Ten years on – The Futuretrack Graduates

by

Peter Elias, Kate Purcell, Gaby Atfield, Erika Kispeter, Rosie Day and Stefanie Poole

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Warwick Institute for Employment Research
University of Warwick

Contact details
Peter Elias
Warwick Institute for Employment Research
University of Warwick
Coventry CV4 7AL
Tel: +44 (0)79 2053 1150
Email: P.Elias@warwick.ac.uk
https://warwick.ac.uk/fac/soc/ier

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The Futuretrack Team:
Peter Elias
Kate Purcell
Gaby Atfield
Erika Kispeter
Rosie Day
Stefanie Poole
Lynne Marston

Institute for Employment Research
University of Warwick
Coventry

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Summary

Futuretrack is a study which has followed a large and diverse group of people who applied for a three- or four-year undergraduate degree course in the UK in 2005/06. The aim of this study is to broaden our understanding of the relationship between knowledge and skills acquired in higher education, subsequent transitions into the labour market and career outcomes.

Study members were contacted during four earlier stages. This latest contact, the fifth stage, was made in 2019, some ten years after graduation for most participants. Just over 6,000 graduates responded via a detailed online questionnaire between March and October 2019, representing more than 2 per cent of the population of UK domiciled leavers from three- or four-year full-time undergraduate degree courses in 2009/10. Two hundred of the survey respondents also participated in telephone interviews between mid-September 2019 and early January 2020, adding richness and understanding to their survey responses.

Previous research by the authors of this report and others has done much to reveal the benefits of higher education, not just in terms of the increased earning power it confers relative to those who could enter higher education but do not do so, but also in terms of its non-pecuniary benefits, such as greater job satisfaction and the social value of one's contribution to society stemming from a higher education.

The Futuretrack cohort graduated into post-recession labour markets in 2009/10, where a significant proportion of graduates experienced difficulties in accessing employment that used and rewarded their knowledge and skills (Purcell *et al.* 2013). This fifth stage of the research aimed to investigate their subsequent career development and to provide robust policy-relevant findings about the factors that had affected or obstructed these graduates' longer-term labour market integration. Our objectives were:

- to assess the relevance of knowledge and skills graduates gained on their undergraduate degree programmes to their career trajectories;
- to reveal the opportunities and obstacles encountered in career development, in relation to educational, demographic and socio-economic characteristics;
- to investigate respondents' attitudes to employment, family-building and wider values;
- to clarify the variables that underpin differential access to graduate earnings and the graduate premium, and how this compares with and perhaps enables us to better understand the findings of recent studies which do not include qualitative as well as quantitative research;
- to investigate the longer-term impact of debt on respondents' access to opportunities and their evaluations of their investment in higher education;
- by comparing this cohort of 2009/10 graduates with an earlier cohort that graduated in 1995, to evaluate how far there has been change in the intervening period in the extent to which HE had enabled them to obtain appropriate employment for people with their knowledge, skills and educational achievement.

These are not new areas of research, but they all benefit from the breadth and scale of our study. Now in its fifteenth year, Futuretrack research continues to unfold the complexity of the graduate labour market, benefiting both those who choose a higher education and informing those responsible for sustaining it. We return to a broader discussion of the policy implications of our findings in the concluding chapter to this report. Here we outline some of the results we have obtained. Much more detail is contained within the ensuing chapters.

Graduate versus non-graduate jobs

We have shown in the previous stage of this study and from earlier research that a small but significant proportion of graduates move into and stay within what we term 'non-graduate jobs', jobs which do not normally require the knowledge, skills and expertise acquired via a university education. How far does this persist ten years on, and where it is still the case, is it the result of misclassification or does it reflect personal, structural, or educational obstacles to more appropriate graduate labour market integration?

Using a version of the Standard Occupational Classification developed to examine the relationship between higher education and occupational outcomes, respondents were distributed in the different categories of this classification according to the age at which they commenced their study, gender, socio-economic background, ethnicity, and the type of university they attended. Those who had embarked on undergraduate study when aged over 26, women rather than men, those from routine and manual backgrounds and black graduates were more likely to be in what we have classified as non-graduate employment. Those who gained their undergraduate degree from universities with high entry requirements appear to have been more likely to access graduate jobs.

While we observed differences between the range of skills used by those in graduate versus non-graduate jobs, more detailed investigation via the interviews suggested that very few of them were in employment that did not make use of and benefit from the knowledge and skills acquired through higher education. Most were in areas of employment where organisational restructuring and access to ICT has changed the division of labour in the workplace and the way that work objectives are met. Some were in low-paying sectors in the public or not-for-profit sectors where employers have been able to enhance the skill-base of their workforce, or (in the case of the latter) simply cannot afford to pay more when there is a ready supply of well-qualified and able workers willing to accept low wages. The minority who clearly were in lower skilled employment are likely to have been making choices that reflected lifestyle values, an issue explored further in the chapter on career motivations.

Graduate earnings

Prior research shows that a university degree confers what is termed a 'graduate premium', the extra earning power that can be attributed to having a degree. It has also been shown that not all degrees are equal in this respect. As others have found, variation in the graduate premium by subject of undergraduate degree is wide. But what role is there for employment history to influence earnings? Are female graduates now catching up with their male counterparts? How does social background impinge upon earning potential?

We confirm findings from research using other sources of information. An undergraduate degree confers a graduate premium and, relative to lesser qualified groups, the premium grows rapidly in the early years following graduation. But the financial rewards to a degree are mixed, with subject studied, type of institution attended and sector of employment playing a significant role in modifying the growth rate. We note also that employment continuity plays a major part in maintaining this premium. While only a small proportion of the graduates in this survey had experienced a long spell of unemployment, this was found to have a major impact on their earnings.

Social background at this stage was not found to be significant in the growth of the earnings of graduates in this cohort, but findings from earlier analyses (Elias and Purcell 2017) had shown how social background interacts with the education of young people from an early age, through school choices (or the lack of choice), the decision to apply for a place in higher education, parental support, and the experience of higher education itself.

An important factor that affects access to high earnings and wide graduate occupational choice is geographical location. Our findings reveal the considerable regional disparities in average graduate earnings. Some participants had experienced very limited geographical mobility throughout the course of their education and subsequent careers, and at previous stages of the Futuretrack research we found that participants who lived at home while they were studying, except for those living in London, were disproportionately from lower social class backgrounds. They were also more likely to have attended HEIs of a lower tariff than their prior educational achievements would suggest they could have accessed. This lack of early geographical mobility is replicated in their careers ten years after graduation, with those who are the least mobile embedded in social networks and economic settings that may not have provided them with the resources they required to develop their graduate careers.

By comparing the growth of earnings of this cohort with that of an earlier group we studied between 1995 and 2000, we go some way towards determining whether graduation into the post recessionary labour market for the Futuretrack cohort impacted upon their earnings. We find that, on average, this was not the case. However, this finding may mask some important differences between the progress of those who have done exceptionally well and those who have not.

The most important finding from our analysis of earnings relates to the persistence of the gender gap in the growth of graduate earnings, with men continuing to outstrip women. We conducted a comparison of gender growth rates in earnings for those in full-time jobs, contrasting the experiences of a cohort of graduates we investigated from 1995 to 2002 with those of the Futuretrack cohort, from 2012 to 2019. Somewhat depressingly, we found that no improvement in their post-graduation earnings growth rates has been made by female graduates over this 17-year period.

Student debt

While this cohort of graduates attended university and graduated before the introduction of higher course fees and loan repayment linked to future taxation, they did accumulate a significant amount of personal debt. Did this constrain their career choices and if so, in what ways?

We examined whether the debt that graduates had accrued by the time they graduated in 2009/10 could have had a long run and negative impact upon their future careers. Here our findings are mixed. We found that those graduates who told us in 2011 that their future options were limited by the debts they had accrued were earning less in 2019 than those who stated that they felt no such limitations. However, this finding appears to reflect the mix of subjects studied and type of university attended rather than the debts on graduation. There was substantial evidence from the interviews that many graduates regarded their student loans less as a form of debt than as an inevitable cost of study.

Postgraduate education

Many graduates we have tracked went on to take a postgraduate education. Often this is viewed as an attempt to stay ahead in the queue for good jobs, but is this what had motivated the graduates who chose to undertake a further degree? Who chooses a post graduate pathway into the labour market and why?

We investigated the role played by postgraduate qualifications in the labour market integration of this cohort. Analysing interview data on the motivation to engage in further study, we identified professional development and strategic career building as the two main factors. Avoiding or postponing or attempting to deflect the effect of the 2008 financial and economic crisis was also an important motivation to enter postgraduate education for many, despite the

scarcity of funding available to postgraduate students. We note the strong relationship between the professional career path being followed and the extent to which postgraduate education plays an important part in these pathways.

We found that 20 per cent of those graduates who work in jobs requiring postgraduate qualifications were employed on fixed-term contracts, compared to less than 10 per cent for other graduates holding postgraduate qualifications. Despite this potential insecurity, three quarters of those working in jobs that require postgraduate qualifications felt that their jobs were ideal or almost ideal for someone with their qualifications, compared to a half of other postgraduates, stating also that they had clear career plans for the next five years, were more optimistic about their career progression and more confident that they had the skills employers are looking for.

Career motivations

From the detailed transcripts of our interviews with graduates we were able to explore what is a relatively under-researched area, the motivational factors underlying the varying career pathways that we observe. How far is it possible to distinguish different pathways according to the values that graduates place on different aspects of their jobs?

Much of the research on the graduate labour market has focussed on earnings, equating earnings with successful labour market integration. One of the strengths of the Futuretrack study is that we can draw on information that permits a wider view of the benefits of higher education. We group respondents into those who placed a high value on financial rewards and prestige, those who placed more emphasis on social values and those who strongly valued job security. The benefit of longitudinal research is that we can track these values from an early stage, thus ensuring that they are not a *post facto* rationalisation of graduate outcomes. As expected, we find that graduates who value money and prestige are more likely to be found in higher paid, higher status jobs. However, this does not necessarily lead to greater job satisfaction. Those who emphasised social values tend to earn less, but they achieved outcomes that improved social well-being and derived success from such outcomes. Those who emphasised job security appear to have sacrificed other objectives in the pursuit of security, leading to lower levels of job satisfaction overall.

Social mobility

Higher education has traditionally been considered a driver of social mobility, enhancing the human, social and cultural capital of participants in a way that makes them more competitive in the labour market. Our previous research has shown that socio-economic background affected opportunities and choices throughout graduates' educational careers, but what is the impact now, ten years after graduation? Does higher education participation benefit all people equally or can it promote and protect some while entrenching disadvantage for others? How does social class interact with other factors, such as gender and ethnicity, to shape the opportunities of graduates and their trajectories as they develop and consolidate their careers?

By comparing the occupations of graduates with those of their parents, we examined intergenerational patterns of social mobility and found that upward mobility was very common with the majority of this cohort of graduates now being employed in managerial and professional occupations. This is very encouraging, but within this positive overall picture, we find important differences in the experiences of graduates as their careers develop.

We find that although graduates from routine and manual background progress into the higher social classes, the position that they occupy within these classes tends to be lower, and they earn less. They enter lower managerial and professional roles, and they are more likely to stay there – they are able to get in, but they are not as able to get on. The qualitative accounts

provided by graduates confirm this, and also highlight the ways in which gender and ethnicity have interacted with these broad patterns to limit opportunities for some. While the majority of the cohort emerged from the last recession with limited obvious 'scarring', at the time we conclude this study a looming post-Covid 19 recession is on the horizon, presenting further challenges. Will the gains we have seen prove to be more precarious than it first appeared? In a stalling and shrinking labour market, who will have the experience, strategies, and dispositions to maintain their position, and will the 'glass floor' protect the most advantaged from what lies ahead? We will turn to this issue in the next stage of this continuing study.

Looking ahead

The relevance of these findings, explored in greater detail in the following chapters, should be considered within the social and economic environment prevailing as this specific group of graduates made their way into the labour market in the second decade of the 21st century. Most of them graduated at a time when the global economy had been shaken by a major recession, yet among our respondents, we found little obvious evidence of 'scarring' from this experience. We can conclude with some confidence that this 'Class of 2009/10' had benefited from their higher education and were making strong contributions to the economy and society. But at the time we concluded this study, neither we nor any of the respondents could have known what lay ahead. Now, with a looming post-Covid 19 recession, the cohort faces further challenges. Will they find that the strategies and dispositions they developed to deal with the previous recession make them better equipped to weather what lies ahead? We will turn to this issue in the next stage of this continuing study.

Policy Implications

The information collected and analysed at this fifth stage of the Futuretrack Longitudinal Study has enabled us to assess and attempt to achieve better understanding of how far the different clusters of knowledge and skills that these 2009/10 graduates acquired in HE has enabled them to obtain appropriate employment, develop careers and contribute to the economy. We have focussed on three longer-term outcomes: their occupations, their earnings, and the non-pecuniary aspects of their jobs. We looked at the routes they took to achieve these outcomes, sometimes via postgraduate education or further professional training, and examined the intergenerational mobility they experienced. We provide evidence that has addressed these questions and our findings are summarised earlier in this concluding chapter and discussed more fully in the report.

