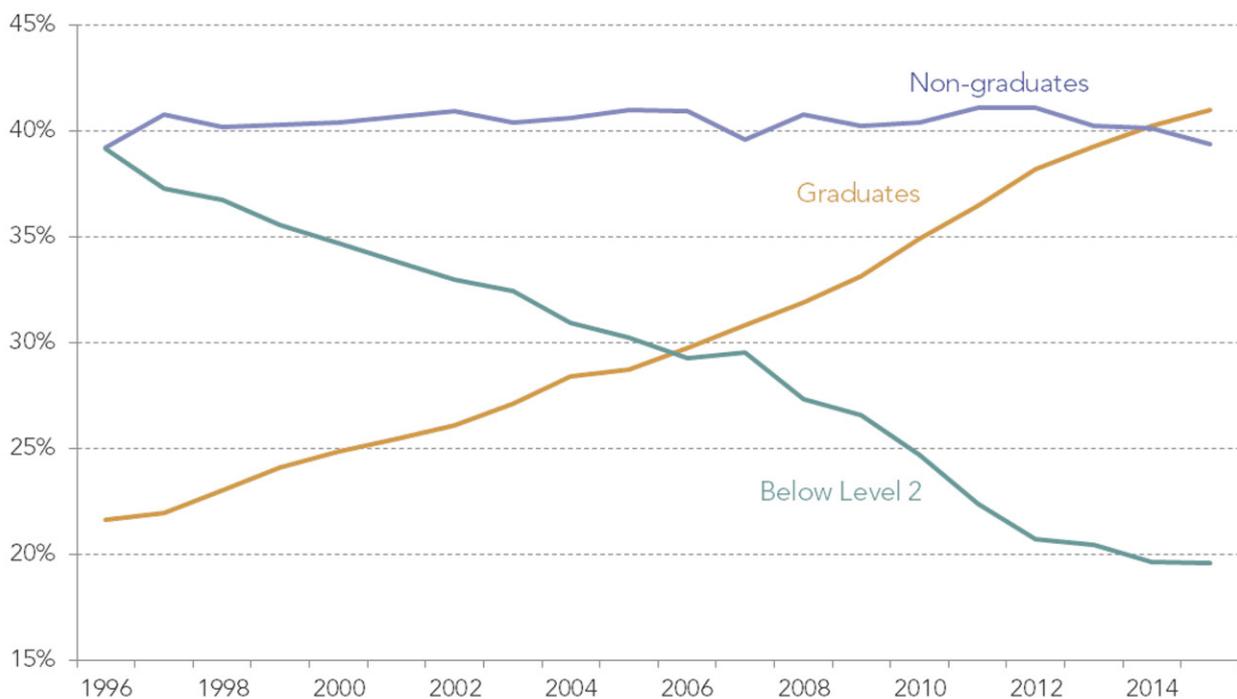
Before delving into the routes taken by non-graduates and what outcomes they produce, we first describe the non-graduate group, looking at how their numbers have changed over time and how the qualifications mix within non-graduates has shifted, as well as discussing their characteristics.

Over the last two decades, the number of graduates has increased rapidly. As Figure 2 illustrates drawing on data from the *Labour Force Survey*, between 1996 and 2015, the proportion of the adult workforce graduates comprise nearly doubled, rising from 22 per cent to 41 per cent. In the same time period, the share of the workforce with qualifications below Level 2 almost halved, from 39 per cent to 20 per cent. Figure 2 however also shows that non-graduates make up roughly the same percentage of the workforce today as they did in 1996. What has changed of late is that graduates now – under this tripartite split – constitute a similar proportion of the workforce as non-graduates, around two-fifths share each. The fall in the share of adults without Level 2 qualifications has eased off in recent years. While this could be a temporary slowdown in longer-term shifts, there is no guarantee that the patterns visible in Figure 2 will continue.

Figure 2: Changing qualifications mix but non-graduate share stays steady

Graduate and non-graduate population, 1996 to 2015

Percentage of all adults aged 24 to 64

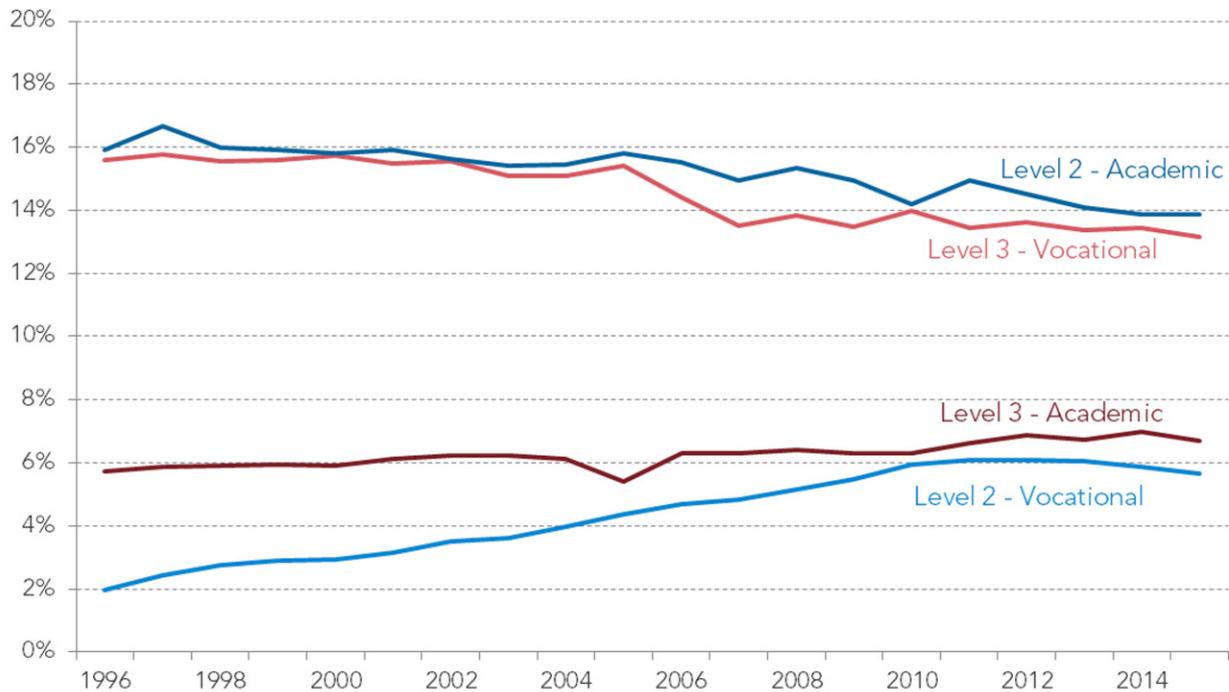


Source: Labour Force Survey quarterly datasets, 1996 to 2015, Q2

Although the percentage of non-graduates within the population as a whole has remained roughly stable, there has been more movement *within* the non-graduate group. Figure 3 shows how the composition of non-graduates has shifted over the past 20 years. The Level 2 vocational group has grown significantly over this period increasing from around 2 per cent of the total population in 1996 to 6 per cent in 2015. At the same time there has been a slight downward movement in the population with Level 3 vocational and Level 2 academic qualifications, with a gradual rise in those with a Level 3 academic qualification. Importantly, women have become increasingly represented among those with a vocational qualification growing from 20 to 40 per cent of the Level 3 group and from 53 to 59 per cent of those at Level 2.

Figure 3: Shifts in non-graduate qualifications

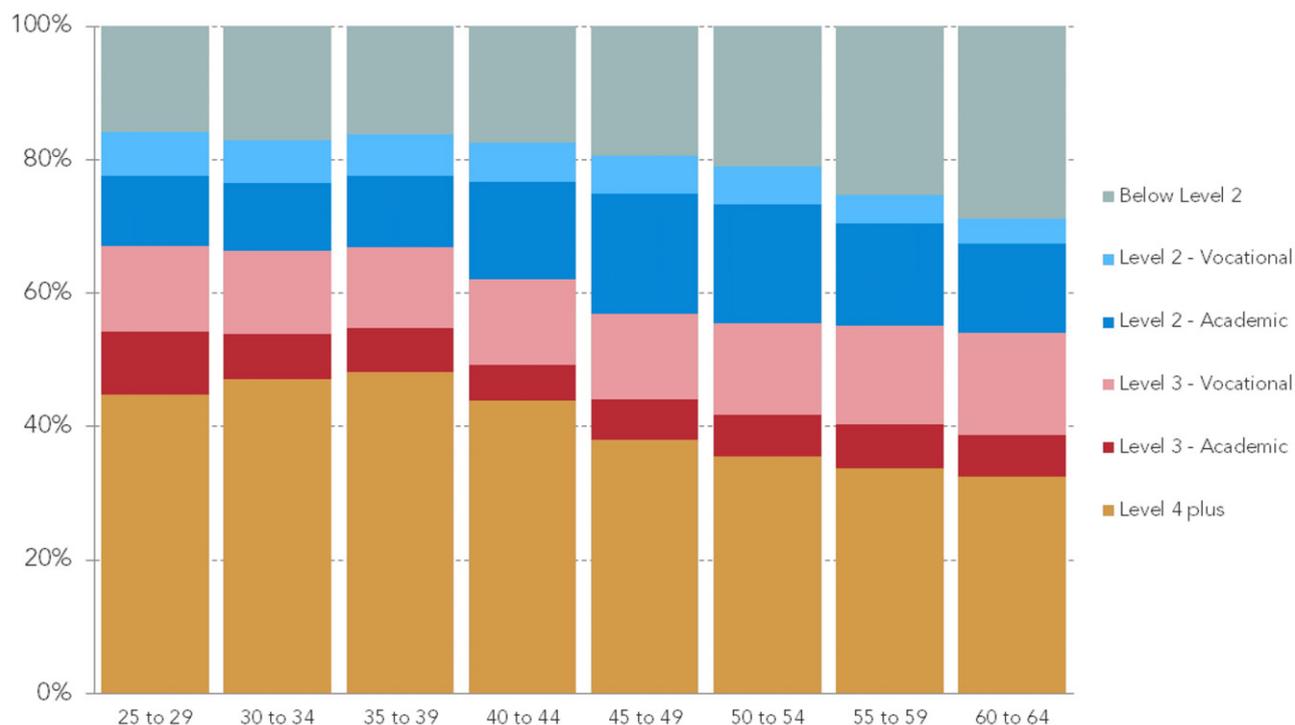
Percentage of all adults aged 24 to 64 by highest qualification



Source: Labour Force Survey quarterly datasets, 1996 to 2015, Q2

Clearly, these changes reflect developments in the labour market and society and demand for different skills alongside government policies on education and training. Figure 4 confirms that this change has affected successive cohorts rather than all non-graduates. A view of cohorts confirms that younger workers are more likely to be graduates than older age groups, with older workers more likely to have lower level qualifications. The slightly higher proportion of the population with a Level 4 qualification and above up to age 40 reflects further improvements in qualification level to both higher and degree levels in adult life.

Figure 4: Age by highest qualification grouping



Box 1: Who are Apprentices?

Given their centrality to current debates around non-graduate education and the role employers should play in helping their staff develop, understanding more about who is choosing to take the apprentice route today is useful background information. In the 2014-15 academic year there were 499,900 Apprenticeship starts in England – with similar levels in previous years – and 251,100 starts in the first two quarters of 2015-16.

Figures for 2014-15 show that the majority of people starting apprenticeships are aged 24 and under but a significant portion (43 per cent) are aged 25 and over.* New apprentices are evenly split by gender, though men were in the majority in 2014-15, comprising 53 per cent of new starts.

Looking at which sectors these apprenticeships are beginning in, the majority were in service industries:

- Nearly three-in-four (73 per cent) apprenticeship starts were in three sectors: Business, Administration & Law; Health, Public Services & Care; and Retail & Commercial Enterprise.
- The most popular of these (29 per cent of all apprenticeship starts) was Business, Administration and Law, with Health, Public Services & Care (26 per cent) the second most popular.

Source: Labour Force Survey quarterly datasets, 1996 to 2015, Q2

In terms of the level, most (60 per cent) were intermediate apprenticeships (Level 2), with advanced (Level 3; 36 per cent) and higher (Level 4; 4 per cent) representing a smaller proportion of starts.

The *Labour Force Survey* asks respondents whether they have started and completed an apprenticeship as well as the type and level. Our analysis shows that in July to September 2015, 3.3 million people reported they had completed an Apprenticeship, of which nearly three-quarters (73 per cent) reported this had been completed before 2000 and had achieved Level 3 as their highest qualification. The bulk of these are identified as 'trade apprentices'. Of the 750,000 who had completed a modern apprenticeship, only 100,000 reported a highest qualification of Level 2, despite 350,000 having completed a Level 2 or intermediate Apprenticeship. Suggesting that these individuals will have gone onto complete a higher level qualification. However, the total population suggests some under-reporting of apprenticeship starts and completions, given administrative data, which may indicate that people undertaking apprenticeship schemes are not aware of, don't recall or do not consider their status in that way. Throughout our analysis apprentices are classed within the broader grouping within which their highest qualification lay.

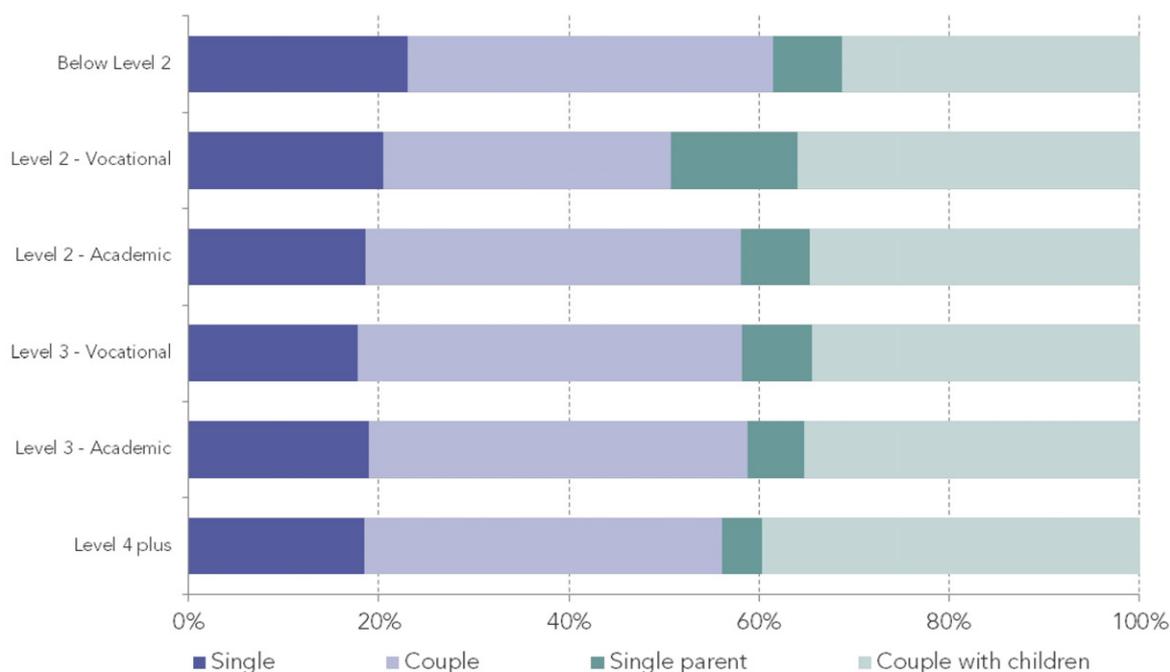
* By J. Delebarre, "Apprenticeship Statistics: England (1996-2015)" *House of Commons Briefing Paper*, 2015

Family types

While the following chapters will focus on the earnings prospects of non-graduates, outcomes do of course vary by a number of other characteristics we can consider when analysing this group. Figure 5 shows that, overall, there is relatively little variation in terms of the household type individuals of different qualification levels are likely to be found in. Where there are differences, in part these are explained by the age of those within the group – although those with a Level 2 vocational qualification are more likely to be single. Similarly, our analysis has shown that there is little variation by housing tenure with the differences between groups explained primarily by age – younger groups are more likely to be private renters – than any strong correlation between their educational background and their tenure.