We conclude by identifying key areas where new or invigorated directions for policies are required, along with research priorities that we hope can be addressed in the future:

- Employers, professional associations, and governmental policymakers must address *the continuing and growing gender gap in graduate earnings,* a matter of increased concern that needs intensified scrutiny and greater efforts by all these bodies through further concerted actions, initiatives and policies designed to tackle this issue. The gender gap in graduate earnings may emerge through the recruitment of more male graduates than females to higher paid jobs within an organisation, via gender-biased promotion within organisations or both. Annual gender pay gap reporting is currently required of all organisations with more than 250 employees. Such reporting puts a public spotlight on organisations with large gender pay gaps, especially those that employ significant numbers of graduates. This, in turn, can cause employers to think more about the reasons underlying gender pay differences and act to remedy the situation. It is important that such information is made publicly available to potential employees. *We recommend that gender pay gap reporting should be extended to organisations with fewer than 250 employees and should be presented in a manner that identifies the gender pay gap within the highly qualified workforce.*

- HEIs, employers and policy makers need to consider *how to prevent the seeming ossification of social mobility* to achieve fairer access to opportunities, which would almost certainly bring more innovative contributions to economic development and socially representative participation at the higher end of the labour market. The access and admissions policies of higher education institution are now monitored by the Office for Students. An independent review of the effectiveness of such monitoring activities is currently in progress, to inform the ways in which higher education institutions will be required to develop a strategic approach to fair access policies, and to establish their monitoring and assessment regimes. *We urge the Office for Students to include tough penalties to be applied to higher education institutions that fail without good reason to deliver improved access for potential students from disadvantaged backgrounds and to ensure their retention within higher education.*

- Graduate earnings have long been one of the key outcome measures used by policy makers to evaluate not just the apparent success of actions to expand higher education, but now form part of the outcome measures to evaluate individual higher education institutions. The availability of new and large-scale continuous sources of information, brought together in the Longitudinal Educational Outcomes datasets. We have shown in this report the importance of including information on hours worked and location in these data and we support further calls to this effect[1]. More importantly though, while we recognise the value of monitoring and evaluating individual financial rates of return, we advocate the *development of an effective means of recognising and monitoring the wider benefits of graduate study to individuals, communities, and society as a whole*. It has been widely acknowledged that, in addition to the obvious measurable financial benefits of higher education participation, there are other less-easily-measured impacts on individual well-being and capacities, and on the communities and societies to which they contribute[2]. Recent calls to make progress on this issue have been made by Universities UK[3] and within the Independent Review of the Teaching Excellence and Student Outcomes Framework[4]. *We strongly support these calls to develop indicators of the wider benefits of higher education and propose that the Office for Students should spearhead this work.*

- Detailed and up-to-date *analysis of earnings differences by subject of degree and the knowledge and skills acquired* can provide useful indicators on the emergence of skills shortages or over supply of graduate labour. For example, aggregations of subjects such as STEM are justifiable, useful, and revealing, but disaggregation within them, and even more, within heterogeneous subjects such as Interdisciplinary and the Biological Sciences, would provide better labour market information about the knowledge and skills sought by employers and used in graduate recruitment. *This is an area where further statistical cooperation between the Department for Education, the Higher Education Statistics Agency, the Department for Work and Pensions, HM Revenue and Customs, and the Office for National Statistics could lead to significant improvements in the identification of over or under supply of specific graduate skills and knowledge.* Making such detailed information available in a timely manner could help potential students with their subject choices, assist institutions with curriculum

1 Department for Education, 2021.

2 See, for example Wilson and Pickett, 2009, Pascarella and Terenzini 2005, Brennan *et al.* 2013.

3 Snelling, C. and R. Fisher, 2020.

4 Department for Education, *op. cit.*

planning and provide employers with vital data for planning recruitment and pay strategies.

- Finally, *we recommend the continuation of long-term longitudinal studies of graduates and the creation of new such studies to enable further cross cohort comparisons of graduates' careers and* opportunities. When we commenced the Futuretrack Study in 2005, we could not have foreseen the value of the study fifteen years into the future. Support for the continuation of this study and for new cohort studies is vital. In this respect we are fortunate in gaining further funding from the Nuffield Foundation to follow the Futuretrack cohort as they navigate their ways through the Covid 19 pandemic.

The characteristics of respondents

As with any longitudinal study, those who have remained within the study through its fifteen-year life can no longer be viewed as a random sample of the original population – all those who applied for a place in higher education in 2005/06. Our earlier reports reveal the extent of this bias, indicating that the sample now consists of those who had higher entry grades than the average. For this reason, we caution about generalising our findings to the broader cohort of graduates who gained their first degrees in 2009/10. Where possible we have tried to take account of this in the analyses presented in this report. However, the best approach is to view all the results as pertaining to a relatively successful cohort of graduates. In what follows we report on the characteristics of respondents who replied at this, the fifth stage of our enquiry.

The sample of survey respondents is predominantly of white ethnic origin (91%, most aged 31 to 33 (85%), while 20% came from what is termed 'routine and manual' social backgrounds, based upon the occupation held by their father or mother when they were 14 years old.

Male graduates who had studied in the Physical Sciences, Maths and Computing and Engineering Technologies constitute more than one third of all male respondents. For women, over a third had studied subjects at the undergraduate level in Subjects Allied to Medicine, Biology, Veterinary Science, Agriculture and Related, and Interdisciplinary Subjects.

Most were now working as full-time employees, although 7 per cent were self-employed. Over three quarters of the respondents stated that they were engaged on a permanent or open-ended contract, with 11 per cent stating that they had a fixed term contract. More than one in six of those in employment were holding more than one paid job at the time they were surveyed.

Female graduates were more likely to be employed in public service sector jobs (central, local government, health, and social services). More male than female graduates were employed in the information and communication industries, banking, finance, insurance and in other business services.

Major Groups 1, 2 and 3 of the Standard Occupational Classification (Managers, Directors and Senior Officials, Professional Occupations and Associate Professional Occupations) accounted for more than 90 per cent of the jobs they were holding. Geographically, the majority were working in the Greater London area and the South east of the country, particularly men, with almost 40 per cent of the sample working in these areas. Almost one in eight of the male respondents were working outside the UK. Only half as many female graduates were working outside the UK.

1. Futuretrack - the study and the research questions

Futuretrack is a cohort study, initially consisting of a large sample drawn from the approximately half million people who applied for a degree course at the undergraduate level in the UK higher educational (HE) system in 2005/06. The aim of this study was then, and still is, to broaden our understanding of the relationship between knowledge and skills acquired in higher education, subsequent transitions into the labour market and career outcomes. This report is based upon information gathered in 2019 at what is termed 'Stage 5', the fifth occasion upon which we contacted members of the cohort. Prior to Stage 5, the last contact with cohort members was at Stage 4 in 2011/12. The research findings presented here are based upon their accounts of what they are doing now and their experiences over this ten-year period. Details of the earlier stages and the research findings from previous stages are shown in the box below.

Futuretrack – scale, timeline, methods, and earlier findings

In 2005 the Universities and Colleges Admission Service (UCAS) granted permission for a link to a questionnaire to be emailed by the Futuretrack research team to all applicants for a place in a UK higher education institution in the 2005/06 academic year. Over 128,000 applicants responded to this first stage of the study. Contact with participants has continued via email, using web-based survey instruments to collect information. Approximately 200 survey respondents gave much additional information via telephone interviews, allowing the research team to explore issues in greater depth than could be realised through survey methods alone.

As with any longitudinal study, participation has declined through time. At Stage 2 (2007) and Stage 3 (2009 and 2010), 50,000 and 31,000 responded respectively. From Stage 4 (2011/12) the focus narrowed down to those who had completed an undergraduate degree, with 17,000 responding. Stage 5 (2019), the focus of this report, attracted responses from 6,000. This level of attrition, which was expected given that the study relied on electronic contact details only over a 14-year period, gives rise to biases in the characteristics of those who remain in the study. However, with access to the information originally supplied by UCAS applicants, we have been able to monitor these biases and to allow for their impact upon research findings through what is termed 'data weighting' (see Appendix 1 for details).

All the research findings from the earlier stages, together with the survey questionnaires, can be found at https://warwick.ac.uk/fac/soc/ier/futuretrack/.

Graduate cohort or 'tracking' studies as they are sometimes called, are not new. Other UK studies will continue to provide similar information, such as participants in the *Millennium Cohort*, many of whom are now enrolled in HE, *Understanding Society* with its household-based approach, *Next Steps* based upon a cohort of 13 and 14-year-old secondary school children in England in 2004, and *the Longitudinal Education Outcomes* dataset, a study based on linked school, HE, and tax records. But there is a gap here marked by two events external to the graduate labour market. In 1998, a means-tested contribution towards tuition fees had been introduced in England and gave students whose families could not afford to fund their fees access to (at that stage) interest-free student loans. The Futuretrack cohort was the last cohort to embark on HE with the requirement to pay a maximum of only £1,000 *per annum* prior to the escalation of tuition fees to full cost in subsequent years. Consequently, although they graduated with average student debt of £20,000, this was considerably lower than for subsequent cohorts. Exploration of the impact of debt on graduate careers will benefit from the baseline that Futuretrack provides. What was not anticipated at the outset of the research was that they would graduate into the recession following the international banking crisis of 2008-9. The findings reported in the Stage 4 report bear witness to the challenging labour market they faced. Many high achieving, well-qualified, enterprising, and lucky graduates nevertheless accessed excellent opportunities and were well on the way to building successful

graduate careers, but a substantial proportion had failed to achieve their aspirations (Purcell *et al.* 2013:24-5).

1.1. The research issues

The research findings in this report focus around five areas. Each area and the research questions that are addressed within that area are as follows:

The jobs that graduates do and the fit between these and their undergraduate studies. The expansion of higher education and policies to widen access to it has led to an increasingly diverse and graduate labour supply. Graduate underemployment, with significant proportions of graduates initially experiencing difficulties in accessing well-paid career opportunities, was exacerbated by the 2008-9 recession as the Futuretrack cohorts completed their undergraduate studies. Ten years beyond graduation, how far have they been able to achieve their career aspirations, and how far are they in jobs that require and use their knowledge and skills? What does their current employment profile tell us about the fit between higher education and the graduate outcomes?

Graduate earnings. Prior research shows that a university degree confers what is termed a 'graduate premium', the extra earning power that can be attributed to having a degree. It has also been shown that not all degrees are equal in this respect. As others have found, variation in the graduate premium by subject of undergraduate degree is wide. But what role is there for employment history to influence earnings? Are female graduates now catching up with their male counterparts? How does social background impinge upon earning potential?

Student debt. While this cohort of graduates attended university and graduated before the introduction of higher course fees and loan repayment linked to future taxation, they did accumulate a significant amount of personal debt. Did this constrain their longer-term careers and if so, in what ways?

Postgraduate education. Many graduates had gone on to take a postgraduate qualification. We know from the Stage 4 analyses that a substantial minority undertook study for a further degree as an attempt to stay ahead in the queue for good jobs, but how far *did* higher-level qualifications lead to career advantage? At Stage 4, their achievement of postgraduate qualifications had been too recent to enable evaluation of this investment, but Stage 5 allows us to do so with greater confidence. What had motivated the graduates who chose to undertake a further degree and how far have these qualifications increased their ability to enter and develop the careers they aspired to?

Career motivations. From the detailed transcripts of interviews with graduates we were able to explore what is a relatively under-researched area, the motivational factors underlying the varying career pathways that we observe. How far is it possible to distinguish different pathways according to the values that graduates place on different aspects of their jobs?

Social mobility. The extent to which participation in higher education has facilitated social mobility and greater equality of opportunity for socially disadvantaged graduates or merely reinforces existing patterns of advantage and disadvantage has been a key theme in graduate labour market research for decades. It is well-established that young people from managerial and professional backgrounds continue to be significantly more likely to participate in HE. They predominate numerically in the Futuretrack sample. But what can careful analysis of the survey data relating to the socio-economic occupational origins, educational histories, and current employment outcomes, along with detailed survey accounts of experiences, tell us about the incidence and extent of social mobility among the sample members?

The situation faced by these graduates in 2019 and early 2020 has changed so radically in the space of a few months as the Covid pandemic swept the globe. The life altering consequences of this event may have impacted upon the plans of many of the respondents as described at this stage in the study. Some may benefit in various ways from this changing environment, but others will now be facing an uncertain future, and one for which the higher education they gained, and their subsequent experiences, may leave them with little advantage. However, it is important to document this point in their lives immediately prior to the pandemic. Stage 6 of the study –conducted late in 2020 and to be published in 2021 will examine the initial impacts of the pandemic on the Stage 5 respondents described in this report.