Figure 5: Household type by qualification, ages 24 to 64

Proportion of individuals



Employment and earnings: a snapshot of non-graduates in the labour market

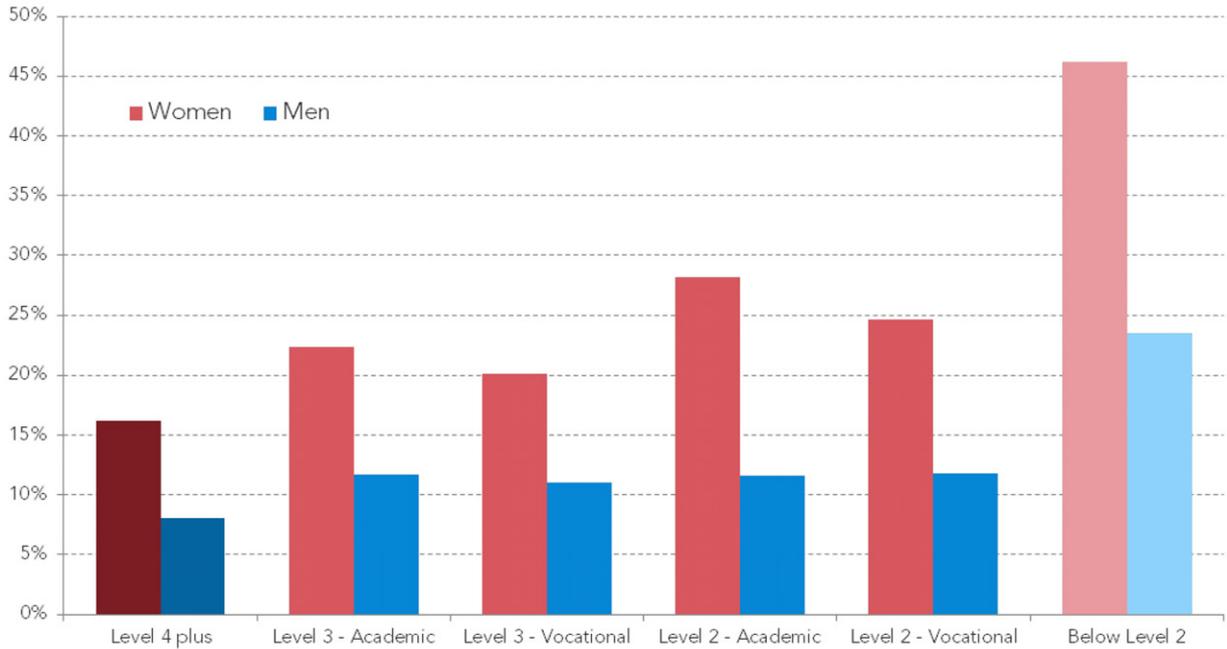
Having established that non-graduates comprise a large, relatively stable but nonetheless diverse part of the workforce, we next examine the routes taken by non-graduates. In this section, we explore the employment and earnings of different groups before looking in more detail at the influence of other considerations like sector and gender.

Varying employment rates across non-graduates

While we for the most part use earnings as a proxy for judging whether or not non-graduates are thriving in the labour market, an important pre-cursor to that debate is establishing how likely they are to be in work. As Figure 6 shows, there are discernible differences in inactivity rates between the sexes within the non-graduate population, with women far more likely to be inactive. A similar proportion of men are inactive regardless of their qualification level. Among women, inactivity rates are higher the lower the qualification level. Inactivity rates stand at around 20 per cent for Level 3 qualified women and 25 per cent for Level 2 qualified women. The between-gender pattern is similar for graduates – although they have overall lower inactivity rates. For those without Level 2 qualifications, inactivity rates are much higher for women but similar to Level 2 for men.

Figure 6: Economic activity status by highest qualification level and gender

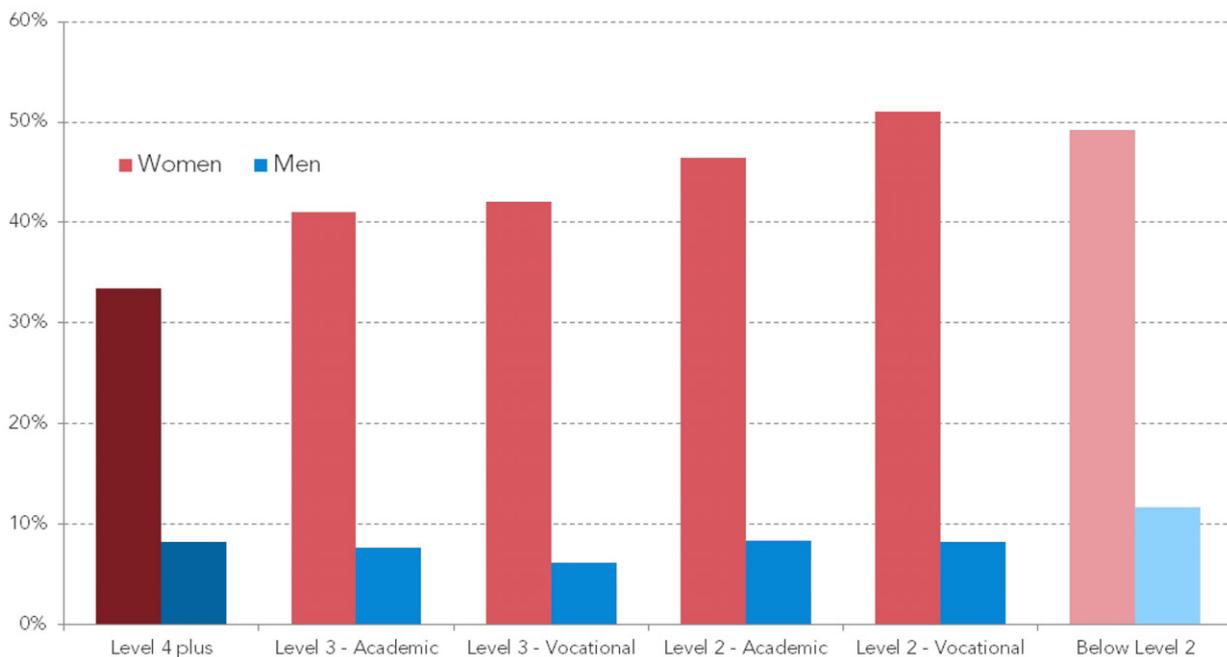
Inactivity rate



For those in work, it is important to consider working patterns. Taking a similar breakdown by gender and qualification (Figure 7) shows that, among those in work, women are more likely to report being in part-time work, a pattern that intensifies the lower the qualification. For example, over half of women with a Level 2 vocational qualification work part-time compared to 42 per cent among those with a Level 3 academic qualification.

Figure 7: Working patterns by highest qualification level and gender

Proportion in part-time work



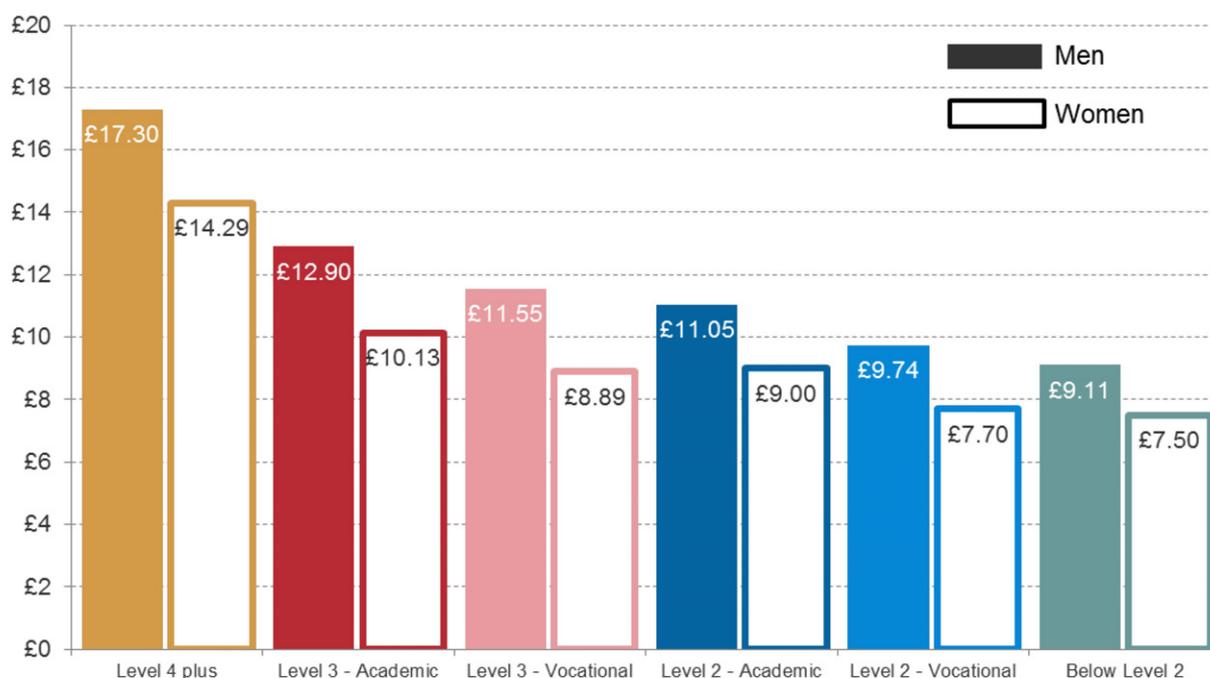
Variation by pay

Turning next to pay, Figure 8 provides a simple comparison of median hourly pay by different qualification type. Our analysis supports the well-established research on the existence of the ‘graduate premium’ – that typical graduates earn more than those without degrees. There is a slightly greater difference between the typical hourly pay of male graduates and those with Level 3 academic qualifications (34 per cent higher) than there is between those with Level 3 academic qualifications and men without Level 2 qualifications (32 per cent lower).

That said, Figure 8 also reveals great pay disparity within the non-graduate group and across genders. In general, non-graduates with academic qualifications earn more than those with vocational qualifications.²³ Median gross hourly pay for men with Level 3 academic qualifications (£12.90) was significantly higher than for those with Level 3 vocational qualifications (£11.55) with a similar proportional gap visible at Level 2. This gap is present despite the increase previously noted in the number of those with vocational qualifications. The pattern is broadly maintained across genders but hourly pay for women is lower across the board with less difference between those with Level 2 qualifications and Level 3 vocational qualifications. 62 per cent of non-graduate women earn below the overall median wage, compared to only 38 per cent of men.

Figure 8: Median hourly pay by gender and highest qualification level, 2015

Median gross hourly pay by highest qualification level



Source: Labour Force Survey quarterly datasets, four quarters to Q3 2015

²³ Here we compare the raw earnings differential without control for wider factors.

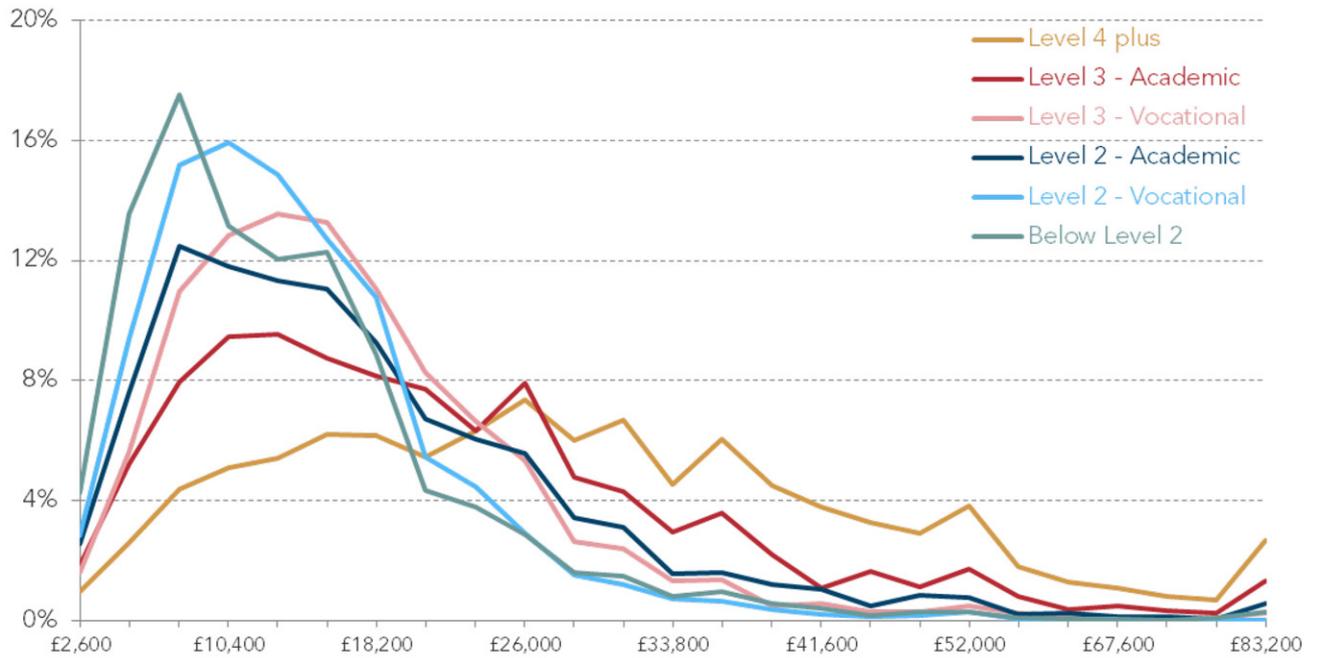
Earnings patterns differ significantly between men and women

While these differences in median hourly pay are important, we can dig deeper by considering how the distribution of gross weekly pay varies by gender and qualification. Given the findings above and previous research highlighting the impact of motherhood on career paths,²⁴ we might expect to see considerable differences in earnings patterns across gender.

Figures 9 and 10 show this to be the case (although disparities become most noticeable among women aged 35 and over). Figure 9 displays the distribution of earnings among women aged 35 to 50 by their highest qualification level, showing the percentage within each group paid at a specific level, with the lowest earners on the left-hand side of the chart and the highest earners to the right-hand side. Something of an 'earnings limit' appears among non-graduates and those without Level 2 qualifications with a spike between £5,000 and £8,000. This would suggest that a large share of women in this age bracket with these qualifications are working part time. Although the spike is slightly further up the distribution and less tall (i.e. fewer people) for those with Level 3 qualifications, it nonetheless displays a consistent pattern across non-graduates. The remainder tend to earn between £10,000 and £20,000 with a noticeable skew towards lower earnings levels. For graduate women, the distribution is much more evenly spread. In part, this is likely to reflect the ability of graduate women to command a higher wage when working part time and when returning to work after caring for children.

Figure 9: Earnings distribution by highest qualification level, women ages 35 to 50, 2013-15
Proportion of earners by gross annual earnings

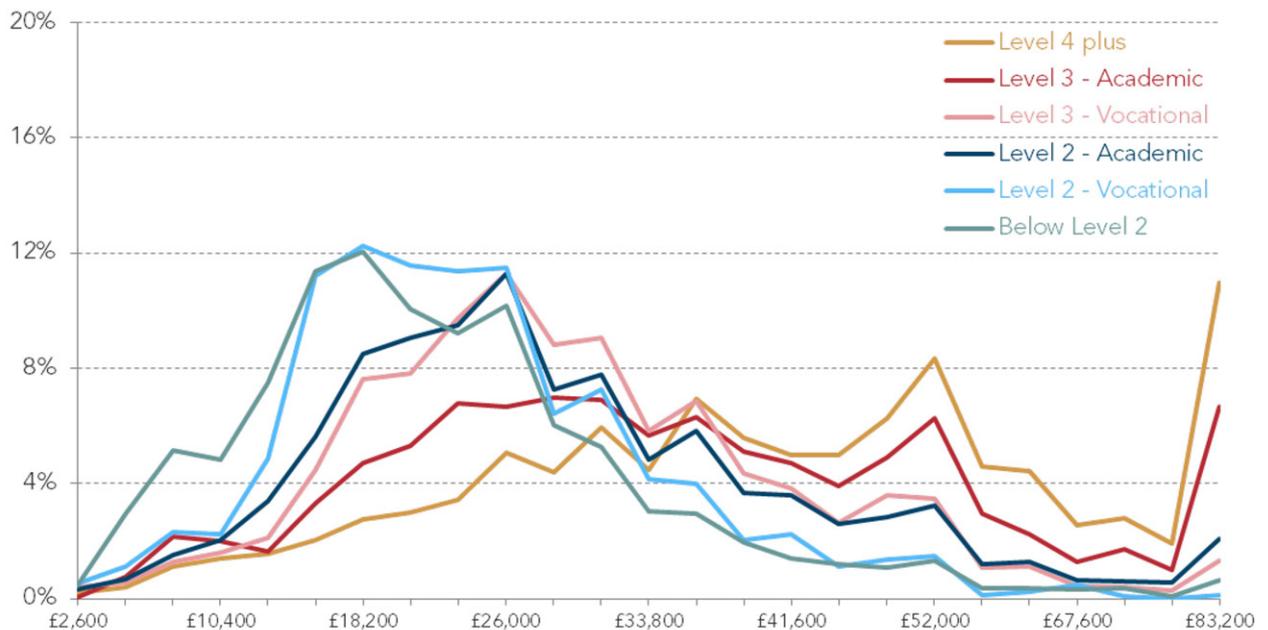
²⁴ See for example B. McIntosh, R. McQuaid, A. Munro and P. Dabir-Alai, "Motherhood and its impact on career progression", *Gender in Management: An International Journal*, Vol. 27 Iss: 5, 2012.



Source: *Labour Force Survey*, Q4 2014 to Q3 2015

Turning next to men, the difference in the shape of the earnings distribution is instantly visible (Figure 10). The 'earnings limit' spikes seen in Figure 9 for women are both further up the pay scale but also less tall, suggesting there is both a higher ceiling for men and it is relevant for fewer of them. Pay is largely focused between earnings of £18,000 and £40,000 a year with far less skewing compared to women. The demarcation by non-graduate qualification also appears less pronounced, though those with Level 2 and below qualifications clearly have lower earnings, with graduates and those with a Level 3 academic qualification performing more strongly on this measure.

Figure 10: Earnings distribution by highest qualification level, men ages 35 to 50, 2013-15
 Proportion of earners by gross annual earnings



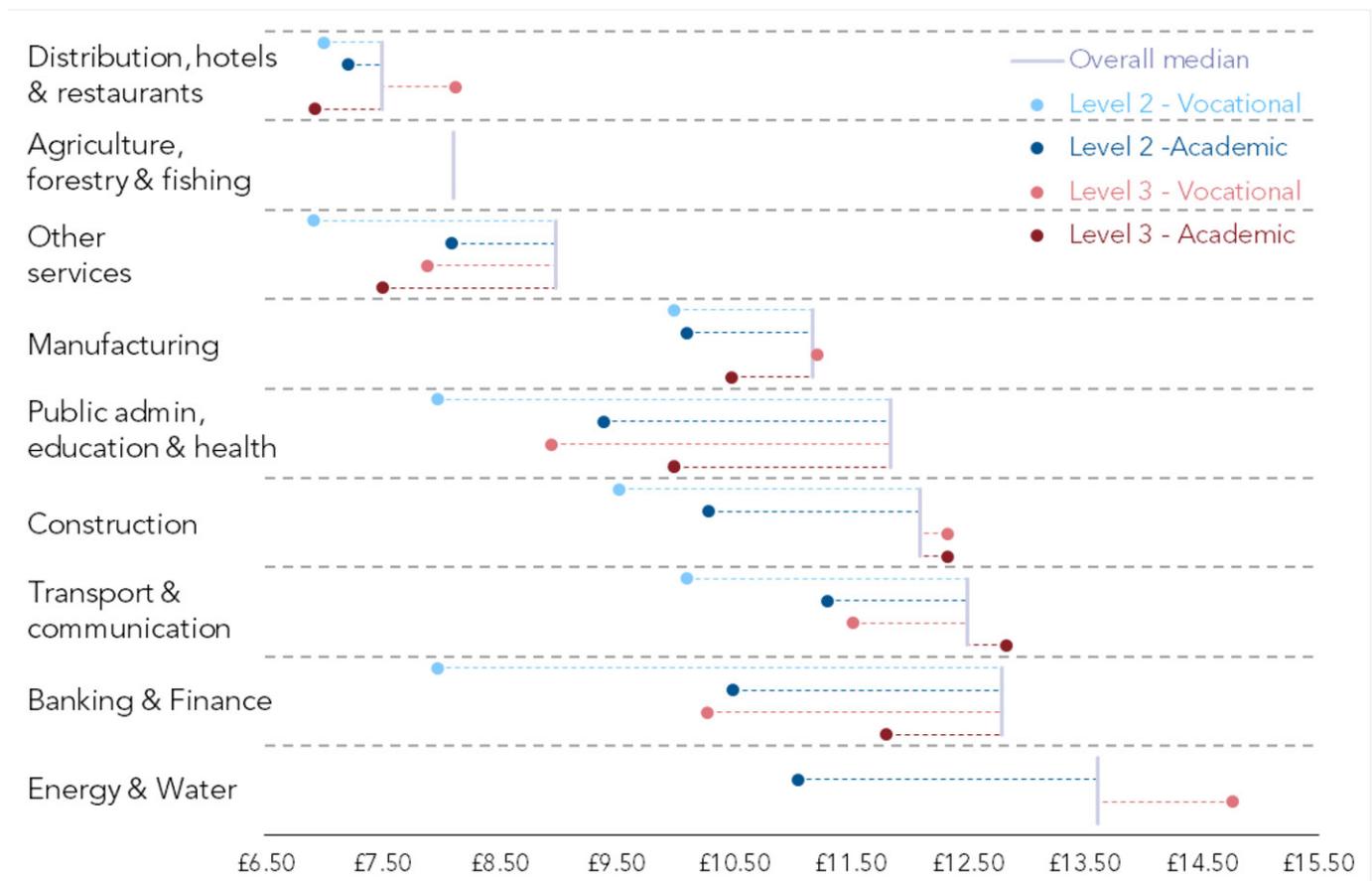
Source: Labour Force Survey, Q4 2014 to Q3 2015

A premium for non-graduates in certain sectors

Despite the variation by gender and qualification level that is apparent, these higher-level statistics still mask a wide variation in pay across sectors as well as by age and generation. Turning first to sectors, the overall level of pay varies considerably – it is particularly low in the distribution, public health and other service sectors – but also by qualification type.

In certain sectors, there appear to be more routes to relatively high pay for non-graduates. As Figure 11 and 12 show, these are often industries with a lower overall proportion of graduates – such as Manufacturing and Construction – as well as in sectors in which pay is generally low, such as Distribution, Hotels and Restaurants. However, Level 2 vocational qualifications tend to perform poorly in sectors such as Banking and Finance, Public administration, Education and Health. Given the lower average earnings of women, this causes concern because these same sectors tend to have a higher proportion of graduates and a high female proportion of non-graduates (Figure 12). In some graduate dominated sectors like Banking and Finance however, a Level 3 academic qualification can provide a route to a higher wage, particularly where there is a higher overall median wage being driven by higher-paid graduates.

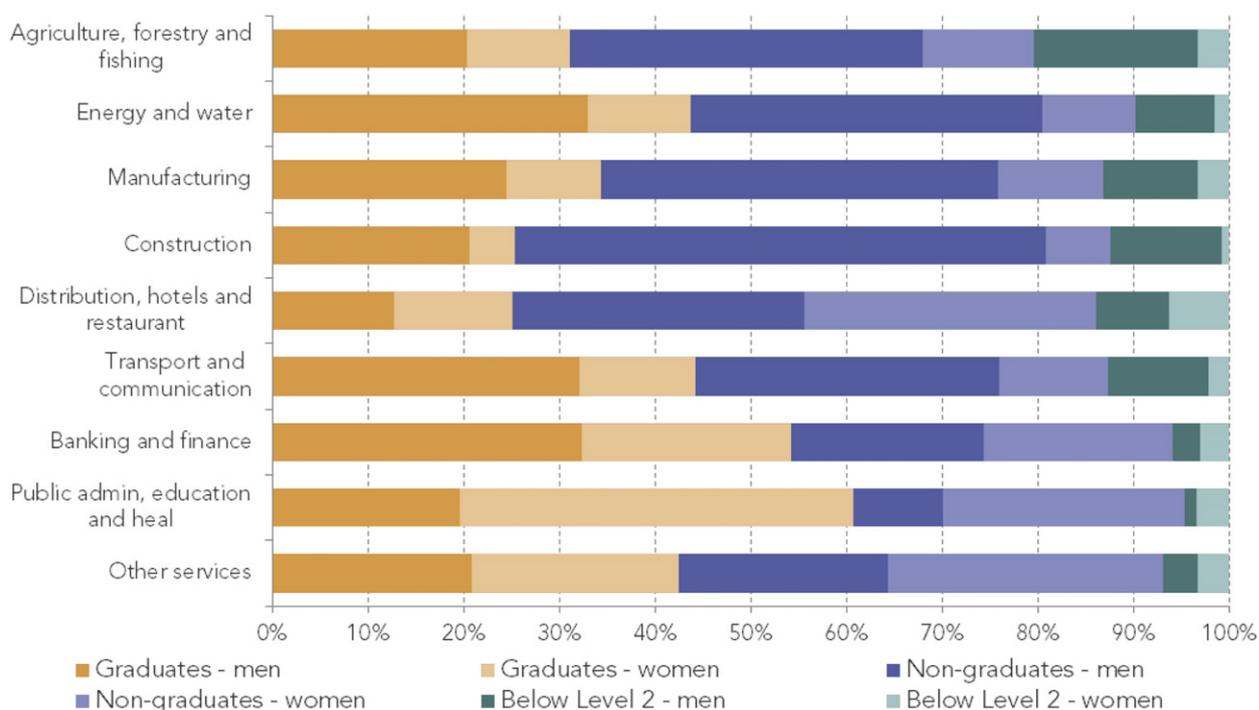
Figure 11: Median hourly pay by industrial sector and highest qualification level, 2015



Source: Labour Force Survey quarterly datasets, four quarters to Q3 2015

Notes: ‘All workers’ category includes graduates and people with no or lower than Level 2 qualifications. Some estimates have been suppressed due to small sample sizes.

Figure 12: Graduate dominated sectors: Proportion of workforce by qualification in different sectors



Source: Labour Force Survey quarterly datasets, four quarters to Q3 2015

Occupation and sex

When it comes to occupation, educational levels are of course not the only decisive factor. As Figures 13 and 14 illustrate, despite having similar qualifications, men and women have different likelihoods of finding themselves in different occupations. Certain sectors or kinds of employment being traditionally female- or male-dominated are likely in part to explain some of these differences. For instance, men are more likely to be managers, directors and senior officials across the educational spectrum. That may in part be explained by self-employment being more common among men. Similarly, caring, leisure and other service roles are much more common for women than men, with the percentage of graduate women in these occupations still remaining relatively high. In part this reflects a pay penalty for some graduate mums.

Figure 13: Qualification by occupation at ages 35 to 50: Men

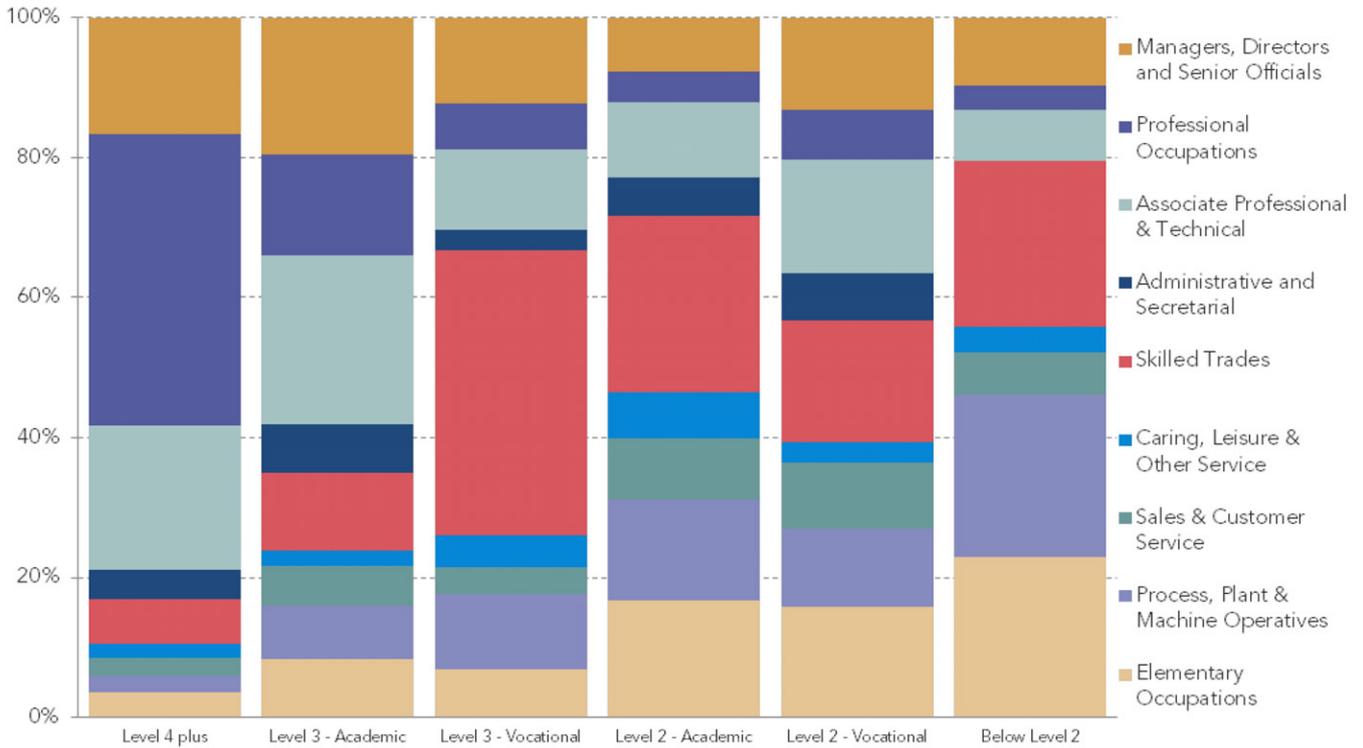
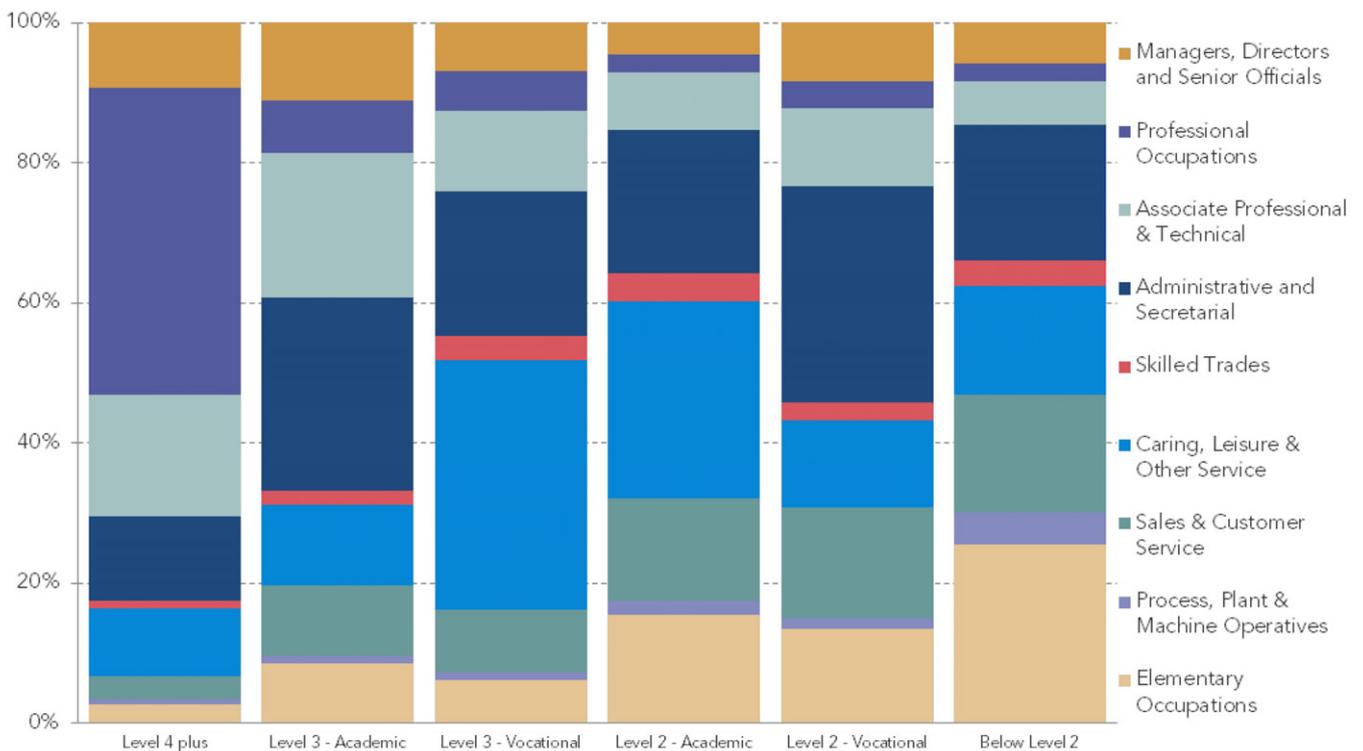