This report is presented in nine chapters. Following this introduction, Chapter 2 gives an overview of the characteristics of those who responded to this stage of the study, covering their main economic activity at the time they were surveyed, their contractual situation, the sectors in which they work, their occupations, gender, age and geographical location, their use of knowledge and skills in different graduate labour markets, some of which were imparted via their higher education, others gained via their experiences since graduating. Chapter 3 focusses in on the changing graduate labour market and addresses the question 'What constitutes a graduate job?', highlighting the problem of relying upon any simple method for distinguishing between what we and others have in previous studies labelled 'graduate' as opposed to 'non-graduate' jobs. Chapter 4 investigates respondents' earnings, analysing the factors associated not just with their earnings in 2019, when the Stage 5 survey data were collected, but more importantly with the growth of their earnings from 2011 to 2019. Chapter 5 examines the possible long-run impact of student debt on the opportunities and constraints that respondents have experienced. Chapter 6 broadens this economic perspective on graduate labour market outcomes to consider other measures of success and the impact personal values have had on respondents' career paths to illustrate the wider benefits of higher education. Chapter 7 looks at the role played by postgraduate study and training in shaping the careers of those who gained their undergraduate degrees in 2009/10. Chapter 8 focusses on the barriers and facilitators respondents have encountered in accessing and progressing in higher level employment. Finally, in Chapter 9, we draw together the findings from all the preceding chapters to illustrate how they successfully engage with and address our original aims and objectives. We end by identifying policy and research recommendations identified as priorities by our research findings.

2. The Futuretrack graduates – where were they 10 years on?

2.1. Characteristics of respondents and their economic activity

This chapter outlines the characteristics of the 6,052 Stage 5 respondents at the time they replied to our survey in 2019, explores the employment and work situations of those who were economically active, discusses how they had got to their current jobs and concludes by considering the relationship between the knowledge and skills they had acquired as undergraduates and these employment outcomes.

Female graduates constituted 62 per cent of the achieved sample of respondents. Table 2.1 shows the distribution of the sample by their age at the time of application for a place in higher education in 2006, ethnicity and social background. In terms of their current ages, just under two thirds of the male graduates and almost 60 per cent of the female graduates responding at the stage of the study were aged between 29 and 31. Respondents were predominantly white (90 to 92 per cent) with the largest non-white group being those of Asian ethnic origin. The social background information is based upon the occupations of the parents of respondents when the respondent was aged 14. Just under two-thirds came from professional and managerial social backgrounds and approximately one in five from routine and manual occupations.

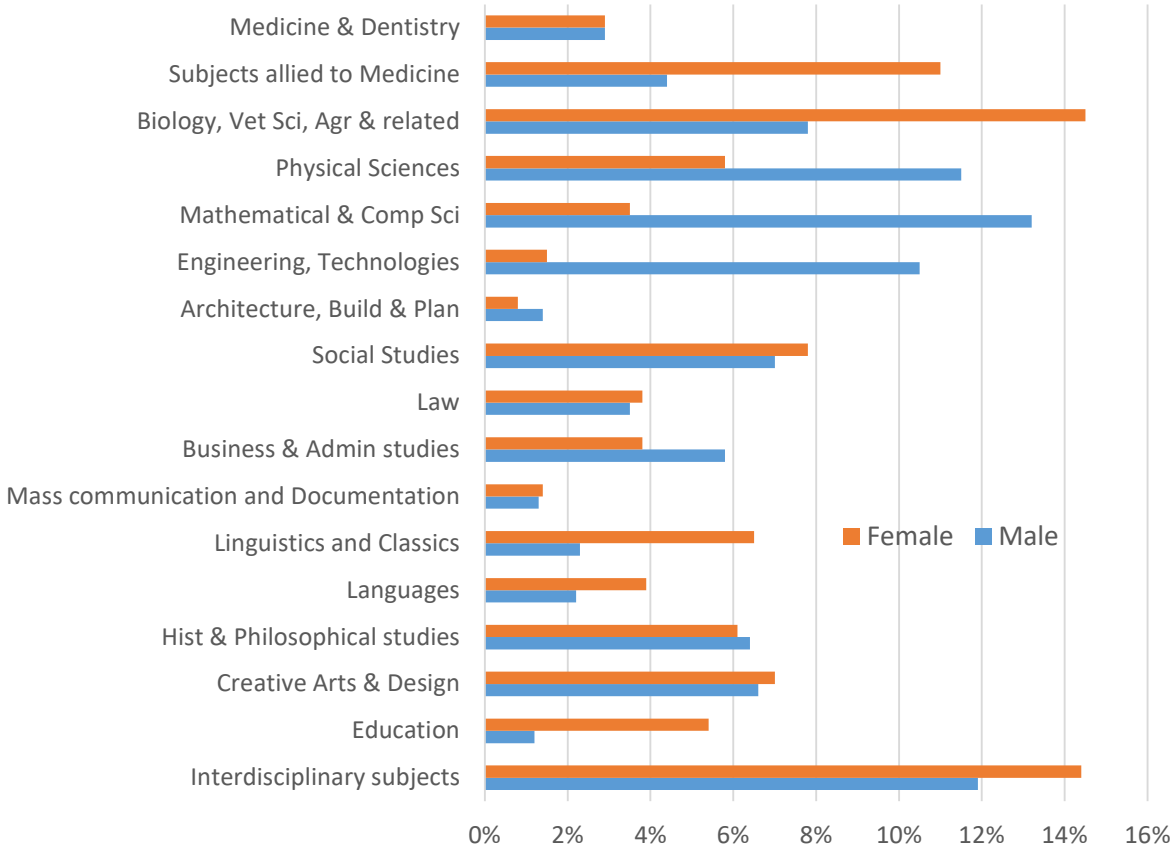
Table 2.1 Distribution of the age group, ethnicity, and social background of the sample by gender

		Gender	
		Male (%)	Female (%)
Age group (as at 30th Sept 2006)	18 and under	63.4	59.3
	19-20	24.2	25.1
	21-25	5.8	6.1
	26 and over	6.6	9.5
Ethnic group	Asian	4.6	3.4
	Black	0.9	1.4
	White	90.7	91.6
	Mixed	2.9	3.0
	Other	0.9	0.6
Broad socio-economic background	Managerial and professional occupations	64.3	60.8
	Intermediate occupations	16.6	18.8
	Routine and manual occupations	19.2	20.4

Source: Futuretrack Stage 5 (n=6,052)

Figure 2.1 shows the distribution of respondents in terms of the grouped undergraduate subject areas of their degrees. Male graduates who had studied in the Physical Sciences, Maths and Computing and Engineering Technologies constitute more than one third of all male respondents. For female graduates, over a third had studied subjects at the undergraduate level in Subjects Allied to Medicine, Biology, Veterinary Science, Agriculture and related, Linguistics & Classics, and Interdisciplinary Subjects. Interestingly, Medicine & Dentistry, Social Studies, Historical & Philosophical Studies and Creative Arts & Design did not have significant differences in their gender balance – but of course within all these broad specialisms, male and female students tend to cluster in different areas of specialism.

Figure 2.1 Distribution of respondents at Stage 5 by undergraduate subject studied and gender



Source: Futuretrack Stage 5 survey, all respondents (n= 5,942)

The majority of respondents were economically active. As shown in Table 2.2, three quarters of the respondents were in full-time employment, with more men in full-time jobs than women, reflecting the fact that part-time employment among this cohort of graduates, as in the labour market generally, was lower for men than women. Equal proportions of male and female graduates in the sample classified their main activity as self-employment (7 per cent). Other categories (voluntary work, study/training, unemployed) accounted for a small proportion of all the main economic activity statuses recorded by the sample, except for the category 'economically inactive' which accounted for nearly one in twenty of all the women respondents, reflecting the beginning of the family-building stage of their lives. Only a very small percentage of the male graduates fall into this category, primarily because they are waiting to take up a job or are retired.

Table 2.2 Main economic activity by gender

	Males(%)	Females (%)	All **(%)**
Full-time employee	83.5	70.4	75.5
Part-time employee	4.2	14.3	10.4
Self employed	7.1	7.2	7.2
Voluntary work	0.6	0.4	0.5
Study/training	1.4	2.2	1.9
Unemployed	1.7	0.9	1.2
Economically inactive	1.4	4.5	3.3

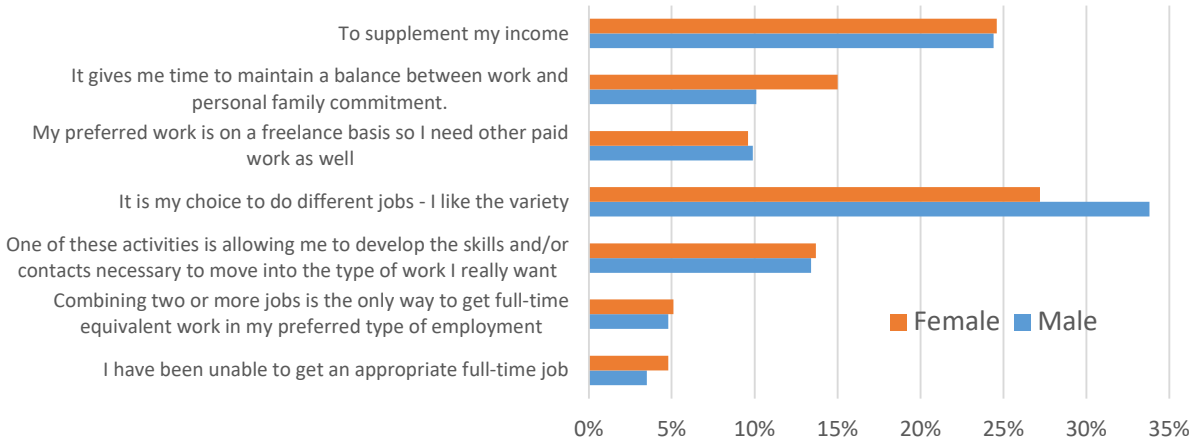
Source: Futuretrack Stage 5 survey, all respondents (n=6,040)

Conversely, more detailed analysis revealed that there were almost identical patterns of contractual situations among women and men. Over three quarters of the respondents stated that they were engaged on a permanent or open-ended contract, with 11 per cent stating that they had a fixed term contract.

Surprisingly, we found that more than one in six of those in employment were holding more than one paid job at the time they were surveyed. Of these graduates, three quarters had two current paid jobs, the remainder had three or more. We provided a list of reasons for respondents to state why they were engaged in multiple job holding, with each reason having three categories of response indicating its importance ('a great extent, 'some extent', 'not at all') and with respondents choosing as many of the reasons as they wished.

Focussing exclusively on the reasons that were categorised as being important to a great extent, Figure 2.2 shows the reasons they gave for multiple job holding. It is reassuring that for both men and women, the most frequently given reason was that they liked the variety, but less so, perhaps, that the second more frequent one was to supplement their income. Significantly more female than male graduates indicated that an important reason for their multiple job holding was that it gave them the opportunity to maintain a balance between work and family commitments.

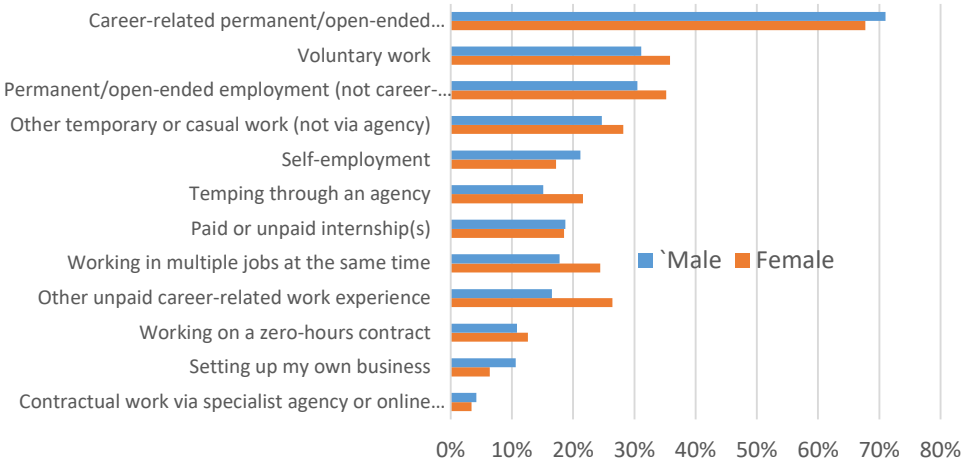
Figure 2.2 Reasons selected by multiple job holders for having more than one job as being important 'to a great extent' by gender



Source; Futuretrack Stage 5, all employed and self-employed multiple job holders (n = 1,243)

It is important to bear in mind that these graduates entered the labour market in the wake of the 2008 recession. Figure 2.3 shows the variation by gender in the range of work-related activities that respondents had been engaged in since graduating. These experiences reflect the challenging labour market that they had entered in 2009 and 2010, and there was widespread reference to this in the interviews that were conducted. Looking back over the nine or ten years since graduating, 18 per cent of respondents had worked at some stage in temporary agency work, 27 per cent in other temporary, fixed-term or casual work, and 12 per cent had been employed at some stage in this period on zero hours contracts. Of those, more than half had taken that employment because they could not find an appropriate permanent job at the time. Nineteen per cent had done paid or unpaid internships since graduating and 21 per cent had had other unpaid career related work experience.

Figure 2.3 Participation in work-related activities since graduating, by gender

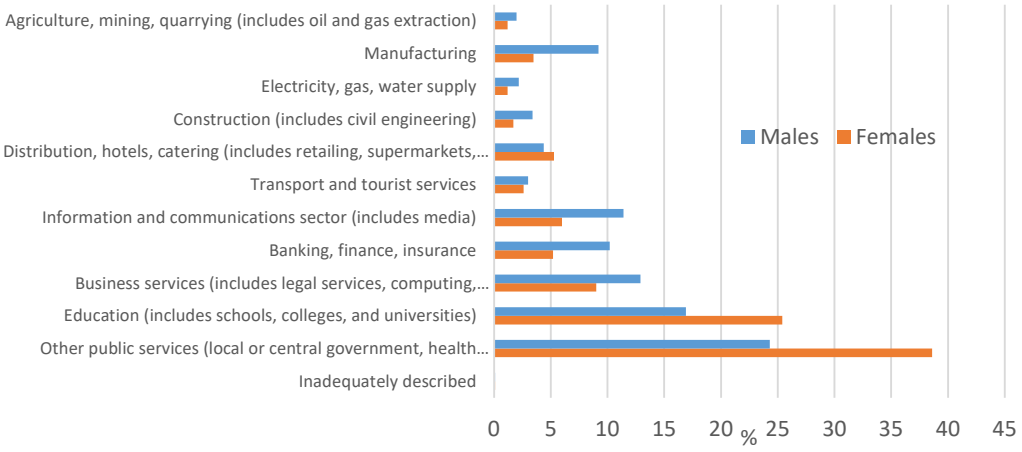


Source: Futuretrack Stage 5 Survey, all employed and self-employed (n= 5,164). Percentages are of the proportion of all employed males and females who had participated

2.2. Current labour market contexts

Figure 2.4 shows the sectors in which they were employed, with significant differences apparent between the sectors in which men and women were working. Women are much more likely to be employed in public service sector jobs (central, local government, health and social services). While this sector remains as the major employment sector for male respondents, there are more male than female graduates employed in information and communication industries, banking, finance, insurance and in other business services.

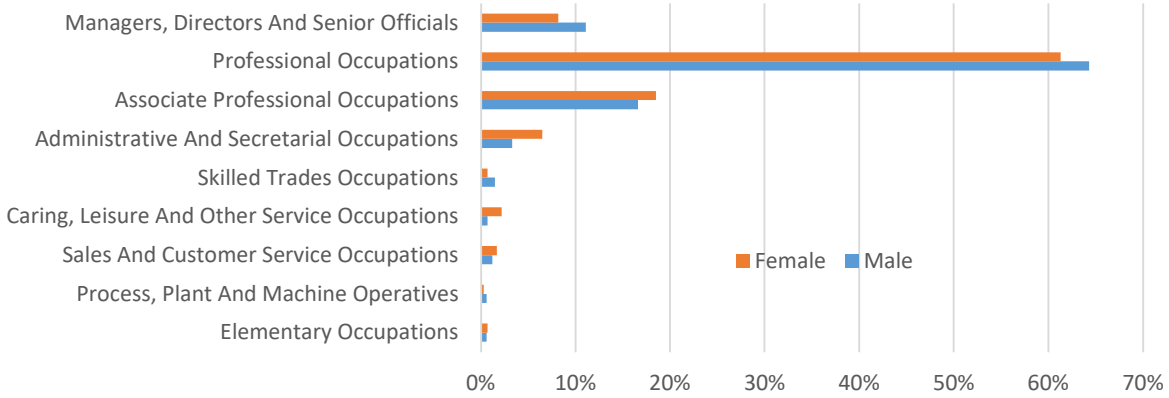
Figure 2.4 Sector of current employment by gender



Source; Futuretrack Stage 5, all employed and self-employed (n = 5,534)

The distribution of the occupations in which these graduates are working is shown in Figure 2.5. Classified according to the major group structure of the 2020 version of the Standard Occupational Classification (SOC), we see that over 60 per cent of men and women are working in Professional Occupations. The second most populated category of jobs are those classified as Associate Professional, while Manager, Directors and Senior Officials make up approximately one in ten of all the jobs held by these graduates at this stage in their careers. A small but significant proportion of the jobs they hold fall within major Groups 4 to 9 of the SOC, occupational areas where we would not expect highly qualified people to be employed. This is an issue that is investigated in more detail in chapter 3.

Figure 2.5 Major occupational group by gender

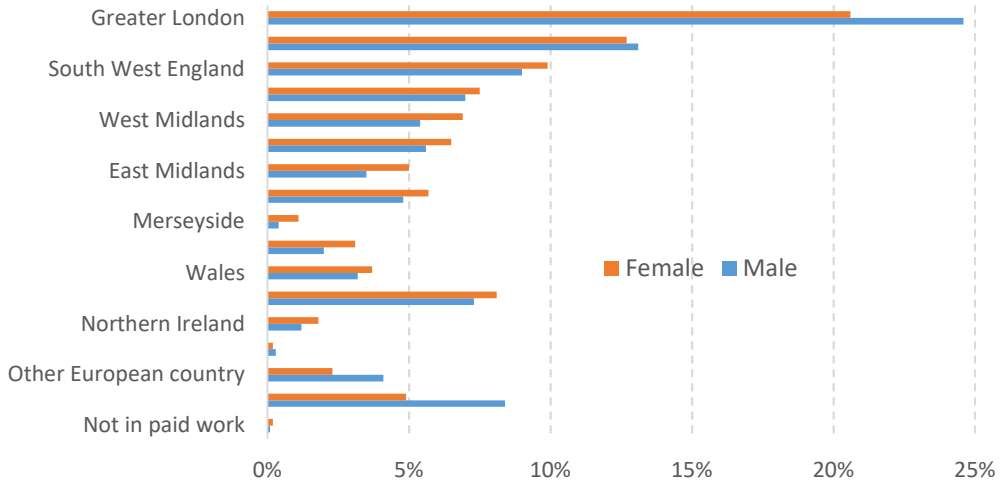


Source; Futuretrack Stage 5, all employed and self-employed (n =5,505)

Figure 2.6 shows that, since graduating, many have moved around the UK and abroad. Nine to ten years after graduating, we find that the majority were working in the Greater London area and the South east of the country, particularly so for men, with almost 40 per cent of the sample working in these areas. Figure 2.6. reflects responses to the question "Where do you currently work?[5]" When we contacted them, in 2019, 12 per cent of male and 6 per cent of female respondents were working outside the UK.

[5] Respondents were also asked, "Where do you currently live?" and this and some of the interview accounts revealed substantial commuting between home and work for a minority of employees; an

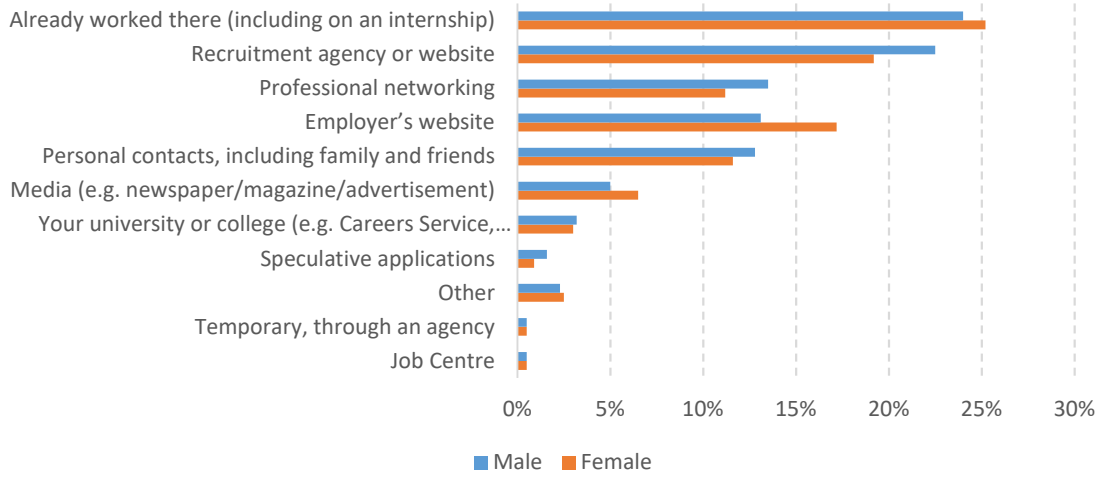
Figure 2.6 Geographical distribution of respondents' place of work by gender



Source: Futuretrack Stage 5 survey, all respondent (n=5,914).

Figure 2.7 shows how respondents first heard about their current jobs.

Figure 2.7 How respondents first learned of their current job



Source: Futuretrack Stage 5 survey, all in employment or self-employment (n= 5,518).

Given that these graduates had been in the graduate labour market for around ten years, the fact that approximately a quarter were in promoted posts is not surprising. The fact that the second most frequently cited source was a recruitment agency or website illustrates how significant these intermediaries have become as a source of graduate recruitment. Figure 2.2. showed that around the same proportions of respondents had worked in agency *temporary* work at some time since graduation, with females more likely to have done so than males, but the incidence reported of having learned of their current jobs through an agency reflects permanent placements and professional and managerial sub-contracting. Males appear to have been more likely to have learned of their jobs via recruitment agencies or websites and networking, and females via researching employers' websites, which may reflect their different sectoral and occupational profiles rather than gender differences *per se*. Traditional media advertising and university careers advisory services had continued to be

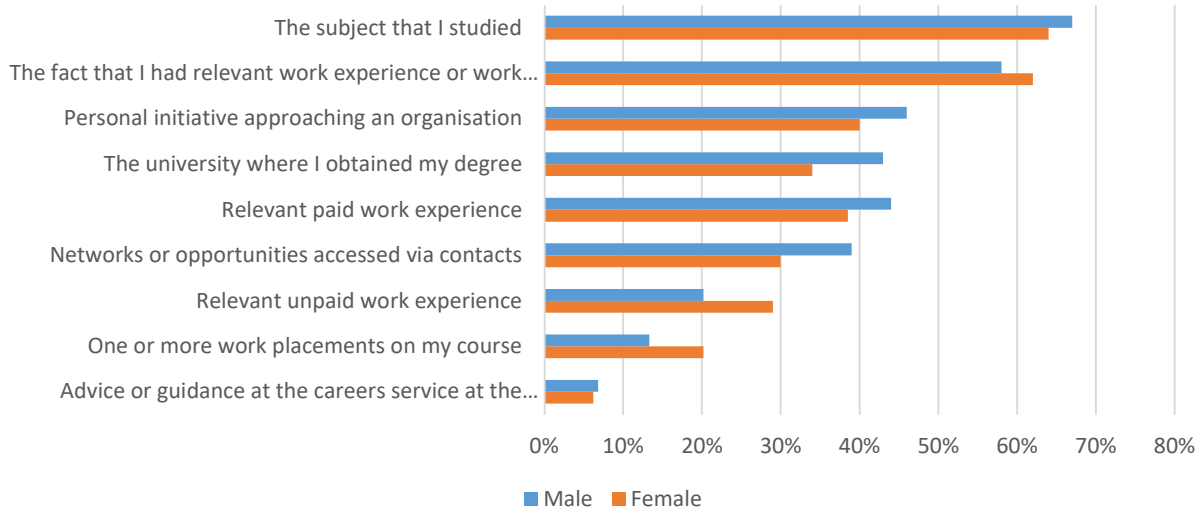
area of investigation that requires detailed analysis that will be undertaken and published as a separate working paper.

useful sources of information for some respondents. The interview data cited below illustrates how personal and professional networking had become important as their careers developed, and how family and friends continued to be reported as an important source of intelligence about employment opportunities.

Among the 'other' category and overlapping with the recruitment websites, a substantial minority reported having been headhunted by professional management or specialist recruiters, employers, previous employers, clients they had encountered in the course of their work or via Linked In, a small number had set up their own companies and some had progressed to paid employment via voluntary work.

Respondents were presented with a set of factors that could have been helpful in enabling them to get their current jobs, with multiple choices recorded. Figure 2.8 shows the factors that they considered had been helpful.

Figure 2.8 Factors considered helpful in accessing current job[6]



Source: Futuretrack Stage 5 survey, all employed and self-employed (n= 5,451)

Although survey respondents most often cited their educational qualifications as important having been required to obtain their jobs, those who were interviewed often mentioned personal attributes, previous work experience and soft skills. Obviously, the requirements of different jobs vary widely, but for most respondents at this stage of their careers, the qualifications and educational achievements provided the essential entry ticket to enter job markets where they were increasingly evaluated based on being able to provide evidence of successful performance in other work roles. The following two examples contrast a very traditional established professional role with a more recent and precarious area of employment.