Figure 14: Qualification by occupation at ages 35 to 50: Women



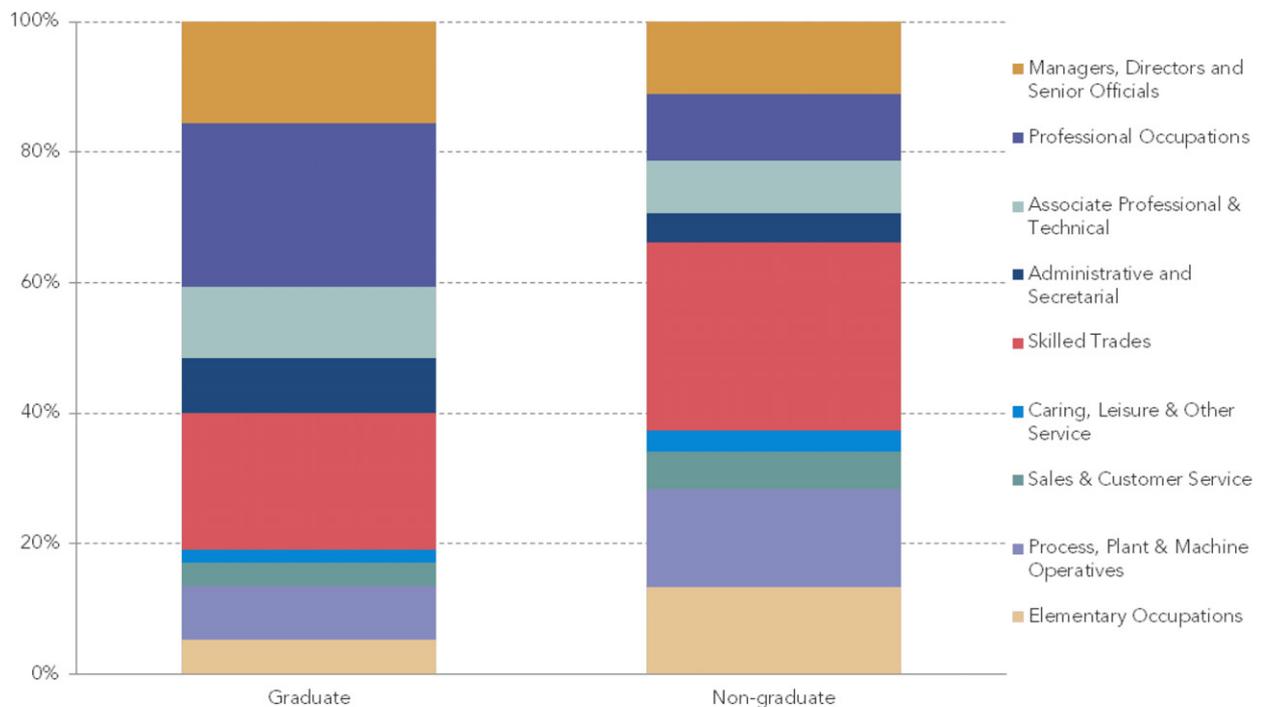
Importance of background

The analysis set out above establishes a link between a person's basic characteristics – particularly gender – and their earnings, but also draws attention to the influence of the

sector worked in. But a common question when considering the power of education is the extent to which it trumps a person's background as a determining factor on their outcomes. To examine social mobility and the importance of background, we next explore the link with the occupational background of the parents. Overall, workers appear to have improved on their parents' occupations, as would be expected given the stronger growth of higher-paying occupations across the economy over recent decades. Despite this general trend, there remained a link between the occupations across generations. Figure 15 firstly shows that the parents of non-graduates were more likely to have been in lower-paying occupations than that of graduates' parents. Having a 'professional' parent particularly boosted the likelihood of a person being in a 'professional' role, regardless of their own education.

Figure 15: Parent's occupation by whether a graduate or not, 2015

Parent's occupation when respondent aged 13

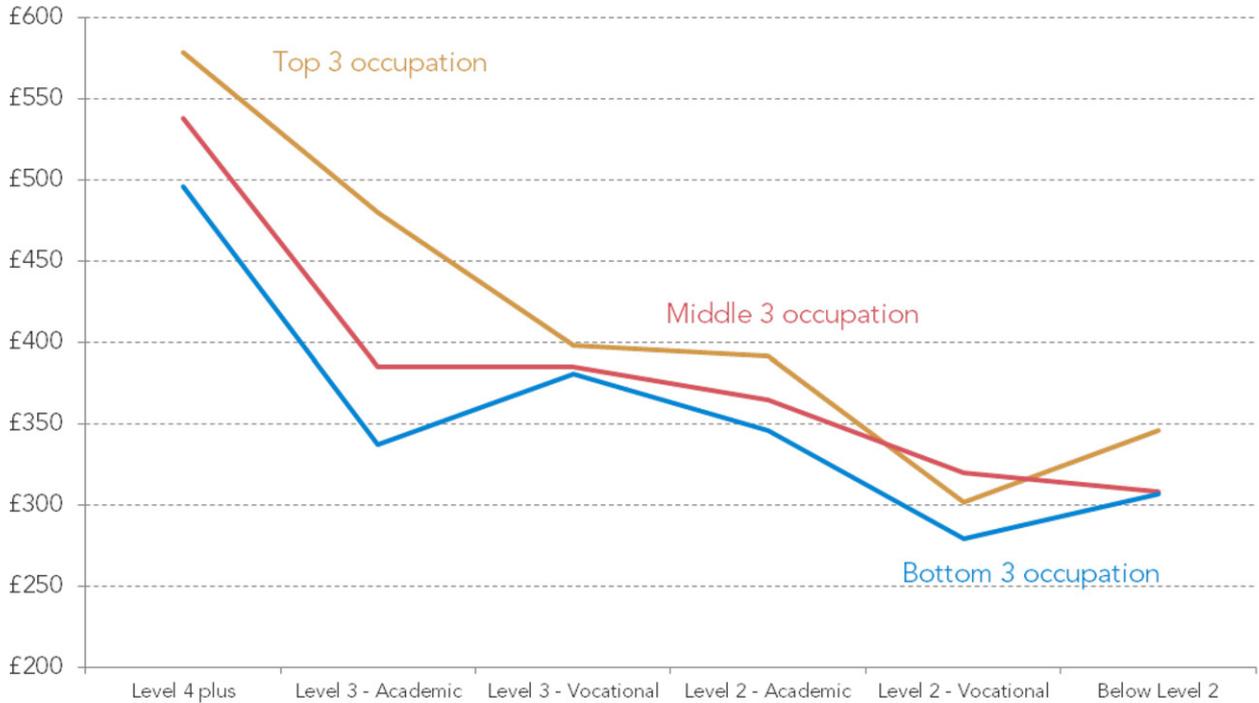


Source: Labour Force Survey, Q3 2015

The ongoing impact of background is also visible in earnings. For example, and as Figure 16 shows, a parent's reported occupation appears to have a bearing on earnings outcomes. The Figure divides today's workforce by education level and shows their earnings by the occupation level, grouped here as top 3, middle 3 and bottom 3 occupations based on their ranking. Regardless of qualification level, those with higher occupation parents tend to have a better earnings outcome. Those in generally lower-paying occupations whose parents worked in higher-paying occupations tend to earn more – with the premium greater among those with Level 3 academic qualifications. On average, non-graduate men with a parent from a top third occupation earn £100 a week more than those with a parent with a bottom third occupation. For women this premium is £80 a week.

Figure 16: Pay by highest qualification level and parent's occupation

Gross median weekly earnings, 2015



Source: Labour Force Survey, Q3 2015

Summary

This section has explored both the composition of the non-graduate group and their earnings. Despite consistently making up approximately two-fifths of the adult workforce over the past twenty years, there has been more movement within non-graduates, with the share of those with Level 2 vocational qualifications growing. Generally, non-graduates with Level 2 qualifications are less likely to be employed and more likely to be in part-time jobs.

Turning to earnings, those with higher qualifications earn more on average but an ‘academic’ premium is also noticeable. Splitting non-graduates by gender highlights the importance of part-time roles and the generally lower pay available in them. For women, an annual ‘earnings limit’ is much more visible than for men, suggesting many women struggle to find well-paid roles. Although the height of the ‘spike’ in the distribution is lower for women with Level 3 academic qualifications than other lower and Level 3 vocational qualifications, it nonetheless is taller than this part-time spike for female graduates, suggesting finding well-paid flexible work for non-graduate mother is a huge challenge.

The importance of sector has also been identified. Industries with fewer graduates appear to offer a better chance for non-graduates to make upward progress, though there are examples of Level 3 academic qualifications appearing to present decent earning opportunities in more graduate-heavy sectors. This underlines the importance of the match between skills and the roles available. And an occupational view also shines a light on the continuing influence of a person's background on their outcomes, with those with a parent who worked in a higher-paid occupation more likely to be higher paid themselves, regardless of their education.

This section has underlined that education does influence the earnings of non-graduates but that a variety of other factors are also vital. This serves to underline the need to create genuine career routes given that for some – women in particular – progression upward in the labour market is proving difficult.

Having developed this snapshot of the earnings of non-graduates, in the next section we explore earnings outcomes over time, looking at how different cohorts of non-graduates have fared and the impact of the recession on their careers.

Cohorts and crisis

Non-graduates across the lifecycle and over time

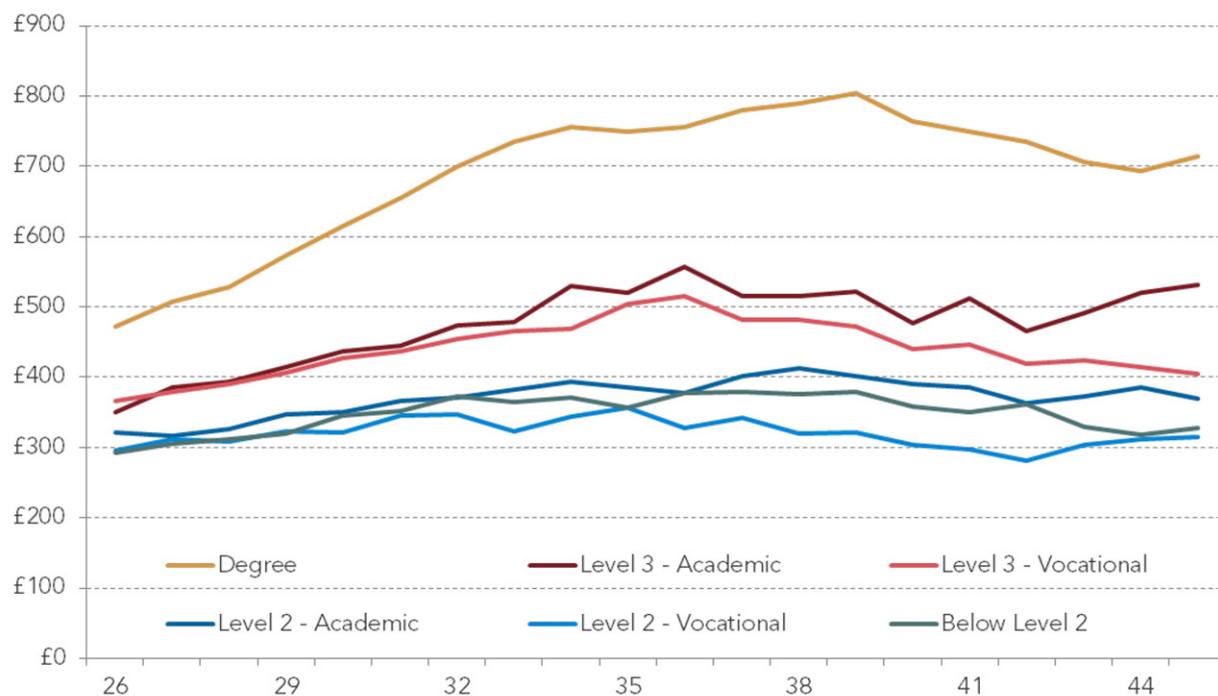
While the ‘snapshot’ view of non-graduate earnings in 2015 as presented in the previous section provides an insight into how the labour market is functioning today for these two-in-five workers, in order to truly evaluate the pathways non-graduates move down, a longer-term view is required. Figure 17 takes the 1970 cohort as an example to explore this point. Between the age of 26 and peak earnings, the typical weekly pay of graduates grew by 70 per cent in real terms compared to 29 per cent for non-graduates. Overall, this slower growth comes on top of the higher salaries graduates have reached by age 26 despite on average having been in the labour market for a shorter period of time than non-graduates. Earnings also peak slightly earlier for non-graduates than graduates,²⁵ with a small gap also visible among the 1960 cohort.

How do those earnings differences between cohorts play out within non-graduates? Figure 17 shows that those with Level 3 academic qualifications as their highest education start higher and see larger growth in median weekly earnings. Comparing the earnings growth of this group to that of those with Level 3 vocational education, despite starting at similar pound figure at age 26, the vocationally-dominant workers reach a slightly lower peak by their mid-thirties. Perhaps of more interest is the decline in earnings after the peak for this latter group. While median earnings at their peak were close to the Level 3 academic group, at the end of the period (age 45) typical pay in this group was just £6 higher than the Level 2 academic dominant group.

Among the other non-graduate groups, far smaller pay increases are seen across the years in the sample. This is particularly visible for the Level 2 vocational group, for whom typical earnings only increase by £61 from age 26 to their peak. Most striking is that in the second half of the period included within Figure 17, the typical earnings of those without Level 2 qualifications actually rise above those with Level 2 vocational qualifications. These trends are broadly consistent in the 1960 cohort with the particular recession impact on the 1980 and 1990 cohort discussed below as people born in these years have had less time to provide a full trajectory to assess. From this analysis, it appears that routes built on lower level qualifications and vocational qualifications provide less scope for a rapid upwards trajectory than higher level and more academic qualifications.

Figure 17: Median earnings by highest qualification level, 1970 cohort
Median gross weekly earnings by age, constant CPI price terms

²⁵ This occurs at age 39 for the 1970 cohort representing the beginning of the recession. For the 1960 cohort, data are only available from age 36 and so much of the earnings growth is already complete but earnings for graduates peak at age 47 and at age 45 for non-graduates.



Focus groups downplay importance of differences between non-graduates

Despite these differences between types of non-graduates, the focus groups held with non-graduates did not support this view. All participants agreed that graduates tended to earn more than those without degrees and that it could be difficult to find a job without basic Level 2 qualifications. However from the point of view of many respondents, the pay and prospects gap between those with Level 2 and Level 3 qualifications was seen as minimal. Within that section of the population who had some qualifications but without being a graduate, frequent assertions were made that determination and sectoral choice made more difference than the actual qualification level. This view extended to further education, with additional qualifications at these levels seen as usually being of limited value, again with exceptions around specific sectors and occupations.

The impact of the crisis

The impact of the crisis on pay has been well-documented, with a large squeeze on earnings up and down the pay ladder.²⁶ Perhaps less widely known however is how the size of that squeeze varied by age. As analysis by Gregg of all workers has established looking at all workers,²⁷ a longstanding pattern is that later cohorts tend to earn more than their predecessors at the same point in life. Among cohorts from the 1960s for example a broad trend is visible in which throughout their twenties and thirties those born in 1968 typically earn more than those born in 1964. Looking at younger cohorts however, that relationship begins to breakdown as the crisis hits. Strikingly, those born in 1983 were earning less by their late twenties and early thirties than workers at the same age a decade previous, overturning the trend.

The recession had differing effects across groups and cohorts

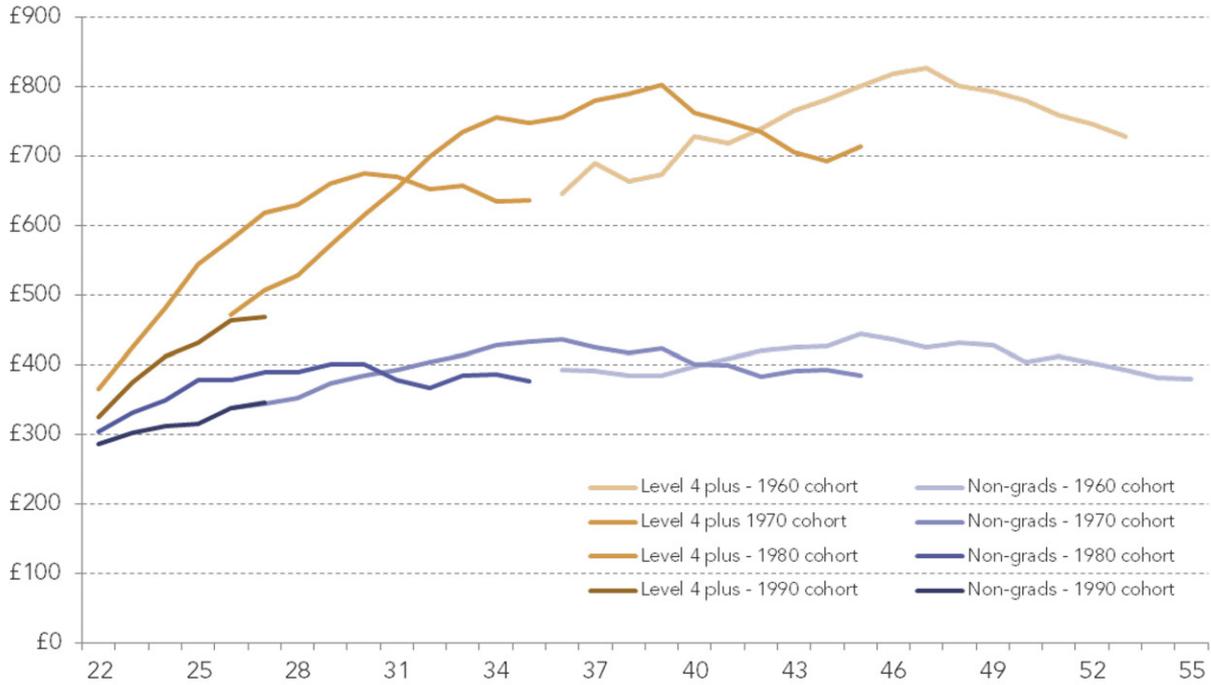
Given that overall view, how did the impact vary by education? Being a graduate did not provide significant protection from earnings falls. Our analysis finds that the typical graduate from the 1980s cohort – now in their mid-thirties – earns 15 per cent less than the typical graduate from the 1970s cohort did at the same age. This graduate cohort gap is slightly larger than for academic qualification non-graduates and about the same for vocational non-graduates.

In order to better account for this cohort effect and explore how the earnings of different groups change over time and the life course, Figure 18 illustrates how earnings progress for three different cohorts. By examining how the labour market experiences of those born in 1960, 1970, 1980 and 1990 vary by qualification type allow us to examine the changing role of different qualifications and the returns to them. The progression path for graduates has historically been much steeper than for non-graduates, and appears to have taken longer before a peak earnings level is reached. Importantly for all, regardless of qualification, the downturn has led to a halting and indeed reversal of real pay progression. For the most recent 1990 cohort the gap between graduate and non-graduate pay is far smaller than for previous cohorts when reaching their late-20s.

Figure 18: Median earnings by highest qualification level, 1960/1970/1980/1990 cohort
Median gross weekly earnings by age, constant CPI price terms

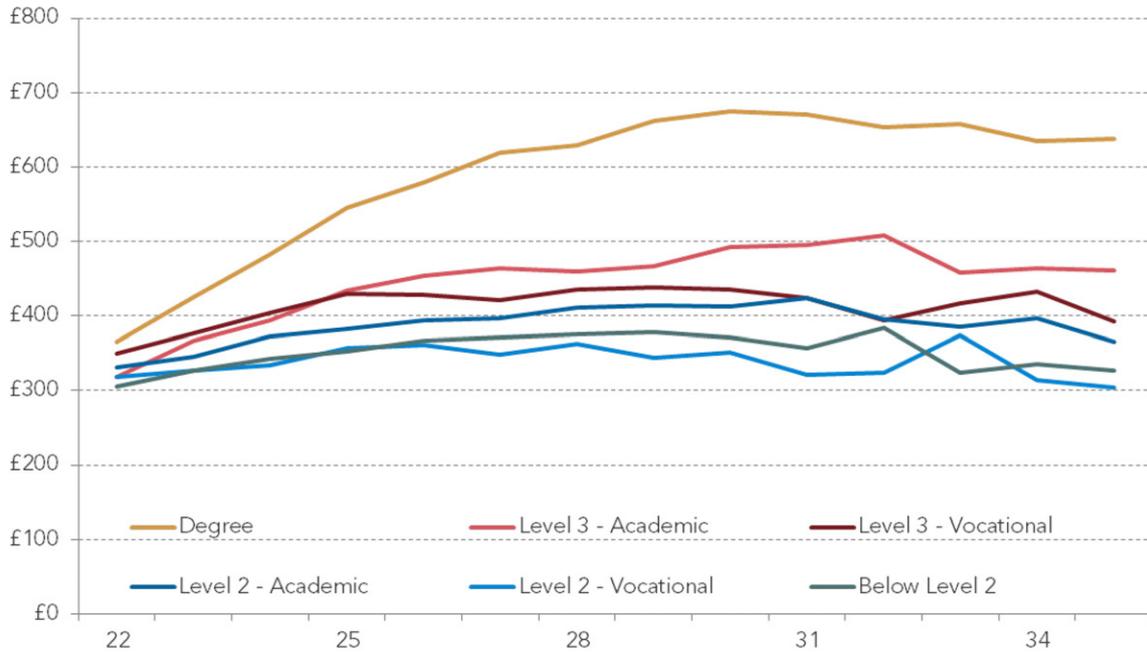
²⁶ A. Corlett, D. Finch and M. Whittaker, *Living Standards 2016*, Resolution Foundation 2016.

²⁷ P. Gregg, “Making steady progress: policies to help long-term earnings growth” in *Securing a Pay Rise*, Resolution Foundation 2015.



Looking just within one recent cohort – those born in 1980 – shows the impact of the recession on all qualification groups. Whereas in the examples discussed above, the earnings tended to rise for almost all groups until at least their mid- to late-thirties, Figure 19 identifies the moderating impact of the recession on earnings growth.

Figure 19: Median earnings by highest qualification level, 1980 cohort
 Median gross weekly earnings by age, constant CPI price terms



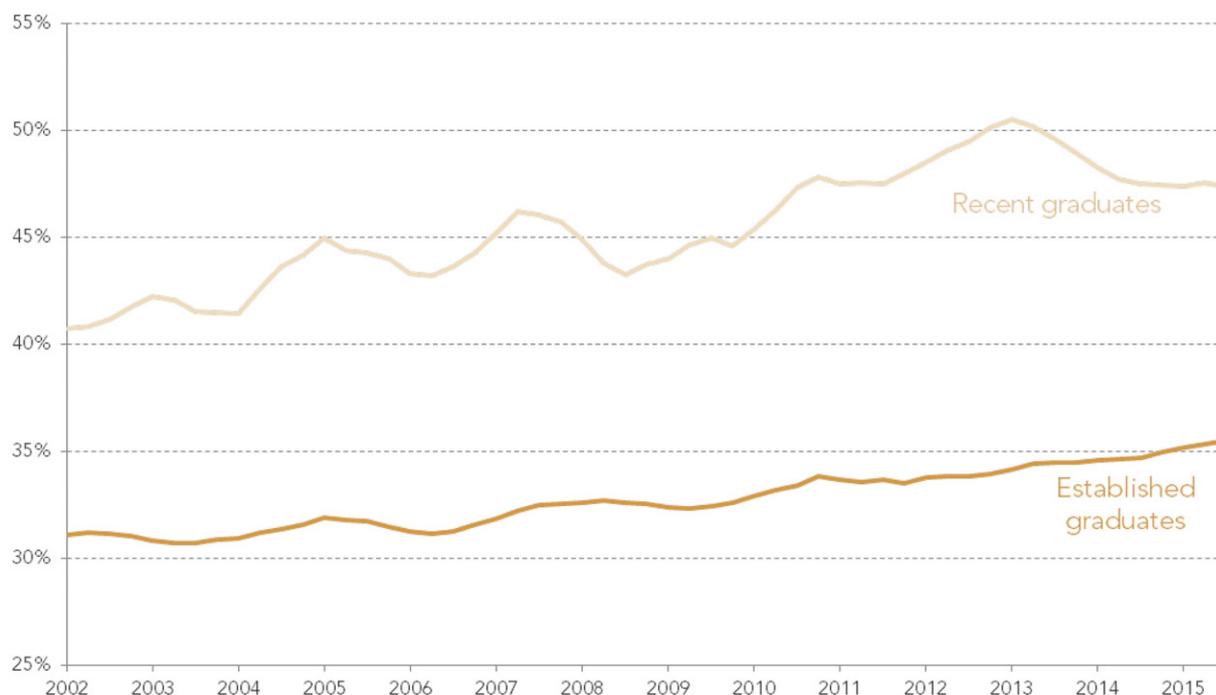
Shifts between non-graduates and graduates

A number of labour market indicators are monitored as signs of the health of the economy. One of these is the proportion of non-graduates in graduate jobs. From the perspective of

graduates, the health of the labour market and the potential of economy as a whole, this reflects that despite a strong overall performance on jobs, the labour market has yet to return to full health. As Figure 20 shows, there was an increase in the proportion of graduates, particularly recent graduates (those that had graduated in the preceding five years), working in non-graduate roles from 2008 onwards. This reached a peak in March 2013 when 50.5 per cent of recent graduates were working in non-graduate roles.²⁸

Figure 20: Graduates in non-graduate roles

Proportion of employed graduates in non-graduate (below Level 4 roles)



Source: Labour Force Survey, Q2 2002 to Q3 2015

To understand the extent to which this pattern relates simply to a growing graduate population or reduced availability of graduate roles since the downturn we perform a simple shift-share analysis (Table 1 below). This shows that while between group pressures (reflecting population share) have continued over the period, the extent to which chances of securing a non-graduate role from within the group has trebled since 2008 (increasing from 0.4 percent to 1.2 percent). Therefore the increased pressure on non-graduate jobs, has more to do with reduced opportunity for graduate roles since the downturn than an increasing population share.

Table 1: Shift-share analysis of graduates (age 24 to 64) in non-graduate roles, 2001 to 2015

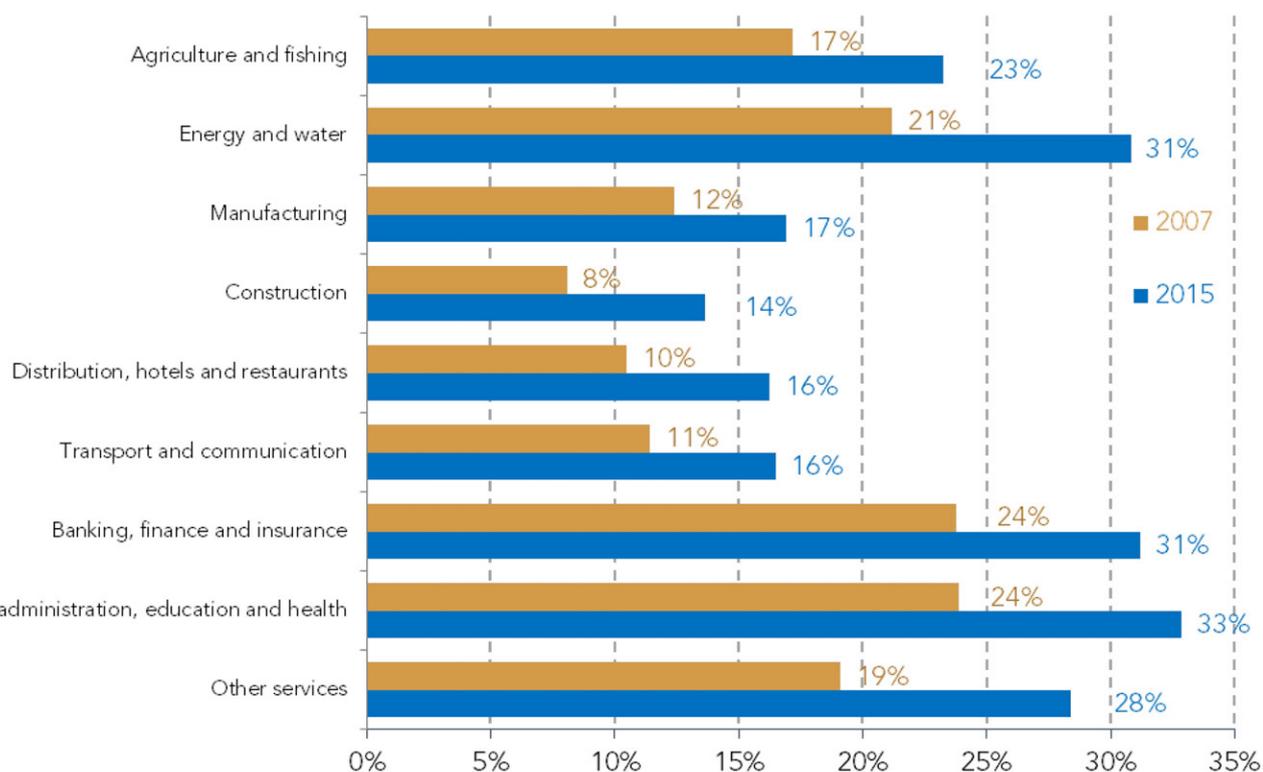
²⁸ Based on work by Elias and Purcell, non-graduate occupations are defined as those in which the associated tasks do not normally require the knowledge and skills developed through higher education to perform these tasks in a competent manner.

	2001 to 2008		2008 to 2015	
	Graduates	Non-graduates	Graduates	Non-graduates
Within group	0.4%	-0.3%	1.2%	1.2%
Between group	2.9%	-7.1%	3.1%	-7.2%

Source: Resolution Foundation analysis of Labour Force Survey 2001 to 2015

Figure 21 maps out the magnitude of pressure on non-graduates by comparing the share of non-graduate roles taken by graduates in each sector. The greatest increases have come in the Banking, Finance and Insurance; Public administration and Health; Other services; and Energy and Water sectors. The latter of these tends to have higher rates of non-graduate pay and for those rates to be among vocational qualifications. However, in the remaining sectors Level 3 academic non-graduates have tended to do well, and this compositional shift may bear down on their wages and limit chances of progression that have existed in the past.

Figure 21: Growth of graduates in non-graduate roles by sector, 2007 to 2015



Source: Labour Force Survey Q4 2007 to Q3 2015

From the point of view of non-graduates, this has two important consequences. For some, it may become harder to find employment in the first place. As Figure 6 in the previous section showed graduates have lower inactivity rates than any other group.

The second consequence in the opinion of many non-graduates in our focus groups who did manage to find or retain employment throughout the recession and recovery, was the influx of graduates into their occupations reduced their progression prospects. For some, this was part of a longer-term ‘graduatisation’ of their occupation while for others there had been a

more noticeable shift in recent years. While there was no shared sense among the participants that a healthier labour market would boost their own prospects by moving graduates back into traditionally graduate positions, it should prove the case. This question of progression is explored in the next section.

Progression – qualifications and wider social factors

Through the analysis presented in the previous chapters, we have established that for some, higher level non-graduate qualifications can lead to a higher level of pay – particularly when working in the right sector – here we seek to understand the extent to which wider factors have an impact on the success or otherwise of the routes taken by non-graduates.