> "*I think the fortunate thing I have in my particular area of work is that private client work is relatively sought after, because there are less people going into it. So, that put me at a slight advantage to other areas. Conveyancing is normally the area that gets hit when you have sort of a recession, because less people are buying houses. Whereas private client work is always popular for work because it involves managing people's estates when they pass away, and writing wills*

[6] Of the total, 4 per cent of males and 6 per cent of females (not shown in Figure 3.2) ticked the last option in response to the multiple response question from which this figure derives: 'I have not been in appropriate employment since graduating'. These will be discussed in Chapter 3.

and so on, so that work hasn't stopped. In terms of what made me stand out, I suppose…well, I've got confidence in my abilities, for one. And my academics were most probably enough".
[Solicitor, studied Interdisciplinary subjects at high tariff HEI, male, Managerial & Professional background, earning £40,000-£44,999]

"*For me it started off as a word-of-mouth thing that I had worked for a television company and I had done some social media roles there. And then after that, yes it just became the power of my CV really, speculative applications, networking. For a short period, I was with an agency"*
[Interviewer: "So it's just who you know? Is that what...?"]
"Yes, I would definitely say, yes, it's who you know or who you've worked with before, yes."
[Interviewer: "Is it quite a small world?"]
"I would say of experienced people, yes. Like you said, not many people know much about social media. It's a modern industry, so yes I would say that of experienced people it's a small world, and there are very limited roles".
[Self-employed freelance Social Media Producer, studied History and Philosophy at high-tariff HEI, female, routine & manual background, earns £45,000-£49,999]

The importance of interpersonal skills and personal qualities in addition to academically acquired knowledge and skills was apparent in the next example:

"*I think initially, it was the physics and the interaction with the kids and being young. Because of where I grew up as well… Because I grew up in inner London, in Peckham, in quite a rubbish area, I can switch between speaking normally and actually just speaking with the kids and relaxing, basically. Being able to engage kids that aren't very engaged, and have that interaction, that's really, really key in the teacher's interview. So, especially for a bog-standard teacher's interview, one of the things you have to do is teach a lesson. Being able to interact with the kids straightaway, that's really, really key. Also, I'm a proper physicist, so to speak, so a lot of schools that don't have proper physics teachers with actual physics degrees…*"
[Special Leader, Secondary School, studied Physical Sciences at highest tariff HEI, male, Managerial & Professional background, earning £40,000-£44,999]

The next example illustrates the most frequent theme mentioned by most interviewees over the full spectrum: the importance of experience and what the candidate, at this stage of their career, had to offer the organisation.

"I had spoken to the director of [the organisation] *on the interview panel and she said to me later on that she thought that I'd interviewed well. And for the job you had to have some kind of social science degree for the role, and I think she just liked the ideas that I had, what the service could look for, moving forward. The interview was in two parts, the first part I remember I had to do a presentation looking at how best to deliver psychosocial support… something like that. And then it was followed by a series of questions. And I think they were impressed by my experience that I had mainly in my ideas. And the director was, I remember on my first week, she was quite enthusiastic about what she thought I could bring to the service".*
[Family Services Officer, Other Public Services, studied Social Sciences at medium-tariff HEI, female, from Routine & Manual background, earning £40,000-£44,999]

Finally, along with experience, many of the accounts mentioned the importance of networks, in identifying and accessing appropriate career opportunities.

"*My experience, definitely. Being able to demonstrate experience of working with people with mental health difficulties, and I had done a bit of prep work beforehand. One of my friends who I met at my original job as a support worker in the residential home, she actually worked for the service that I went to interview for. We had gone off separate ways for a few years, had stayed in contact, but then it turned out that a job came up in the same service that she worked for. I was lucky in that sense, because I could have a chat with her about what do you do, what do I need to read to prep for the interview. So, it was a bit of a who you know in that sense, because she could*

say, this is what they'll be looking for. Have a read of this, get familiar with IAP services and what they do. I think that helped me to know what to prep and what to demonstrate in terms of my knowledge. And then I went into the interview and could tell them what they wanted to hear. Demonstrate knowledge of cognitive behavioural therapy, things like that".
[Psychological Well-being Practitioner Team leader, studied Psychology at lower-tariff HEI, earning £27,000-£29,999]

Not all the precarious employment experiences had been negative. For example, work through agencies can provide a stopgap between planned career-related activities and some specialist temporary and recruitment agencies that place graduates had been found very useful by respondents.

"*I was made redundant from my first job but I had developed a relationship with one of the clients that I used to work for an they asked me to come in and do some temping work for them in the same kind of work I was doing for them in my first job. I think it was called technical safety advisor, that was just kind of ad hoc, they would ask you to come in and say 'This week, can you do three days, and next week, can you do four, and then nothing the week after?' So it was just kind of like that for a period of three or four months whilst I was looking for permanent work"*.
[Interviewer: "And was it in any way, do you think, useful for your career? Did it perhaps help you to find something more permanent?"]
"*Yes it did. It wasn't something I would do full-time, like as a contractor, just because …you've got no predictor of what hours. But it was a very good way to get an insight into how different companies operate and I think it did help me with getting the job that I got after that and this job that I've got now*".
[Senior Consultant (Technical Safety and Risk), Primary sector, studied interdisciplinary subjects and highest-tariff HEI, male from Routine & Manual background, earning £45,000-£49,999]

"*During my Masters, I worked for* [a market research organisation]*…. It was language work, we were calling up hairdressers in France and Spain and asking them questions. Doing market research basically. …it was all spoken and we had targets to reach and stuff like that but it paid, helped me pay to live whilst I was doing my Masters, because I didn't have a grant or anything like that; so basically, I'd paid my fees from money that I'd inherited, and then I had a bit left over. So, I just barely scraped by and thankfully got* [the] *job, which helped a lot. I…. I was working for* [the market research organisation] *but through a temp agency, so they were the ones paying me*".
[Translator, Other Public Services, studied languages at highest-tariff HEI, female, from Intermediate background, earning £33,000-£35,999]

At both Stage 4, in 2011 and again in the 2019 survey (Stage 5), respondents were asked to complete a multiple-response question asking their reasons for taking their current jobs. The answers they gave are compared in Table 2.3.

Table 2.3 Reasons for taking current main job

Reasons selected	2019	2011
It was exactly the type of work I wanted	54%	43%
The salary level was attractive	46%	33%
Other conditions of employment were attractive	38%	29%
I wanted to work in this locality/region	44%	43%
I was already working for this employer	22%	13%
It offered interesting work	53%	43%
It enabled me to do socially useful work*	24%*	
To gain experience in order to obtain the type of job I really want	14%	30%
It offered job security	32%	27%
It is compatible with my partner's career	8%	6%
It suits me in the short term	15%	31%
It is better than being unemployed	13%	38%
Other (PLEASE SPECIFY)	1%	0%

Source: Futuretrack respondents completing Stage 4 and Stage 5 surveys and in employment at both stages (n=3,472). *This option was not included at Stage 4.

In the light of the high overall satisfaction level with current employment, the finding that over half were in exactly the kind of job they wanted suggests a high degree of successful labour market integration. On all the positive dimensions, a higher proportion is apparent, and on the negative ones ("It suits me in the short term" and "It is better than being unemployed") the proportions are considerably lower, possibly reflecting the more 'settled' nature of their employment ten years into their graduate careers. There is no significant change in concern with job security or choice based on location.

2.2.1. Were they using their HE-acquired knowledge and skills?

The core objective of successive governments, in facilitating the expansion of HE and widening participation in it, has been to ensure that the UK economy will be supplied with the knowledge and skills essential to increasing its global competitiveness and maintain its position as an innovative and prosperous nation that 'punches above its weight' in the world order (*c.f.* Bekrahdnia 2013). This objective explicitly underpins current debates about government and individual investment in HE (BIS 2020, Department of Education 2019; BIS 2016), adding to well-established debates about the role of HE in producing and identifying potential employees with the attributes required by employers (OGL 2019; ISE 2018; CIPD 2017; BIS 2016; UUK 2015; CBI 2010). A central focus of our research has increasingly been to investigate the extent to which respondents were using the knowledge and skills that they had learned as undergraduates in the course of their current employment. This clearly varies by occupation. Degrees range from highly specialist to more wide-ranging; from vocational to theoretical and knowledge-generating. While some are specialist training for a specific profession where the knowledge and skills they acquire on their courses is essential to their future ability to practice (*e.g*. Medical specialisms, Architecture), other vocational courses are geared towards one or more sectors (*e.g*. Engineering, Hospitality and Tourism). Others inculcate knowledge and skills that are more widely transferrable across a range of

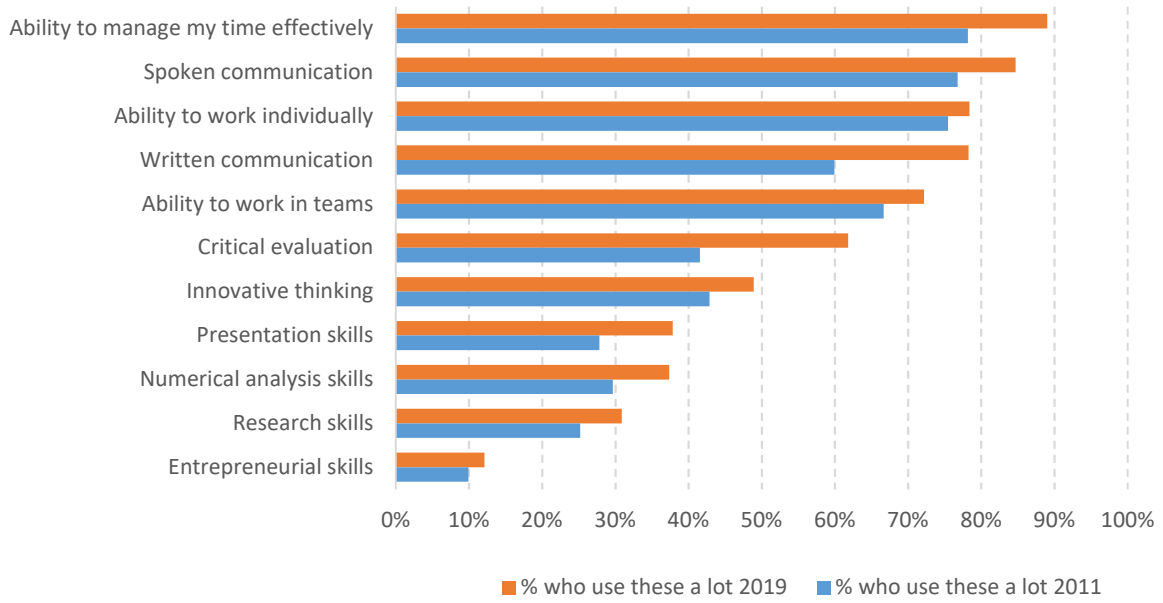
professions and commercial contexts (e.g., Law, Economics, Languages, Social Policy), whereas yet more are predominantly concerned to develop analytic, communication and technical and intellectual abilities and skills through study of particular areas of knowledge (Philosophy, Politics, Sociology, Art and Design, Mathematics and Computing) – although all undergraduate courses have elements of these. To demonstrate their value to government and to individual student 'customers', all areas of HE and the institutions that teach them are required to identify and measure the knowledge and skills developed on their disciplines and courses and required to produce evidence of how far the measurable individual outcomes of having completed these courses has been achieved[7]. But the questions of how far the knowledge and skills developed in HE contributed to subsequent performance and productivity, and how far the achievement of them is taken account of by employers in their recruitment practices and resourcing plans, remains unclear.

We distinguished explicitly between knowledge and skills in investigating the Futuretrack graduates' employment experiences and perceptions about the relationship between their HE and career development. Up to ten years after graduation, 54 per cent told us that they were still using the subject or discipline knowledge acquired on their undergraduate degree programmes in their current jobs and 64 per cent said that they were using the skills developed on these programmes. Most also indicated that as their careers had progressed, their successive employment experience had become increasingly important, both in acquiring jobs and their ability to do them effectively. Respondents were also asked whether, in their current jobs, they had the opportunity to develop their skills and knowledge and to develop and learn new skills and knowledge, and in both cases, over four out of five indicated that they did (81 per cent and 84 per cent respectively). Not surprisingly, 79 per cent used skills developed in previous jobs, but when we went on to ask about the categories of skills that respondents were using, the results are interesting. We will explore below the extent to which this varied by undergraduate degree subject and the kinds of occupations they had entered.

[7] The Teaching Excellence and Student Outcomes Framework (TEF) introduced by the government in England provides information about teaching provision and student outcomes at the institutional level and is being extended to cover subjects within institutions.

Figure 2.9 compares respondents' reported use of skills and capabilities in their current jobs with their reported use by the same respondents in 2011 at Stage 4. In every case, their use had grown, apart from the ability to work individually, in which there had been negligible change.