The *British Household Panel Survey* (BHPS) provides a rich source of information about a representative cohort of individuals that have been tracked since 1991. We take those non-graduates present in the initial wave and test the significance of a range of factors such as their initial qualifications, family circumstances and work history on their earnings outcomes in 2008. In a number of steps, we produce regressions to take account of each set of characteristics and how they interact with progression opportunities over the lifetime.

We have already discussed the extent to which graduates tend to have greater progression trajectories when initially entering the labour market and then throughout their working life. Here we seek to understand the extent to which such opportunities exist for non-graduates and how far other life events may limit lifetime earnings potential.

Step 1 - Impact of qualifications held in 1991 on earnings outcomes in 2008

First we consider the impact of the qualifications held by non-graduates aged 21 to 45 in 1991 on their earnings in 2008 (older adults in the initial period are mostly retired by 2008). We split the group by gender and in a simple regression control for the impact of both age and region compared to people with a Level 2 vocational qualification.²⁹ Table 1 shows the extent to which different non-graduate qualifications contribute to gross weekly earnings reporting the estimated co-efficient and the proportional impact on earnings. Three findings stand out:

- For men holding a Level 3 qualification provides a significant boost to earnings, with academic Level 3 qualifications increasing earnings by 48 per cent and Level 3 vocational by 22 per cent.
- For women a Level 3 academic qualification has a similar effect as for men (50 per cent boost), but there is no significant impact from other non-graduate qualifications.
- Earnings outcomes for people with a Level 2 vocational qualification are not significantly different to those with a Level 2 academic qualification, nor are they different for women with a Level 3 vocational qualification.

Table 2 - Impact of qualifications held in 1991 on earnings outcomes in 2008

²⁹ We have taken a larger age range due to sample size limitations within the non-graduate population. We split by gender given the much greater likelihood of an interrupted work history after having children among women. Positive earnings in 2006 to 2008 are used to boost sample sizes. Relatively small sample sizes mean that results should be taken as indicative of direction and scale of each impact only. Full details of the analysis can be found in Annex A.

Qualification	Coefficient		Earnings uplift	
	Men	Women	Men	Women
Level 2 academic	0.06	0.107		
Level 3 vocational	0.197***	0.113	22%	
Level 3 academic	0.392***	0.407***	48%	50%

Notes: The dependent variable is gross weekly earnings; the independent variables are non-graduate qualification levels with controls for age, regions and attrition rates. Sample consists of 12 to 45 year old non-graduates in 1991 with positive earnings in 2006 to 2008. Asterisks denote significance of coefficients (*** p<0.01, ** p<0.05, * p<0.1).

Source: Resolution Foundation analysis of the British Household Panel Survey

Step 2 – Initial household characteristics

However, it is unlikely that qualifications alone explain an individual's earnings outcomes so now we begin to take account of other factors that may affect progression. First, we account for other characteristics in the initial period of 1991. Table 3a shows the significant initial period factors either boosting or bearing down on 2008 earnings outcomes. Green rows signify positive effects on earnings, with red rows showing negative ones. The darker the colour the stronger the general effect.

For men, living as a couple acts as an upward contributor to earnings – potentially reflecting a father's higher likelihood of being in work.³⁰ For women, having attended a private or grammar school is a key factor, as is being in paid work in the initial period. Bearing down on both men and women's earnings is having disability, whereas for women living as a couple and having dependent children also bears down on earnings (potentially reflecting the impact of having children and which in turn is likely to be related to the importance of being in work in the initial period).

Table 3a – significant initial period factors either boosting or bearing down on 2008 earnings outcomes

Men	Women
	Attended a grammar or private school***
Living as a couple*	Being in paid work in initial period*
	Living as a couple*
	Has dependent children*
Has disability*	Has disability*

Notes: Asterisks denote significance of coefficients (*** p<0.01, ** p<0.05, * p<0.1).

³⁰ Previous research has shown that fathers have a much higher than average employment rate in part reflecting the division of household roles within families with children, although these traditional roles have been changing in recent years see for instance: P. Gregg and D. Finch, *Employing New Tactics: the changing distribution of work across British households*, Resolution Foundation, 2016 and S. Harkness, "Second earner to primary breadwinner? Women's wages and employment", in eds. G. Kelly and C. D'Arcy, *Securing A Pay Rise: The Path Back to Shared Wage Growth*, 2015.

Source: Resolution Foundation analysis of the British Household Panel Survey

Including these additional variables has an impact on the extent to which qualifications held in 1991 have a bearing on earnings outcomes, as shown in Table 2b. For women Level 3 academic qualifications remain significant but their explanatory power has been reduced. This suggests that attending a private or grammar school explains a portion of the progression for women initially found to be related to Level 3 academic qualifications. For men these initial characteristics simply provide an additional explanation of progression and do little to affect the coefficient estimates on qualifications.

Table 3b – Impact of qualifications for non-graduates on 2008 earnings with inclusion of initial household characteristics

Qualification	Coefficient		Earnings uplift	
	Men	Women	Men	Women
Level 2 academic	0.092	0.069		
Level 3 vocational	0.217***	0.053	24%	
Level 3 academic	0.421***	0.335***	52%	40%

Notes: Asterisks denote significance of coefficients (*** p<0.01, ** p<0.05, * p<0.1).

Source: Resolution Foundation analysis of the British Household Panel Survey

Step 3: Changes in household characteristics, training and qualifications

Changes in household characteristics are not found to have a significant impact on the earnings outcomes of men though to some extent this may reflect that in having taken a wide cohort from 1991, further family formation has a small impact on initial characteristics. There is still an overall positive impact from living in a couple in the initial period.

For women, however, and as shown in Table 4a, the length of time spent as the main carer for a child under the age of 3 has a significant negative impact on earnings. The proportion of time spent with a dependant child in the household has a similarly large and negative effect. Being a single parent is not found to have a significant impact but this is likely to reflect that being a single parent in itself does not reduce progression chances. Instead, it is the increased likelihood of experiencing other factors – such as time spent out of the labour market caring for young children and working part-time – that has a negative impact. Overall, motherhood is proving to have a significant downward effect on non-graduate earnings.

Table 4a: Effect of changes in household characteristics, training and qualifications

Men	Women
Gained a graduate qualification** Years of job-related training***	Attended a grammar or private school*** Years of job-related training*** Gained a first degree***
Reported that future looks good*** Living as a couple*	
	Years with responsibility for a child*** Years caring for child aged 3 and under***
Has disability*	Has disability**

Source: Resolution Foundation analysis of the British Household Panel Survey

Importantly, improving skills and qualifications provide a clear route to boost earnings for non-graduates. For our initial group, going on to gain a degree or a level 4 qualification significantly boosts earnings while employer training was also an important upward factor. The extent to which these findings reflect selection bias of people with greater initial skills, greater potential or those actively seeking progression opportunities is not clear. However, these findings do identify a possible route for non-graduates to boost their earnings potential, even if in part that involves no longer being a non-graduate.

As in the previous step taking account of these factors does little to affect the extent to which qualifications explain earnings outcomes for men but it does further reduce the extent to which Level 3 academic qualifications account for higher wages for women. Table 4b shows that the coefficient falls with the inclusion of downward factors suggests that it does little to offset the downward explanatory factors and that progression routes via training or improved qualifications are in part more available to those with academic Level 3 qualifications.

Table 4b – Impact of qualifications for non-graduates on 2008 earnings with inclusion of changes to household characteristics, training and qualifications

Qualification	Co-efficient		Earnings uplift	
	Men	Women	Men	Women
Level 2 academic	0.098	0.083		
Level 3 vocational	0.211***	0.022	23%	
Level 3 academic	0.376***	0.292***	46%	34%

Notes: Asterisks denote significance of coefficients (*** p<0.01, ** p<0.05, * p<0.1).

Source: Resolution Foundation analysis of the British Household Panel Survey

Step 4: Incorporating labour market histories

Finally, we incorporate the impact of labour market histories on earnings outcomes. For both men and women (and reflecting findings in previous Resolution Foundation research³¹) remaining in employment – though not necessarily the same job – has a large upward effect on earnings, as does having a role with some element of managerial responsibility.

³¹ D'Arcy and Hurrell, 2014

Working in the right sector for the majority of the 1991 to 2008 period also plays a key role. For men, remaining in the Construction, Education and Real Estate sectors boosts wages, but remaining in Retail and Wholesale has a downward effect. Being sacked or made redundant is also shown to have a lasting detrimental effect on longer-term earnings outcomes.

For women working in Retail and wholesale or the Other Services sector and in process operative or craft occupations (most traditionally with large low paying elements) has a downward impact – although working part-time has the strongest overall effect.

Table 5a: All combined characteristics effecting earnings outcomes for non-graduates in 2008

Men	Women
Gained a first degree***	Attended a grammar or private school***
Years of job-related training***	Years of job-related training***
Years of employment & self-employment***	Years of employment***
Years of managerial responsibility***	Gained a first degree***
Working in a firm of more than 100 employees**	Years of managerial responsibility***
Spending majority of years in Education, Construction & Real Estate sectors***	
Reported that future looks good***	Attended a grammar or private school**
Longer commuting time*	Years of job-related training**
Proportion of years in which made redundant or sacked*	Years with responsibility for a child***
	Years caring for child aged 3 and under***
	Majority of time spent in Process operative or craft occupations
	Majority of time spent in Retail & Wholesale or Other services sectors**
	Years worked part-time***
Years spent in retail & wholesale sector***	Has disability**

Notes: Asterisks denote significance of coefficients (*** p<0.01, ** p<0.05, * p<0.1)

Source: Resolution Foundation analysis of the British Household Panel Survey

Including work histories has an important influence on the extent to which qualifications explain men's earnings outcomes, removing any significant impact from Level 3 vocational qualifications and halving the return to Level 3 academic qualifications to 24 per cent. This implies that although such progression opportunities apply to all non-graduates, those with Level 3 qualifications have a greater chance of accessing these routes. It also offers some protection against the factors identified above as having a negative impact.

Among women, the earnings uplift from a Level 3 academic qualification is reduced by two-thirds, with remaining in work over the period seeming to be the greatest upward factor to interplay with Level 3 academic qualifications. With only a 12 per cent uplift to earnings a Level 3 academic qualification is offering only limited protection from the downward pressures on earnings stemming from motherhood.

Table 5b – Impact of qualifications for non-graduates on 2008 earnings with inclusion of changes to household characteristics, training and qualifications

Qualification	Co-efficient		Earnings uplift	
	Men	Women	Men	Women
Level 2 academic	0.013	0.0471		
Level 3 vocational	0.084	0.003		
Level 3 academic	0.218**	0.117**	24%	12%

Notes: Asterisks denote significance of coefficients (*** p<0.01, ** p<0.05, * p<0.1)

Source: Resolution Foundation analysis of the British Household Panel Survey

Overall, there are some clear progression routes for non-graduates, with working in the right sectors and improving skills and qualifications crucial to boosting earnings. For men, achieving a Level 3 academic qualification is likely to lead to higher levels of earnings and increases the chances of accessing some progression routes. There is little difference in the progression chances of men with Level 2 academic or vocational qualifications.

For women, while similar progression routes are available the role of qualifications are slightly less important than for men – though still play a significant role. The impact of motherhood limiting time in the labour market and increasing the likelihood of working part-time is key, placing a downward pressure on earnings outcomes.

Typologies

So far this report has shed light on the labour market outcomes and characteristics of non-graduates as well as the factors that play a significant role in determining progression chances. While it is also clear that the non-graduate population is large with varying characteristics, it is possible to develop some broad typologies to provide a more accessible account of the non-graduate population and the challenges they face.

Taking the key significant factors affecting non-graduates from the BHPS analysis and key trends appearing from the LFS analysis allows us to form four groups of ‘typical’ types of non-graduates. The LFS is used to provide estimates of the population size and other related characteristics in each group (largely due to sample size limitations of the BHPS). Some non-graduates have had a relatively successful outcome, at least at a household level. Yet others have either failed to progress in the labour market or face a potentially tough outlook for the future.

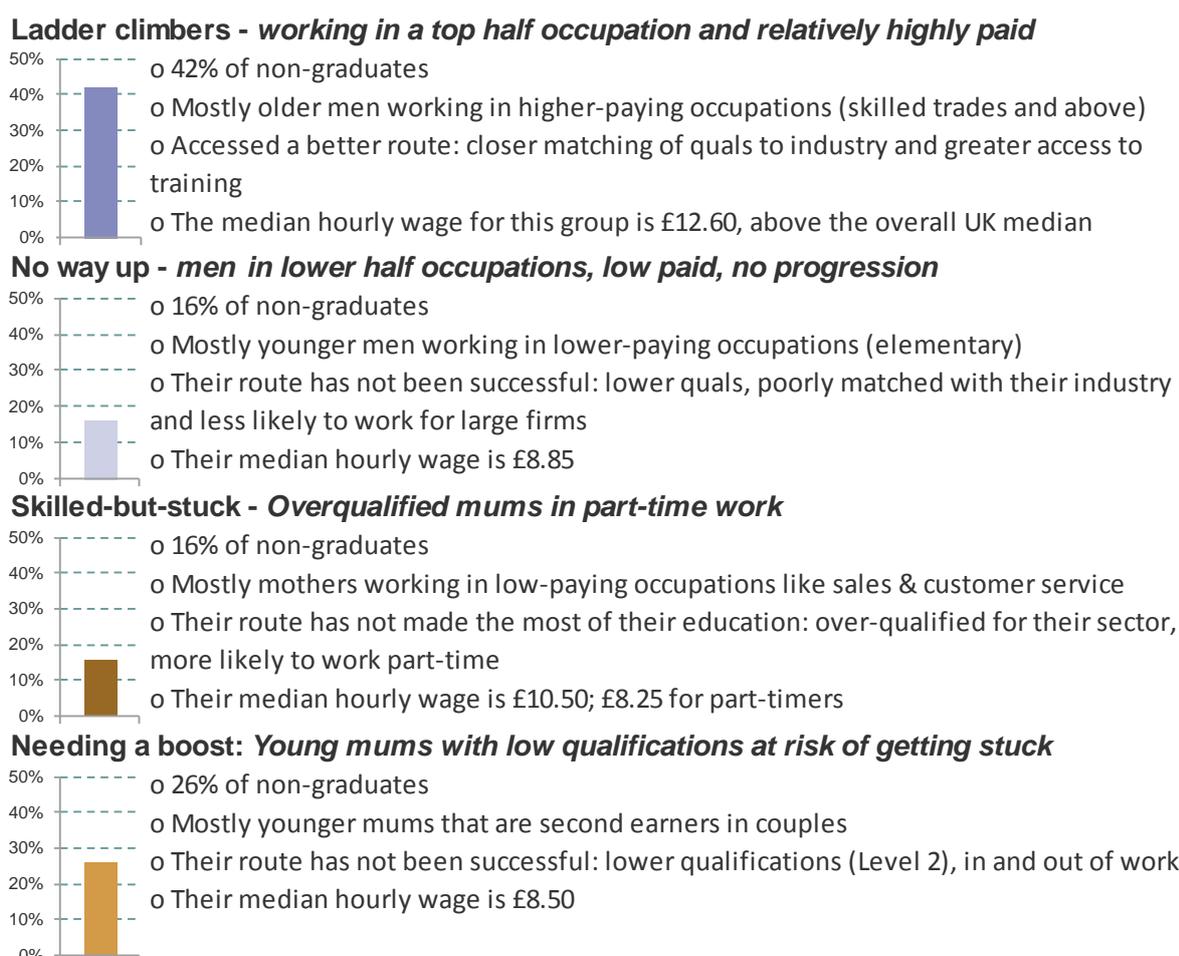
Some – like the ‘ladder climbers’ – have worked in industries where their skills are more valued and opportunities to progress have been in greater supply, resulting in higher overall pay. For others – like the ‘skilled-but-stuck’ – despite having generally higher qualifications, the sector they work in and their higher likelihood of working part-time means they have failed to make headway. The group with ‘no way up’ are less qualified and tend to work in sectors with fewer upward routes.

The final group, those ‘needing a boost’, tend to be mothers. Their lower qualifications make them less well paid but weak incentives from in-work support for second earners – a large

proportion of this group – mean seeking longer hours or higher-paid work is less attractive than it could be.

An important though small additional group which could be added are those with ‘crashed careers’: younger workers who have missed out on the relatively rapid earnings growth most would expect in their early twenties due to the recession. The set of challenges facing them are a labour market which offers fewer opportunities to progress for non-graduates and the ‘clogging’ of routes by graduates who have taken roles considered to be of at a non-graduate level.