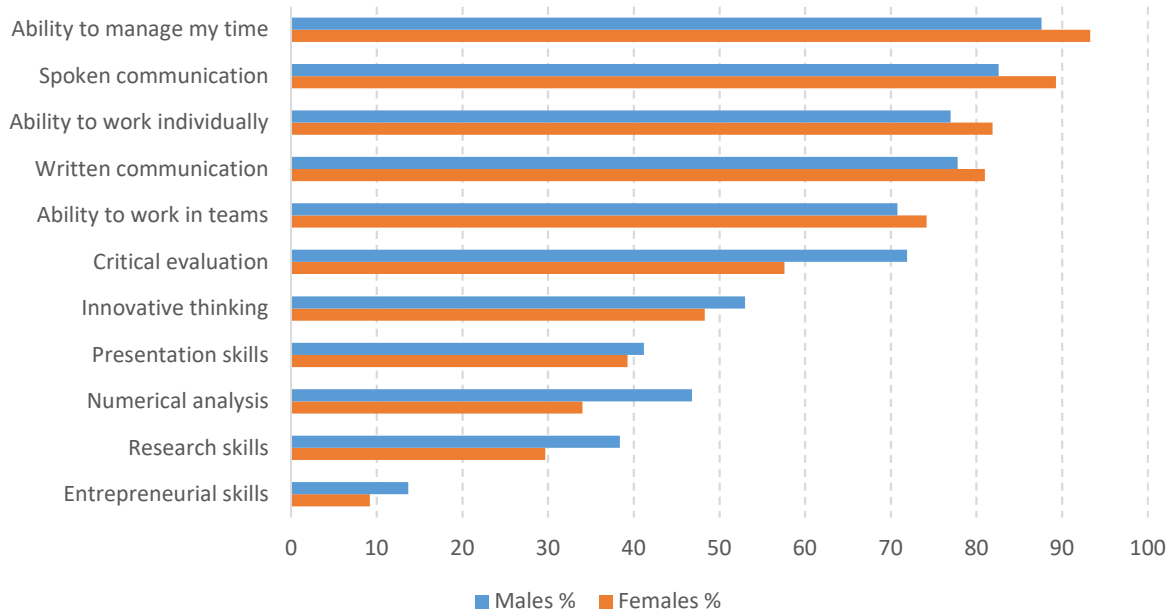
Figure 2.9 Comparative use of skills and capabilities in current job 2019 and 2011



Source: Futuretrack respondents completing Stage 4 and Stage 5 surveys and in employment at both stages (n=3,472).

Analysis of the 2019 responses by gender, as shown in Figure 2.10, reveals interesting differences which partly reflect the different distributions of male and female degree subject specialisms and occupational outcomes.

Figure 2.10 Respondents' use of skills and capabilities in main job in 2019, by gender



Source: Futuretrack Stage 5 survey, all graduates in employment. (n= 5,507)

It is easier to speculate about why males might be required to make more use of numerical skills (given their preponderance in Manufacturing, ICT and Banking & Finance), and females more likely to use spoken communication (given their relatively greater concentration in Education and Other Public Services) in their current jobs, than it is to understand why either would be doing more or less critical evaluation, innovative thinking or using research skills, although obviously, all these concepts have different meanings in different employment contexts.

Members of the interview sample were asked to give examples of how they used their knowledge and skills. Obviously, those who went into the established vocational professions like teaching, medical and related occupations and engineering required and used their undergraduate knowledge and skills to enter and proceed in their chosen careers. Others were building on their undergraduate skills to a greater or lesser extent. In specialist professional and technical areas, it was pretty obvious that the job could not be done without the basic discipline-based substantive knowledge and skills acquired as an undergraduate, but the significance of these beyond obviously direct vocational application is well illustrated by the following interview accounts.

> [Interviewer: "you said that in the current job you use the skills and knowledge that you developed on your undergraduate course quite a lot. Can you expand on that?]
> "*It's more about communication styles….the undergraduate course was philosophy so it was all about communicating your thought processes, communicating arguments, being able to balance and weigh up different aspects of some sort of argument and I am working in an environment where you have to weigh up everyone's needs and everyone's opinions. Especially in the community, there's a lot of opinions, and nothing is necessarily based on fact. So it's kind of managing all the expectations and managing those different viewpoints…*".

(Project Officer, on fixed term part-time contract working for local government, female, studied Philosophy at highest tariff HEI, Asian, from Managerial & Professional background, earning £12-14,999K)

In the two cases that follow, the relationship between the knowledge learned and requirement of their current situation was less direct, but the relevance of the analytic and communication skills and the discipline of having successfully accomplished their HE competences was felt to have both led to their recruitment by employers and to underpin their capacities to operate effectively.

"*The subject is very different. Undergraduate was combined arts, looking at history, history of art, theology. So the ability to analyse, the ability to synthesise, to put information together, particularly, possibly hard to find, possibly incomplete information, and to be able to manipulate it quickly and reliably is effectively what I do day to day. Construction is highly complex. There's a great deal of interdependence between things. No one person has a grip on the whole, normally. Someone who is able to, as I am, understand quite a lot of the whole and understand how bits of it relate to the whole, and have a sort of a depth perspective but also quite a broad perspective, so depth in context (which, again, is history effectively), is very valuable. I've found that that is something that I can bring day to day in a way that others who are trained differently are less able to do.*"
[Assistant Project Manager, Construction, studied Combined Arts at highest tariff HEI, male, from Managerial & Professional background, earning £33,000-£35.999]

Similarly, the next respondent illustrates an example of a Humanities graduate whose HE subject knowledge has little immediate relevance to her current work, but she perceives as The best illustration of an important variable that affected access to high earnings and wide graduate occupational choice is geographical location. Figure 4.4 showed the considerable regional disparities in average graduate earnings. Some participants had experienced very limited geographical mobility throughout the course of their education and subsequent careers, and at previous stages of the Futuretrack research, we found that participants who lived at home while they were studying, except for those living in London, were disproportionately from lower social class backgrounds and they were also more likely to have attended HEIs of a lower tariff than their prior educational achievements would suggest they could have accessed. This lack of early geographical mobility was replicated in their post-graduation careers and they remained embedded in social networks and economic settings that did not provide them with the resources they required to develop graduate careers.
having prepared her well for the challenges of her employment.

"*Do I need an understanding of Victorian Gothic novels to do my job? No, but, in a sense, partly, my degree demonstrates something. So, my course is known for being academically rigorous and it demonstrates that I have accomplished certain things or been capable of certain things. Certainly, I've learned things about how I motivate myself and how do I, proactively, seek a solution for myself…. And I wouldn't have had the jobs that I've had in the past without it, so no, I don't need an understanding of Victorian Gothic novels to negotiate contracts with partner branches around the world, but I do think it was a crucial part of my growth and development in a more broad sense and it's a way of demonstrating something to employers*".
[Senior manager in a global educational services company, studied English Literature, at highest tariff HEI, female, Routine & Manual background, earning £70,000-£79.999]

[Interviewer: "Do you think that you use the skills that you learnt on your degree in your job?"]
"*Perhaps not all of the theory, but just the skills that you develop as part of being at uni. Everything from social interaction skills, to the communication skills, to the organisation. I don't think I would have been as well-rounded an individual if I'd have gone straight from college into a work position. So yes, I would say so. And also, I don't know if many companies are like it these days, but* [this international manufacturer] *is one of those companies where they only recruit people if they've got*

a degree. Or if you don't have a degree, you can get to a certain ceiling and you won't be progressed any further. So I wouldn't be where I was today if it wasn't for having the degree".
[Logistics manager Northern Europe, Manufacturing, studied Business Studies at medium-tariff HEI, male, from Intermediate background, earning £65,000-£69,999]

As the examples cited illustrate, the kinds of jobs that the graduates did and the relationships between their undergraduate studies and subsequent career outcomes nearly 10 years after graduation varied very considerably, as did their earnings.

2.3. Summary

We have shown in this chapter some of the basic characteristics of the sample of respondents to the survey conducted in 2019 (Stage 5 of the study). Most were aged between 30 and 33 years and more than 90 per cent white. Over 60 per cent came from a professional and managerial social background and approximately one in five had parents from routine and manual backgrounds.

The distribution of undergraduate subjects they had studied was distinctly gendered, along traditionally established lines. The male graduates were considerably more likely than females to have studied Physical Sciences, Mathematics, Computing and Engineering Technologies (STEM) subjects, whereas female members of the sample predominated in Subjects Allied to Medicine, Biological Sciences, Education, and Interdisciplinary Subjects. Gender ratios in Medicine, Humanities and Arts subjects were virtually identical at the broad disciplinary level.

At the time of the survey the predominant mode of working was full-time employment for both men and women; 83 per cent of males and 70 per cent of women. Approximately 7 per cent of the sample were self-employed. Over three quarters of the respondents stated that they had permanent or open-ended contracts, with 11 per cent stating that they had a fixed term contract.

More than one in six of those in employment had more than one paid job at the time they were surveyed. Of these graduates, three quarters had two current paid jobs, the remainder had three or more. In terms of the reasons given for multiple jobholding, their most-frequently cited reasons were that they liked the variety or to supplement their income. Female graduates also gave balancing work and family commitments as an important reason.

Examining the sectors in which they were employed in 2019, women were more likely to be employed in public service sector jobs (central, local government, health and social services). Although this is also an important sector for male respondents, there are more male than female graduates employed in information and communication industries, banking, finance, insurance and in other business services.

Major Groups 1, 2 and 3 of the Standard Occupational Classification (Managers, Directors and Senior Officials, Professional Occupations and Associate Professional Occupations) account for more than 90 per cent of the jobs they were holding. Geographically, the majority were working in the Greater London area and the South east of England, particularly so for men, with almost 40 per cent of the sample working in these areas. Almost one in eight of the male respondents were working outside the UK. Only half this many female graduates were working outside the UK.

Investigation of how respondents had found out about the jobs they were in at the time of the 2019 survey revealed that, almost a quarter of them had obtained this job via internal promotion and between 10-15 per cent via professional networking, but other most frequent sources reflect increased online job-seeking, via recruitment agencies and employers' websites. The interview accounts revealed substantial use of specialist internet platforms,

networking and the activities of professional 'headhunters'. Family and friends remained important sources of information about careers, and the analysis revealed interesting gender differences.

Asked what had helped them to gain appropriate jobs for people with their knowledge and skills, the subject of degree studied, qualifications and university attended, were cited as important by many of them, but the accounts suggest that most regarded these as a foundation for their experience since graduation, which had become very much more important in accessing the kinds of jobs they now held and aspired to. Well over half were in jobs that they regarded as 'exactly the kind of job I wanted' or jobs they had accepted because 'it offered interesting work' and comparison with their reasons for accepting the jobs they had been in in 2011-12 at the time of the Stage 4 survey revealed substantially more satisfactory integration and reduction in reporting of negative or transitory reasons for accepting their current jobs.

Responses to questions about their use of their undergraduate knowledge and skills in their current occupations in comparison to the extent to which these were developed in their undergraduate programmes substantiated this. The requirement to manage their own time, their use of written and spoken communication skills, critical evaluation skills and use of numerical skills had increased significantly since they had answered the same question about the job they held in 2011-12 at Stage 4 of the survey. The last of these almost certainly reflects increasing seniority and responsibility for budgets. There were small gender differences in the use of different competences, with only critical evaluation and numerical analysis significantly different, but the general picture illustrated by the verbal accounts from interviewees is that as their careers progressed, most had experienced greater requirements to exercise leadership and decision-making competence in addition to their subject knowledge.

3. Current employment and use of knowledge and skills in different graduate labour markets

3.1. Using a classification of graduate jobs to better understand the relationship between the supply of and demand for knowledge and skills

In this chapter we attempt to move towards a clearer understanding of the extent to which the jobs done by Futuretrack respondents in the summer and autumn of 2019 required, used, and built upon their undergraduate education. To do this, we use the occupational classification SOC(HE)2020 to analyse the survey and interview data we collected. The expansion of higher education (HE) since the last decades of the 20th century was informed by successive reports that argued that that the post-industrial 'Knowledge Society' requires an increasingly highly educated and highly skilled workforce of whom a growing proportion would require undergraduate-level education. The SOC(HE)2020 occupational classification was developed in the light of this, to facilitate analysis of fit between the knowledge and skills developed in HE, and the extent to which it was required and used by recently qualified graduates in their early career occupations (Elias and Purcell 2013). It has subsequently been refined for use with the 2020 revision of the UK Standard Occupational Classification, SOC2020 (ONS 2020).

In developing the SOC(HE)2020 classification, analyses of the classificatory criteria and protocols used for successive national standard occupational classifications, along with detailed analysis of qualitative data provided by graduates about what they *did* in their jobs, had revealed that those in jobs wholly or almost always held by graduates required substantial levels of at least one (and normally all three) clusters of knowledge and skills:

- specific occupational *knowledge and expertise;*
- the strategic ability to *orchestrate* and deploy the knowledge and skills of others; and
- high-level skills to *communicate* or to facilitate the communication of knowledge.

We then considered the extent to which these competences were necessary to fulfil the requirements of jobs classified within each occupation unit group in the UK Standard Occupational Classification[8]. By identifying the predominant cluster of knowledge and skill for competent performance of tasks associated with the jobs in each unit group, four categories were created to encapsulate all unit groups within SOC2020, three of which would characterise what we term 'a graduate job'. These are:

- Experts
- Orchestrators
- Communicators

All other unit groups were classified as 'non-graduate jobs'.

Coding job titles to an occupational classification is somewhat error prone. It should also be borne in mind that this classification was originally designed to investigate graduates' integration to the labour market on completion of their undergraduate studies. It was recognised from the outset that some occupations, notably that demanded orchestration skills, had traditionally often been held by job holders based on their experience rather than qualifications. Others who have undertaken similar approaches to the definition of what is termed a 'graduate job' have come up with slightly different definitions, but overall there is a reasonable degree of agreement between them (see, for example, Green and Hensecke, 2016).

[8] Full details of the development of this classification are given in Elias and Purcell 2013. Examples of respondents' current graduate job titles classified into SOC(HE) categories are provided in Appendix Table A3.

Table 3.1 shows how membership of the SOC(HE) categories relates to the SOC2020 major occupational categories as used for the LFS and other national statistical sources.

Table 3.1 SOC(HE)2020 categories of current jobs according to SOC2020 Major Groups

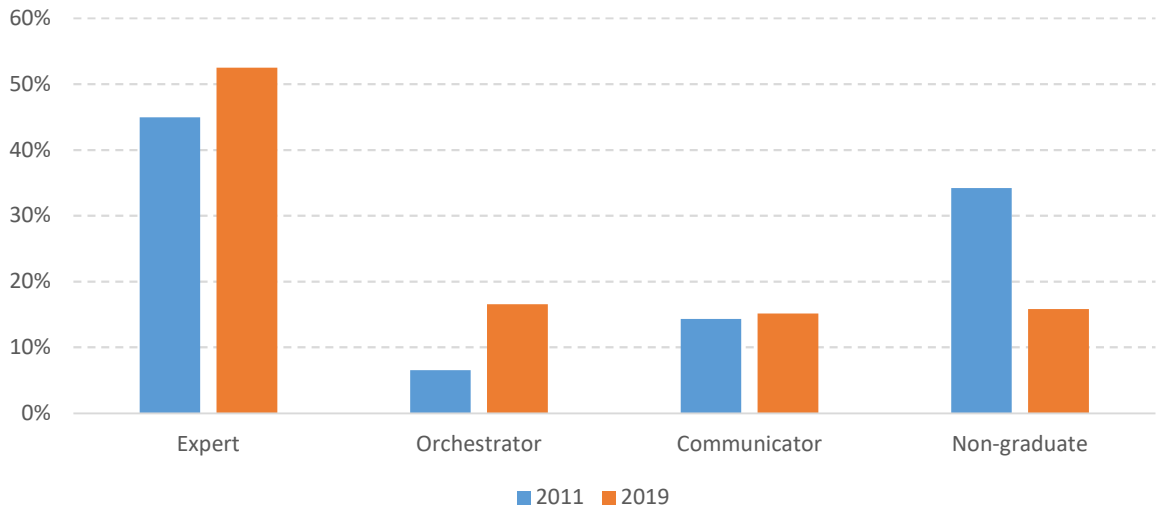
SOC2020 Major Group	Expert	Orchestrator	Communicator	Non-grad	ALL
Managers, Directors &Senior Officials	0%	58%	0%	5%	9%
Professional Occupations	91%	35%	50%	0%	63%
Associate Professional Occupations	9%	0%	50%	36%	18%
Administrative & Secretarial Occupations	0%	7%	0%	27%	5%
Skilled Trades Occupations	0%	0%	0%	6%	1%
Caring, Leisure & Other Service Occupations	0%	0%	0%	10%	2%
Sales & Customer Service Occupations	0%	0%	0%	10%	2%
Process, Plant & Machine Operatives	0%	0%	0%	3%	0%
Elementary Occupations	0%	0%	0%	4%	1%
n=	2,926	763	768	1,050	5,507

Source: Futuretrack Stage 5 survey, all in employment and self-employment

It is not surprising to find that the majority of those in Expert jobs are working in professional occupations and the remainder in associate professional occupations, and that those in Communicator jobs are divided between these same SOC2020 categories, or that Orchestrators are mainly in senior management or professional occupations. The Orchestrators and Non-graduate jobholders whose occupations were classified in Associate professional and some of the other lower categories, may well reflect the limitations in either the SOC(HE)2020 or the SOC2020 classification systems rather than location in inappropriate jobs for people with their qualifications and skills, as the analyses that follow will reveal.

Figure 3.1 compares the occupational distributions of respondents in 2011 and 2019. We find that the proportion in non-graduate jobs had fallen substantially, and those in Expert jobs had increased, as have those in Orchestrator jobs. It appears that an increased number of the graduates had accessed appropriate employment for people with their knowledge and skills, and not surprisingly, many had moved into occupations where they were required to orchestrate the knowledge and skills of others. Nevertheless, there is still a higher proportion than might have been expected in 2019 who appear to be in non-graduate employment, a finding pursued further in this chapter.

Figure 3.1 Comparison of the SOC(HE)2020 occupational location of employed respondents in 2011 and 2019

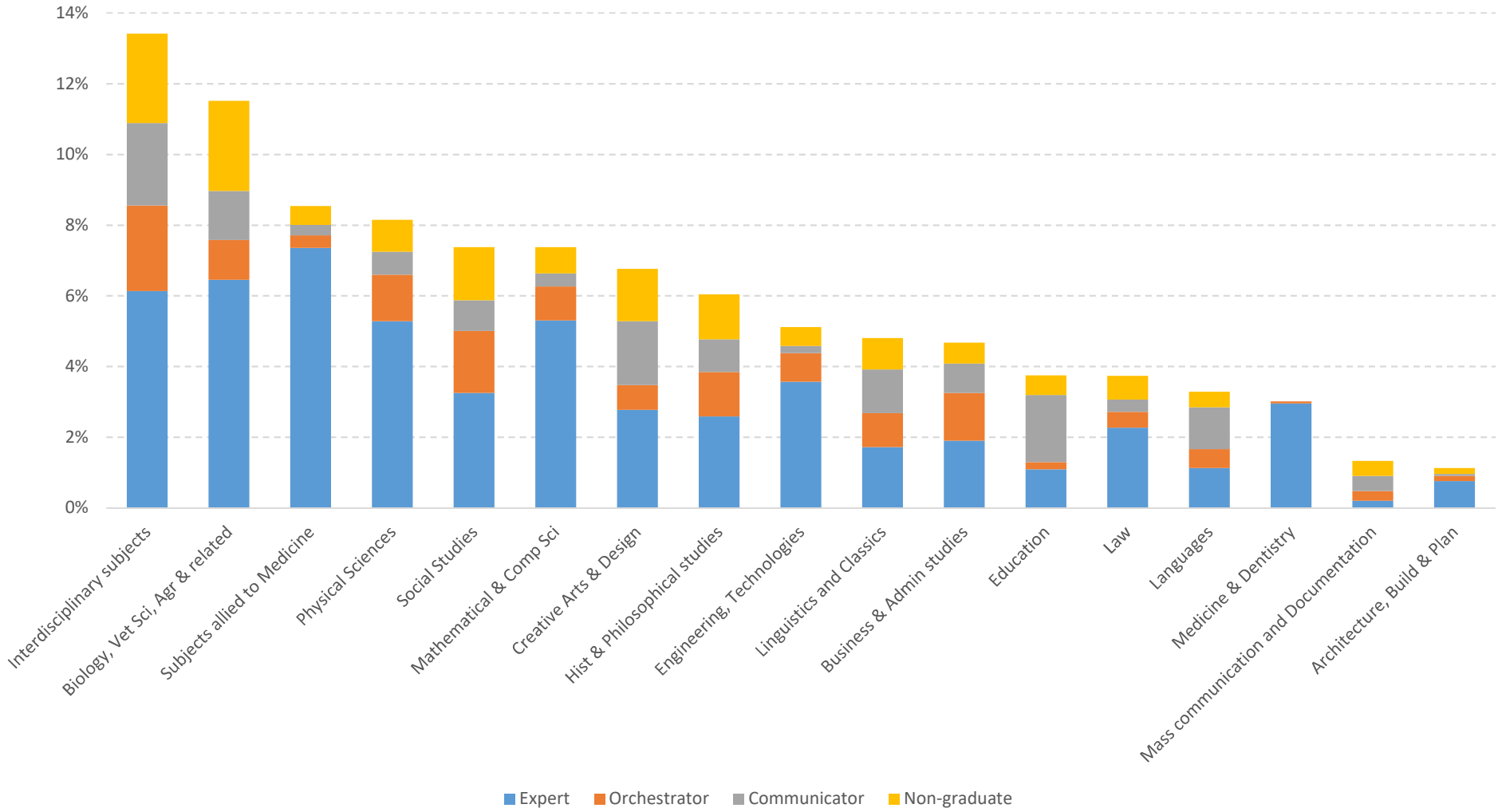


Source: Futuretrack Stage 5 survey respondents in employment or self-employment in 2011 and 2019.
Note: The 2011 respondents were classified according to SOC(HE)2010 and the 2019 respondents according to SOC(HE)2020 (n=3,954).

Figure 3.2 shows the distribution of the occupations held by respondents at the time of the survey, by subjects studied, among the four SOC(HE) categories and compares their distribution within the sample. Expert employment is the predominant mode, as would be expected from this highly-qualified sample, with those who have studied Interdisciplinary subjects (which include degrees like Politics, Philosophy and Economics and other joint and cross-disciplinary combinations of subjects like Biology and Business Studies or Languages with other areas of study) most likely to be in Orchestrator jobs, followed by those in Social Studies, Business & Administrative Studies, Physical Sciences and Historical & Philosophical Studies. Communicators, not surprisingly were most often, along with Interdisciplinary graduates again, from the Arts & Humanities end of the spectrum: Education, Creative Arts, Languages and Historical & Philosophical Studies.

The important issue is, of course, the distribution of those in SOC(HE)2020 Non-graduate jobs, who were more often in the largest two groups: Interdisciplinary and Biological, Veterinary Science, Agriculture and related, and least often in the Expert vocational areas of study.

Figure 3.2 Respondents in employment and self-employment by broad subject of study and SOC(HE)2020

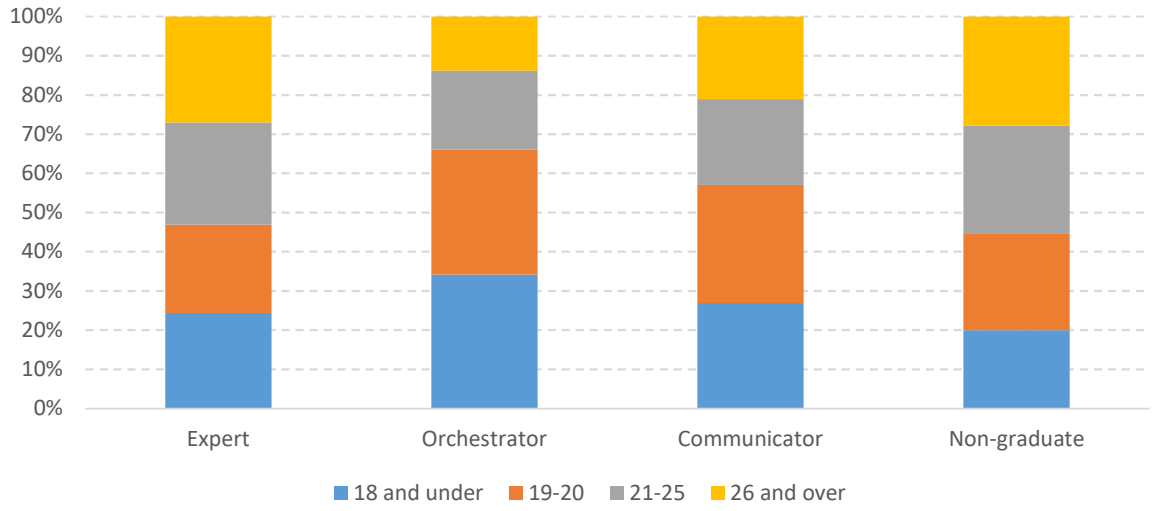


Source: Futuretrack Stage 5 survey, all graduates in employment. (n= 5,412)

3.2 Characteristics of respondents in the SOC(HE)2020 categories

Figure 3.2 shows that those with some subject specialisms were more likely to be in employment that required HE-acquired knowledge and skills than others; notably, those with traditional professional vocational knowledge and skills and with STEM[9] skills, as had been found at the previous stage of the survey. The difference with the earlier stage is the extent to which the incidence of those in Orchestrator occupations has increased in all groups, but especially among those who had studied Social Studies and Interdisciplinary subjects. Figure 3.3 reinforces our Stage 4 finding that those who studied undergraduate degrees at a relatively mature age are more likely to have done so with a specific 'specialist expert' occupation in mind but also suggests that, as has been found in previous studies *(e.g.,* Purcell *et al.*,2007, Egerton 2001), may have been more likely to have experienced difficulty in accessing a job that required and valued their HE qualifications.