Figure 22: Non-graduate typologies



Source: Resolution Foundation analysis of the Labour Force Survey 1996 to 2015 and British Household Panel Survey, 1998 to 2008

Focus groups

In order to better understand the drivers behind these trends and typologies and to explore how attitudes are evolving with to non-graduate routes, two focus groups were held in two English cities in December 2015. The participants were non-graduates as per the definition used in the data analysis, with a mix of which qualifications were their highest: GCSEs, A Levels, BTEC etc. Aged between 25 and 50 and working in a variety of sectors at different pay levels (ranging from just above the National Minimum Wage to £35,000 per year), they were a representative mix of gender, ethnicity and working patterns (full-time and part-time employees and self-employed people). Both parents and childless people were included.

Difference within non-graduates and qualifications

In the opinions of the majority of participants, there was a clear gap between the earnings and prospects of graduates and non-graduates. But beneath that, the experience of the participants was that employers were generally unlikely to differentiate between those with GCSEs or A Levels although basic Maths and English qualifications were seen as more important than others, in line with previous research.³² One participant had first-hand experience of this, being involved in recruitment at her current employer:

I work for the council now and do recruitment, and when we're shortlisting we don't even look at people's qualifications. As long as they've got 5 GCSEs A-C. Beyond that, unless it's a specific role that requires a specific qualification, aside from that we don't look at anything else.

This did not mean however that taking part in additional training or gaining qualifications had no impact on progression prospects. In common with the quantitative analysis, the value of qualifications was very much contingent on the kind of qualification and the sector a person worked in. Understanding which qualifications were valuable was often seen as a “minefield” to navigate however. One woman in her forties said “there just seems to be a huge increase in so-called awarding bodies and colleges offering what I would term as ‘Mickey Mouse’ [qualifications].”

Again, a clear divide emerged between industries. In some, there were clear career paths in which gaining specific qualifications would greatly improve one’s job prospects and pay, particularly in more academic-focused subjects like accountancy. One woman who worked in childcare saw that qualification levels had an impact on pay but didn’t affect the type of work done or your ability to carry out the work: “In my job with NVQ 2 and 3, you’ve got exactly the same role, maybe you’ve got a bit more money, but you’re doing exactly the same job”. This suggests that non-graduate qualifications can have a ‘signalling’ effect.

³² P. Gregg, L. Macmillan and C. Vittori, “Nonlinear Estimation of Lifetime Intergenerational Economic Mobility and the Role of Education”, University of Bath mimeo, 2015.

A man in his forties had a similar experience which again underlined the importance of the quality of the qualifications offered, how transferable the skills developed are and the degree to which taking part is the employee's choice:

My career started picking up when I was working for local government, because they actually have a budget for training... They trained me up. I got a [qualification] and back then that was like a £1,300 course for five days. And I got it done for free... Back then, if you had that [qualification], you'd be earning some pretty good cash.

Role of employers and management

While the important role of industries was acknowledged by most participants, regardless of sector the contribution of employers was seen as crucial. Workplaces in which high-quality management was a focus and progression was discussed with staff and encouraged tended to push staff towards qualifications or training that allowed them to progress.

But across sectors, two common questions emerged: did qualifications or training actually improve your ability to do a job or move into a higher-skilled one, and was it related to a pay increase? In the experience of a number of participants, the answer to both these questions was no. For this group, involvement in these courses was often not voluntary with all staff members "expected" to participate as part of their role. As this was rolled out across the workforce, pay rises were not linked to completing these qualifications or training and they served more to recognise the skills they already had rather than help develop their abilities.

Other participants had taken part in training that enabled them to do new things or to raise their performance in their present role but as it was not linked to a pay increase, this was often dispiriting. One man in his late forties who had completed an optional qualification in his workplace had hoped it might "look good on my CV":

[B]ut I don't think it's done anything for me where I'm working. I've just got four letters after my name. And then we've had to all go through another qualification this year but it's not optional, everybody's had to go through that. So again, another qualification to my name but if everyone's got it, it's not worth anything.

Similarly, a woman in her mid-thirties felt that her own career hadn't been helped much by additional qualifications she had received:

For me, I don't think the GNVQ [in business studies] I got at college has essentially made a massive difference. I think most of the time when they're looking, because I'm in admin, they're looking at GCSEs.

That said, her own experience had been that she had received a promotion after completing the additional qualification but felt her progress was due to the experience she had gained within her previous role:

They encouraged me whilst I've been there, I've done an NVQ Level 3 in business admin...But I wouldn't say that's benefited me particularly in the role that I do now. I think it is more experience that you gain through work. It was there as an option so I

took it to better myself going forward. I mean I've actually been promoted to a manager but not because I've got that qualification, more because of my experience.

This chimed with the experience of others, highlighting the importance of attitude over aptitude.

The additional learning that people had completed wasn't always accredited qualifications but took the form of on-the-job training or working closely with senior colleagues to learn the requirements of the new role. On-the-job training also varied in its usefulness, with some speaking warmly about how employers had taken the time to develop them and improve their skills, without official qualifications. A man in his late twenties had been steered by his employer away from official qualifications and towards on-the-job training:

Where I work at the moment, I've got ambitions to become a design engineer. I went for another job there. I went for it because I've got lots of experience. I didn't get the job but they sat down with me and talked about how you go about progressing into doing [that job], and they said the formal qualification's probably not the way to go about it. Instead, using the skills I've got now, I work with people in the company and actually try and develop, basically working on the skills. Basically it's all on the job training... They've been giving me small schemes to work on myself so I can get a feel to the start and end process of it.

One acknowledged downside of this approach however was that unlike an official course which often has a fixed completion date, other demands on his time were crowding out these opportunities: “the workload now, we're quite busy so it's sort of fitting it in as and when along with the rest of my workload.”

Views on a specific form of in-work training – apprenticeships – were more negative however. This opinion was shared both by those who had been apprentices and those who had not with phrases such as “lackeys” and “joeys” used to describe the status of apprentices. Excluding those in skilled trades, apprenticeships were often seen as, at best, of little long-term value to an individual and, at worst, an exploitative waste of time. In the experience of some participants, employers often used apprenticeships to replace higher-paid staff without taking the apprenticeship model seriously, with one referring to apprenticeships as “a tax break for companies”.

A woman in her thirties explained how this failure to take apprenticeships seriously affected young people:

[O]n the team where they're working, [the apprentices] can all sit at their desks and listen to music, the [managers] buy them they cans of pop and boxes of biscuits... They're not preparing these people, these young people, for real life... Why aren't you putting them through a programme of customer service, using email, dealing with people?

But there was also an understanding of the difficulty of finding time to adequately manage apprentices:

I've got two apprentices on the team I manage and I just haven't got the time to put that time into them that you want to give them to get them to somewhere, to develop them, to support them.

This very much echoes the findings of previous Resolution Foundation research for the Social Mobility and Child Poverty Commission with the commitment of employers and managers to helping develop staff critical for progression prospects.³³ For others however, apprenticeships could be positive experiences when that required time was set aside. One participant in the public sector had recently seen apprentices come into administrative roles and from his perspective, thought they had received extensive and high-quality training.

The self-employed, though often earning less, appreciated the fact that their qualifications or lack thereof made little difference. In some industries, having specific qualifications or certifications was crucial in order to attract customers but for most, the quality of their work and the price they charged was the most important consideration in their success.

The rise of graduates in non-graduate jobs

There was consensus that some roles which had previously been available to non-graduates had now become classed as graduate level. This limited the number of roles open to non-graduates, as a woman in her forties explained:

I've got a friend who works at a company he started [at when] he left school at 16. Went straight in the back office at 16. He's my age, and he now recruits for his back office and won't take anyone who isn't a graduate.

As well as getting a foot on the ladder, many of the participants felt that the expansion of graduates into previously non-graduate sectors curtailed their prospects for earnings progression. One participant who had worked in sales across a number of industries explained how, in some sectors, a degree was viewed as essential in order to reach a management position. While to some extent this reflected the additional technical knowledge required, in his view it was more of a cultural decision as extensive training was provided. For him, it resulted in better people being overlooked for promotion:

In my industry, I've been held back by not having a degree. I've seen people who have a degree move on into better positions. They don't care what the degree is in, they just take them on and pass them through. They're absolutely useless at their job. Having a degree just opens the door, it doesn't matter what it's in. I've had to fight my corner and use [my] equivalent experience.

The greater value assigned to degrees instead of experience was a particular bone of contention among the participants. One woman explained how in her workplace, seeing

³³ D'Arcy, C and Hurrell, A. *Escape Plan: Understanding who progresses from low pay and who gets stuck*, Social Mobility and Child Poverty Commission/Resolution Foundation, 2014.

inexperienced graduates earn more than her in similar roles (“you can do the job, it doesn’t matter”) has encouraged her to pursue a foundation degree level qualification: “I work in finance and you can get a graduate in, and that person won’t have as much experience as me. But they would get paid more money. So that’s why I’m trying to [get a foundation degree].”

But there were also examples of employers who had begun to move away from stricter academic criteria.³⁴

I was quite fortunate actually because at the time they only took on graduates. It’s all changed since then. Must’ve had a really good interview! Even now, they’ve got a question about your degree even though it’s a sales role.

The value of university

This discussion of graduates in non-graduate jobs led on to a discussion of whether or not graduates were “worth” the pay premium they receive and why the participants had not attended university themselves. Given the competitive nature of the labour market, some saw employers’ preference for graduates as sensible, at least in the short run. One man in his twenties working in recruitment, with his colleagues being almost all graduates, felt that for his job “you don’t need a degree, but I guess a lot of it is whittling down the applicants.” The role of a three-year degree as a signal was also recognised, with it being a sign that you could work hard and had demonstrated commitment.

This signalling perspective clashed with a broadly shared view was that many young people go to university “for the lifestyle” rather than to learn or to improve their career prospects. Indeed, many participants said they chose not to go to university because they didn’t know what they wanted to do and had intended to pursue it later in their careers. One focus group participant in her mid-twenties said:

I just didn't go to uni because I didn't know exactly what I wanted to do yet so I didn't see the point in wasting my parents' money. That's what all my friends did. They all went and did social studies... That's what a lot of people do when they don't know what they want to do. And I just thought I'd go and make some money.

Despite this, all agreed that, from a financial perspective, they would encourage their children to attend university. Although there were concerns about the debt burden their children would be taking on and a sense that the value of degrees for younger people had been diminished as higher education expanded, there was a recognition that it had “made things easier” in terms of finding work and progressing. The value of being a graduate was framed by the group participants in the context of how the labour market had changed. The case of a woman in her late thirties working in childcare echoed with the experience of many:

³⁴ The Social Mobility and Child Poverty Commission’s *State of the Nation 2015* report discusses other employers who have recently taken a similar route.

There were loads of jobs twenty years ago. I found a job pretty much straight away, as soon as I finished my course I found a job. Now it's a lot harder. They want you to have maths, English, science as well.

Jobs were no longer for life meaning that being adaptable with transferrable skills – a trait which the groups regarded graduates as possessing – was an important determinant of earnings prospects for the future.

But there was also a worry among some parents in the groups that a full range of options was not presented to young people. Most participants felt the career guidance they had received themselves (if they had received any) was usually unhelpful and sometimes had actively directed them towards unwise decisions. The parents in the group felt that although provision had improved, the focus for their children in education today from careers guidance staff was solely on getting into university rather than the specific course or what their interests were. While there was an understanding that university was the often best path, it was still possible to have a rewarding career without attending university but crucially, identifying high-quality non-graduate pathways was a difficult proposition:

I think there's a pressure on kids now as soon as they get to high school, that they're being told about university straight away. It's more the norm to be going to university. Then if you're not going there, you're not going to get a particularly great job that's going to drive you on because I feel that the other courses that are maybe available to people that don't go [to university] are not as strong. [Man in his forties]

This lack of clarity on the best routes for non-graduates, particularly through the further education system was highlighted in the Social Mobility and Child Poverty Commission's State of the Nation 2015 report, describing “a fragmented application process, a proliferation of institutions with no clear signal of quality, and a range of qualifications with different value to different employers.”³⁵

With the overall advantages of being a graduate established, the groups discussed whether they would return to education in order to get a degree. Some older participants did plan to do this but for younger and middle-aged group members, the amount of time a degree would take to complete and starting at the bottom in another industry if they did intend to move into another line of work was seen as risky at best or impossible for those with families and mortgage payments.

Importance of gender

As in the quantitative analysis, views on routes differed between men and women. Many of the female participants worked part-time at lower hourly rates than male participants. For some, this was a decision in order to allow them to work more flexible hours or closer to home in order to balance their childcare responsibilities. The interaction of benefits with earnings was seen as important for some. One woman explained her situation: “I'm a single

³⁵ Social Mobility and Child Poverty Commission, *The State of the Nation 2015*, 2015.

parent and the more I earn, the less I'll get in my benefits. So it's actually better to earn a lower wage. It's not actually worth me working at all but I've worked for 20 years, I can't not work. It's self-respect that I do go out and work and earn something.”

Summary

There is clearly much overlap between the findings of the quantitative analysis in this report and the views expressed by our focus group participants. Some had managed to find paths which led them to higher pay and a role they were happy with. For some, their route was to work for a good employer that took an interest in their career and development. For others, success was driven by completing training, though the sector worked in was of huge significance in relation to the returns to training.

But for others, their progress had been less strong. For some of the mothers in the group, the need for flexibility and the lack of good quality part-time roles and a benefit system that did not incentivise movement onto higher pay were obstacles. For others, not having a degree had proved a barrier with employers preferring graduates when making promotion decisions. There was a widely-shared consensus that the labour market had become a less easy space to navigate, with this particularly important for young people. The participants understood the value that graduates could bring, and the insulation a degree provides from that harsher jobs market. But at the same time, many felt their own skills and experiences were undervalued, simply because they had not attended university.

These themes and potential policy responses to help create better routes for different kinds of non-graduates are discussed in the next section.

Conclusion and policy directions

The research presented here paints a mixed picture of the availability and quality of career routes for non-graduates. In this section, we weigh up that evidence, suggesting three key tasks government must take on in order to provide better opportunities for non-graduates. There are some notable headwinds which are likely to make that process more difficult but the current juncture represents a once-in-a-generation opportunity to improve the prospects of non-graduates.

Our analysis has identified important differences between the outcomes of different non-graduates. As would be expected, non-graduates with higher qualifications earn more than those with lower qualification levels but we have drawn attention to the importance of looking beyond qualification levels to consider how they interact with sector, gender and age. It is clear that for some, the non-graduate path has and continues to provide steady employment and decent earnings progression. Many non-graduates – particularly characterised by those in our ‘ladder climbers’ group – have been able to develop successful careers. But given having the right qualification in the right sector is important, identifying how to spread the lessons from these industries across the economy will be vital as our work suggests in most sectors, non-graduate tracks that offer the prospect of strong earnings growth are limited or non-existent.

But as well as spreading the routes that are currently proving successful, attention should be given to the challenge of reopening routes. A common theme in both the quantitative and qualitative analysis is the shift of graduates into non-graduate jobs, which potentially has negative consequences for non-graduates. A number of our focus group participants felt that employers had a preference – often unfairly – for graduates over non-graduates, even when the latter were more experienced and better qualified for the role. This development would be of concern to any non-graduate seeking a move into positions of greater responsibility but it is of particular significance to young people, many of whom fit in our ‘crashed careers’ group.

Beyond those routes that function successfully and where a stronger labour market would pay dividends for non-graduates, our analysis has identified that for a large proportion of non-graduate mothers, the current system is not working. For them, it is obvious that the creation of new routes is a priority. Our regression found that working part-time hampers the earnings growth of most non-graduate women, with only degrees (and to a lesser extent Level 3 academic qualifications), helping mothers to escape the trap of low pay that often comes with having children. The development and spread of better quality flexible and part-time roles has been the focus of organisations such as the Timewise Foundation.

Across each of these three areas, the significant upward impact of either employer training or gaining a degree, as well as better outcomes for those in large firms and flattened career trajectories suggests a need for better and continual skills improvement for those in work, with a role for government, particularly for those in smaller businesses where employers may

struggle to find such training cost-effective. The falling volume of workplace training is a concern given this finding.³⁶

And for new entrants taking the non-graduate route, it is key that vocational courses offer both an appropriate skills match to better paying sectors of the labour market, while a clear career progression path is offered to continually improve skills once in work. Our evidence has highlighted the importance of matching education to sector. The focus groups raised disappointment with careers guidance – both for current employees who had already moved through the education system and for teenagers today. Given the importance of appropriate skill-sector matches, the National Careers Service's role in helping lower earners and non-graduates to discover pathways and funding opportunities to higher-paying positions is just one approach that could be considered.

One barrier to such attempts however was the attitude expressed by many of our focus group participants towards training. For many, it was seen as something that was “nice to do” but often had little impact on their earnings or prospects. That was particularly the case with regard to apprenticeships, with only more ‘traditional’ apprenticeships in skilled trades felt to offer excellent opportunities.

Headwinds

Many of the issues raised above are not new ones. However, the combination of developments in the labour market and policy changes mean that the coming years are a moment of opportunity to establish a non-graduate system that works for more people. Failure to get to grips with these changes could leave us with a much more polarised labour market.

Perhaps the two biggest challenges to improving routes for non-graduates are both policies that could have positive impacts on non-graduates. The first, the National Living Wage (NLW) has already raised the wages of millions of workers since its introduction in April 2016, a welcome boost in its value after the National Minimum Wage (NMW) fell in real-terms for six years after the downturn began. But because of the size of the planned increases – the latest OBR estimate projects an NLW of £9 in 2020 – it is unlikely that employers will be able to maintain pay differentials between their lowest earners and those who currently earn above the pay floor.³⁷

Evidence from the NMW points towards two trends which may make non-graduate routes less clear, particularly in low-paying sectors where the NLW will have a larger effect. First, intermediate roles – roles that are paid at grades above the NLW – may be stripped out, with staff either on the NLW or at a supervisory wage. This removal of the rungs from the pay ladder may make the process of climbing out of low pay all the more difficult. But even where the structure of roles within a firm do not change, the pay gap between roles is unlikely

³⁶ F. Green, A. Felstead, D. Gallie, H. Inanc and N. Jewson, *What Has Been Happening to the Training of Workers in Britain?*, 2013.

³⁷ C. D'Arcy and G. Davies, *Weighing up the wage floor*, Resolution Foundation and CIPD, 2016.

to remain as wide in many low-paying industries and previous Resolution Foundation research for the Social Mobility and Child Poverty Commission highlighted that the low returns to promotions in hospitality and retail were discouraging low-paid workers from trying to progress.³⁸

Similarly, the introduction of Universal Credit should mean a simplified, easier to interact with benefits system with the most punitive withdrawal rates under the tax credit system reduced. As previous Resolution Foundation analysis has outlined, in its current form many of the hoped for improvements will not materialise, which may make progression for non-graduates all the more challenging.³⁹ As opposed to the well-known '16-hour rule' in the current system that incentivises parents to work 16 hours a week, UC may actually reduce that figure for some groups, particularly single parents. For second earners incentives to work at all are weakened. As our regression highlighted, part-time working is negatively linked to strong career prospects. This incentivising of 'mini-jobs' thus risks trapping mothers in particular in part-time employment. Another innovation of UC is in-work conditionality, which will see those working less than full-time hours potentially subject to sanctions if they do not. At best this approach will move people into sustained roles at the wage floor rather than placing the focus on helping recipients into better-paid work.

On both these concerns, the challenge is to reduce the impact that having children has on non-graduate women's careers. Particularly for the 'skilled-but-stuck' group, the lack of availability of better paid part-time opportunities and the high cost of childcare is likely to act as a significant barrier to higher earnings, with the effect more pronounced for non-graduate women than (generally higher-paid) graduates. Policies that help boost the supply of better-quality part-time roles and that increase their demand among women by making balancing employment and childcare an easier juggling act could help to boost the earnings of non-graduate women.

A stronger labour market with more graduate roles for graduates is the best solution to this issue of clogged routes. Monitoring metrics like graduates in non-graduate jobs and the proportion of workers moving between jobs, particularly important for those who are seeking vacancies to move into higher-paid positions, will be crucial. While we would expect much of the difference from pre-crisis levels on such measures to disappear as the labour market returns to full health, if there is little change in coming years, it may be that part of this shift is structural, requiring more of a response.

Ensuring the quality of training and apprenticeship – especially in light of the government's 3 million target and the growing role they are likely to play for both new labour market entrants and those already in the workforce – will be vital to making sure non-university routes are seen as an appealing alternative. Though much depends on its implementation, the

³⁸ D'Arcy, C and Hurrell, A. *Escape Plan: Understanding who progresses from low pay and who gets stuck*, Social Mobility and Child Poverty Commission/Resolution Foundation, 2014.

³⁹ For a roadmap to UC reform see D. Finch, *Universal Challenge: making a success of Universal Credit*, Resolution Foundation, 2016 and for more detail, see D. Finch, *Making the most of UC: Final report of the Resolution Foundation review of Universal Credit*, Resolution Foundation, 2015 or .

apprenticeship levy could well be good news for non-graduates. As Alison Wolf has described it, “apprenticeship levies remove the free-rider problem: if you have an apprentice, you get subsidies, and if you don’t, your levy goes to help support the training of other people’s.”⁴⁰ But overcoming the low quality and level of many apprenticeships, as the Social Mobility and Child Poverty Commission have repeatedly raised, will be a key challenge for the government.⁴¹ If the apprenticeship levy’s introduction is handled well with appropriate attention given to the quality of the training provided, it could do much to elevate non-graduate education. Failing to achieve this however risks undermining the apprenticeship brand, perhaps permanently.

⁴⁰ A. Wolf, “Beyond the degree delusion”, in eds. G. Kelly and C. D’Arcy, *Securing A Pay Rise: The Path Back to Shared Wage Growth*, 2015.

⁴¹ Social Mobility and Child Poverty Commission, *Apprenticeships, young people, and social mobility: The Social Mobility and Child Poverty Commission’s submission to the Apprenticeships Inquiry by the subcommittee on Education, Skills and the Economy*, 2016.

Annex A: Regression analysis method and results

Our analysis uses the BHPS from 1991 to 2008 to understand the impact of both qualifications and household characteristics on the earnings of non-graduates. It relates to adult individuals aged over 23 in the initial 1991 period but with positive earnings in the period 2006 to 2008, and therefore those aged up to 46 in the initial period.

The analysis excluded 'temporary sample members', which are individuals that were only temporarily captured in the survey data because they happened to be living with a permanent sample member, and were therefore not systematically tracked over time. The BHPS Wales, Scotland and Northern Ireland booster samples are not included in the analysis because they were not available in 1991, but to boost sample size a person with positive earnings in any of the years 2006 to 2008 are included. The analysis did not extend beyond 2008 because including the more recent BHPS sample from Understanding Society waves led to higher rates of attrition and so lower sample sizes.

To understand the factors associated with higher or lower earnings outcomes we ran OLS regressions on the log of gross weekly pay in 2006-08 using a wide range of time-invariant, initial and 'dynamic' characteristics. By 'dynamic' characteristics, we mean characteristics over the period 1991 to 2008. For characteristics measured in the form of continuous variables (e.g. household size, number of dependent children, etc), the 'dynamic' characteristic measures were specified in the form of the mean value calculated for each individual across every subsequent survey year for which there were observations.

For employment-spell related binary measures (e.g. whether or not working in a specific industry or occupation, specific whether or not job is permanent, whether or not job is part-time, etc), the 'dynamic' characteristic measures were specified as proportions of subsequent survey in which a particular characteristic was observed out of all those years where the individual was in employment.

Non-employment-related binary measures (e.g. whether or not caring for a dependent, whether or not currently undertaking training; whether or not living in a specific region, etc), the 'dynamic' characteristic measures were specified as proportions of all subsequent survey years where the individual was present in the data in which a particular characteristic was observed.

Preferred model specifications were identified using a stepwise regression approach, whereby the model initially using the full set of potential explanatory variables and then run repeatedly with insignificant variables successively removed from the model. The stepwise specifications were used as a starting point, with key variables (especially those related to education and training) added, swapped and/or removed until a robust and stable preferred specification was identified. In estimating the OLS regression models, the calculated standard errors are clustered according to the BHPS primary sample unit (PSU), but survey weights are not specified.

Because the analysis is focussed on only those individuals in the panel sample that were a non-graduate in the original wave & with positive earnings in 2008 the sample size for the analysis is relatively small (406 males and 745 females).

Table A.1: Determining factors of earnings – men

Variables	Co-efficient	Standard Error
Highest qualification: Level 2 academic	0.0132	(0.0701)
Highest qualification: Level 3 vocational	0.0844	(0.0588)
Highest qualification: Level 3 academic	0.218**	(0.0862)
Reported that future looks good	0.126**	(0.0527)
Gained a first degree	0.409***	(0.105)
Years of job-related training	0.295***	(0.107)
Years of self-employment	0.849***	(0.219)
Years made redundant or sacked	-0.472**	(0.225)
Years of employment	0.949***	(0.189)
Years of managerial responsibility	0.461***	(0.0637)
Working in a firm of 1000 or more employees	0.192**	(0.0958)
Working in a firm of 100 to 999 employees	0.147**	(0.0629)
Majority of years working in Education sector	0.478***	(0.129)
Majority of years working in Real Estate sector	0.459***	(0.117)
Majority of years working in Retail and Wholesale sector	-0.371***	(0.114)
Majority of years working in Construction sector	0.384***	(0.116)
Length of commute	0.158***	(0.0348)
<i>Control variables</i>		
Age in initial period	0.0423**	(0.0206)
Square of age in initial period	-0.000905***	(0.000315)
Living in East Midlands in initial period	0.0544	(0.0799)
Living in London in initial period	0.0130	(0.112)
Living in North East in initial period	-0.102	(0.106)
Living in North West in initial period	-0.204**	(0.0792)
Living in South East in initial period	-0.0498	(0.0756)
Living in South West in initial period	-0.0775	(0.0761)
Living in Scotland in initial period	-0.105	(0.0870)
Living in West Midlands in initial period	-0.0783	(0.0816)
Living in Wales in initial period	-0.201*	(0.120)
Living in Yorkshire and Humberside in initial period	-0.179**	(0.0793)
Mean job hours worked over period	0.0270***	(0.00475)
Control for attrition	0.0118	(0.0151)
Constant	4.582***	(0.367)

Source: RF analysis of British Household Panel Survey and Understanding Society data, 1991-2008

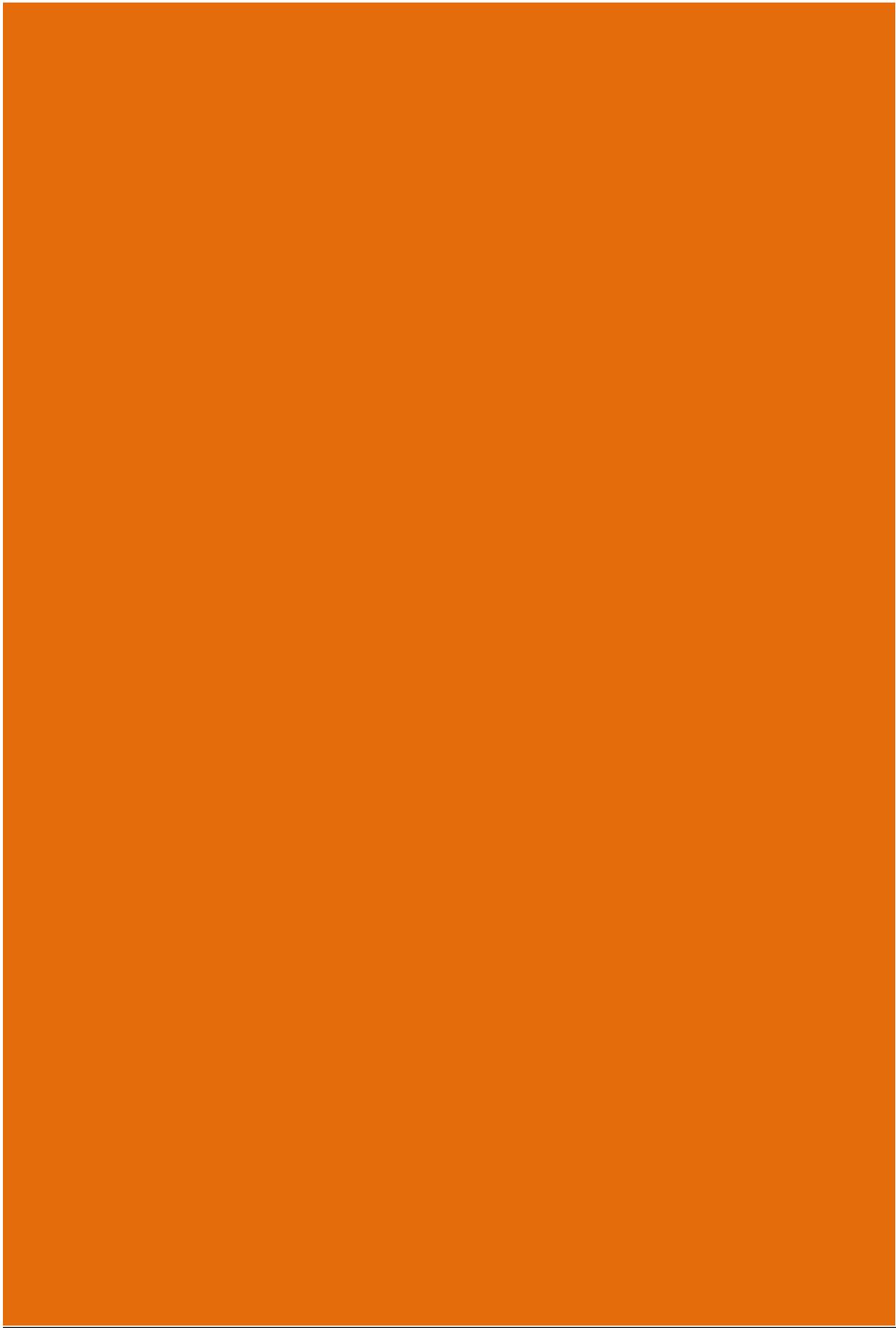
Notes: N=402; R-Squared=0.542; Asterisks denote significance of coefficients (*** p<0.01, ** p<0.05, * p<0.1)

Table A.2: Determining factors of earnings – women

Variables	Co-efficient	Standard Error
Highest qualification: Level 2 academic	0.0471	(0.0678)
Highest qualification: Level 3 vocational	0.00345	(0.0772)
Highest qualification: Level 3 academic	0.182**	(0.0865)
Attended a grammar or private school	0.117**	(0.0500)
Years caring for child aged 3 and under	-1.255***	(0.371)
Gained a first degree	0.268***	(0.0712)
Years of job-related training	0.147**	(0.0705)
Years worked part-time	-0.337***	(0.122)
Years of managerial responsibility	0.453***	(0.0775)
Years of employment	0.484***	(0.123)
Majority of years working in process operative occupations	-0.181*	(0.101)
Majority of years working in craft occupations	-0.161*	(0.0870)
Majority of years working in Other services sector	-0.245*	(0.133)
Majority of years working in Retail and Wholesale sector	-0.560***	(0.123)
Proportion of years unemployed	-1.395**	(0.597)
Length of commute	0.113***	(0.0274)
<i>Control variables</i>		
Age in initial period	0.0540**	(0.0211)
Square of age in initial period	-0.00101***	(0.000308)
Living in East Midlands in initial period	0.0879	(0.0650)
Living in London in initial period	0.214***	(0.0664)
Living in North East in initial period	0.0119	(0.110)
Living in North West in initial period	-0.0432	(0.0764)
Living in South East in initial period	0.0357	(0.0639)
Living in South West in initial period	0.0574	(0.0807)
Living in Scotland in initial period	0.121*	(0.0634)
Living in West Midlands in initial period	-0.00791	(0.0730)
Living in Wales in initial period	-0.0400	(0.0889)
Living in Yorkshire and Humberside in initial period	0.0494	(0.0650)
Mean job hours worked over period	0.0344***	(0.00516)
Control for attrition	-0.00209	(0.0192)
Constant	4.491***	(0.401)

Source: RF analysis of British Household Panel Survey and Understanding Society data, 1991-2008

Notes: N=402; R-Squared=0.542; Asterisks denote significance of coefficients (*** p<0.01, ** p<0.05, * p<0.1)





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