Figure 3.3 Age distribution* of employed graduates in SOC(HE)2020 categories



*Age is defined as age in 2006, the date on which they had embarked on undergraduate study
Source: Futuretrack Stage 5 survey, all graduates in employment. (n= 5,501)

Table 3.2 shows that women are significantly less likely to be holding Expert or Orchestrator jobs and more likely to have been in Communicator or Non-graduate employment.

Table 3.2 The distribution SOC(HE)2020 categories held in 2019 by gender

SOC(HE)2020 category	Gender	
	Male	Female
Expert	60%	52%
Orchestrator	17%	13%
Communicator	11%	17%
Non-graduate	13%	17%

Source: Futuretrack Stage 5 survey, all in employment and self-employment (n = 5,507).

Examination of the distribution of respondents according to their socio-economic backgrounds shows only small differences in SOC(HE) occupational outcomes at the margins of statistical significance. Those from routine and manual backgrounds were slightly more likely to be in

[9] Science, Technical, Engineering and Mathematical expertise.

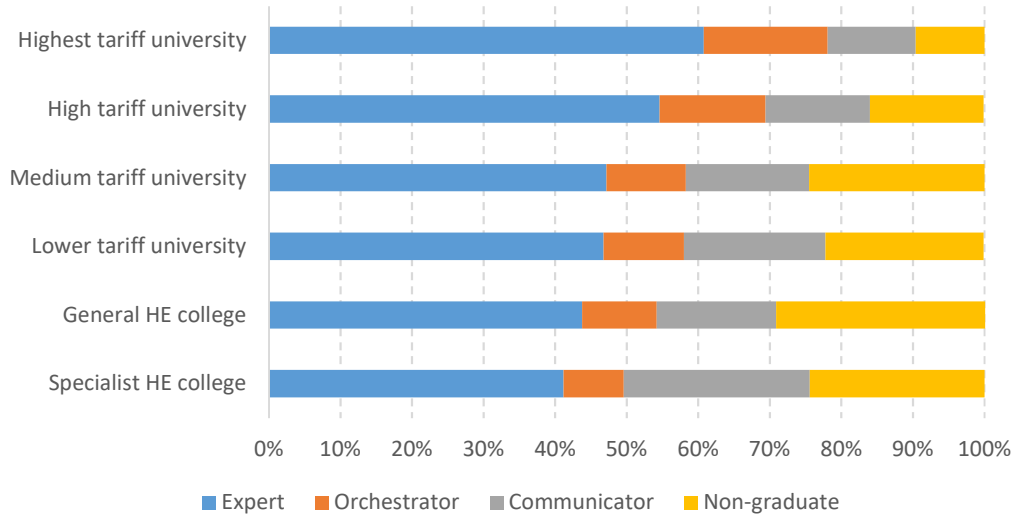
Non-graduate jobs and less likely to be in Expert jobs than graduates from managerial and professional backgrounds: 20 per cent of those from routine and manual socio-economic backgrounds were in Non-graduate jobs as opposed to 15 per cent of those from managerial and professional backgrounds.

Research on the graduate labour market since the 1960s, at the start of the first stage of HE expansion after the Robbins Report (Committee on Higher Education 1963), suggested that students from relatively more socially-disadvantaged backgrounds were more likely to have opted for professional and technical subjects (Kelsall, Poole and Kuhn 1972), and the earlier stages of this project also revealed the propensity of certain Asian groups, in particular, to opt for a relatively narrow range of vocational disciplines leading to particular occupational labour markets. These tend to be occupations that we have classified as 'Expert jobs', and our Stage 5 analyses indicated that this propensity appears to have persisted, with 64 per cent of Asian respondents in Expert occupations compared to 55 per cent overall. Black respondents were most likely to have been in Non-graduate jobs compared with all respondents (20 per cent compared to 16 per cent) but our ethnicity sub-sample sizes do not enable us to identify these differences with statistical confidence.

Previous stages of the survey have provided evidence of the well-established facts that students from socially disadvantaged backgrounds and certain categories of minority ethnic students, notably those from Black and some but not all Asian backgrounds, are under-represented in the high and highest-tariff universities. It is also well-established that 'traditional graduate employers' in the past have mainly recruited from a relatively narrow range of HEIs, although the expansion of direct online recruitment and concern to avoid discrimination has raised awareness of the need to increase equality of opportunity (*c.f.* Social Mobility Commission 2020, Sutton Trust and Social Mobility Commission 2019). Despite the volume of research, monitoring and concern to eliminate bias by government, the most well-established 'senior professions' and senior management jobs have remained remarkably resistant to widening access initiatives (Montacute and Cullinane 2019). These mainly tend to relate to the occupations that we have classified as Expert and Orchestrator occupations.

As Figure 3.4 shows, graduates who had attended the most elite HEIs were less likely to be in non-graduate employment at the time of the Stage 5 survey.

Figure 3.4 SOC(HE)2020 category according to Type of HEI



Source: Futuretrack Stage 5 survey, all in employment or self-employment. (n = 5,410 - the 7 respondents who studied at overseas universities, are omitted from this figure. Five were in Expert jobs and two in orchestrator jobs).

Several respondents referred to the advantage of having studied at an *elite* university, as the next example illustrates, but the one that follows it suggests that increasing awareness of bias in recruitment may be leading to fairer recruitment practices in some sectors.

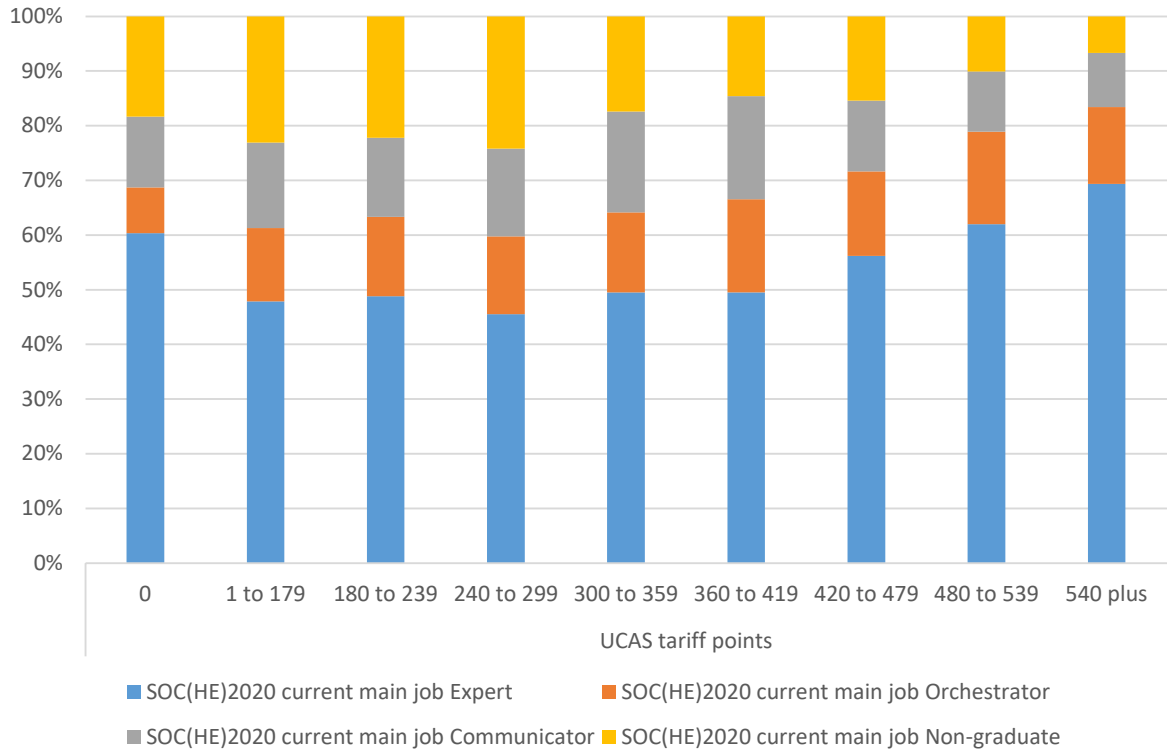
> [Interviewer: "When you started at [one of the big five accountancy firms] on the graduate scheme, why do you think you were taken on specifically? What made your employer choose you, do you think?"]
> *"So, I'd probably pinpoint it at two main things. It was a degree from a good university is probably the first point. And the second point is the fact that I did a maths degree, that is probably the second point. So, when you apply for grad schemes at the big four, they… Two of the biggest success criteria, if you do maths you're always guaranteed to get a job as long as you do well in the interview process. There is a lot of skills that come in with that, like the problem-solving skills, analytical skills; maths lends itself quite well to being an accountant".*
> [Self-employed Specialist Accounting Manager and Consultant, Banking, Finance & Insurance, studied mathematics at a highest-tariff HEI, male from Routine & Manual background, earning £120,000 or more]

> "*I think within* [the international bank] *there is some snobbery on the French side. You have to have gone to a particular university and things like that. I think in the UK side they don't really care, especially on the trading desk. There's a lot of very senior bankers who didn't go to university who started on the trading floor and worked their way up. It's a bit different here and I think, in the wider industry as well there's probably less snobbery around which uni you went to. I was at* [another of the highest tariff HEIs] but *I had vacation schemes at the top three or four firms in the UK and about 78% of people on there were from Oxford or Cambridge, it was that blatant!*
> *Our diversity and inclusion initiatives now actively try and blank out universities and things like that…HR kicked that out now… I think now it's definitely changing. ….I think maybe there is a mentality shift happening and I think maybe it's because people that are progressing through the ranks, they're not exclusively from the same university, the old boys club is stopping a little bit* [sic].".
> [Solicitor, Banking, Finance & Insurance, studied law at a highest-tariff HEI, male, from Managerial & Professional background, earning £120,000 or more]

If we analyse the relationship between type of HEI attended and SOC(HE)2020 by comparing proportions of graduates from the different categories of HEI in each of the four SOC(HE) categories, we find that in this sample, graduates from the highest and high tariff HEIs predominated in all three 'graduate' SOC(HE)2020 categories and even constituted over half of those in Non-graduate jobs, but it illustrates how the traditional graduate recruiters appear to be continuing to recruit and select graduates from the more elite universities. It also shows remarkable similarity in the HEI profiles of, on the one hand, the Expert and Orchestrator jobholders and on the other, those in Communicator and Non-graduate jobs, which may reflect the more academic and less technical knowledge subject/discipline offers of the highest and high tariff HEIs.

As far as SOC(HE) outcomes were concerned, higher proportions of those who had embarked on HE with high 'A' Level Tariff were in Expert and Orchestrator jobs, the two longest-established 'traditional graduate job' areas, by 2019, and there were larger proportions of relatively low-achieving HE entrants among those in Non-graduate jobs. All the SOC(HE) graduate categories contain a wide range of jobs requiring different degrees of intellect, academic ability and other technical and 'soft-skills', and our analyses suggest that this is clearly the case for the Futuretrack Non-graduate jobholders too. Nevertheless, Figure 3.5 reveals that in all SOC(HE) categories, the range of prior educational achievement varied, and raises questions about the significant minority of previous 'highflyers' among the Non-graduate job-holders. Those classified with a zero-tariff score include those with non-standard entry-qualifications, which can be NVQs and Access course qualifications but also includes those with International Baccalaureate and overseas qualifications.

Figure 3.5 Employed respondents in the SOC(HE)2020 categories by access tariff-points as applicants



Source: Futuretrack Stage 5 Survey, all in employment (n=4,672)

Subject of degree studied determines access to virtually all Expert jobs (which, as defined, generally involve discipline-based expertise acquired at undergraduate or postgraduate level) and a significant proportion of the Communicator jobs require specific technical subject-based expertise. But even more widely, the subject the graduates have studied influences employers' perceptions in recruiting to posts, as does the reputation of the university in particular areas of employment or localities, as the examples below show.

> "*I think, throughout my career to be fair, the fact that I've got a law and business degree from* [a highest tariff HEI] *has always been helpful. It's something that people have always, every interview I've ever gone to and it's not just the law it's the business as well, people always want to talk about it.*"
> [Legal Counsel, working part-time two-day week in Business Services, studied Interdisciplinary subjects at a highest-tariff HEI, female, from Managerial & Professional background, earning £24,000-£26,999]

"*I'm not quite sure, I don't know if where I did my course has got quite a good reputation for being quite practical-focused. It's happened to me since I've gone to work, and they've been like, actually [my high tariff university] students have transitioned quite well into the workplace, because of the skills they learned at uni, whereas other courses are maybe a little bit more academic focused. So, when people are faced with different terms within the workplace, they're not quite prepared for that. That has been mentioned a couple of times in my experience*".
[Occupational Therapist in NHS, studied Occupational Therapy at high tariff HEI, female, from Managerial and professional background, earning £35,000-£39,999]

Current employment and self-employment

3.3.1 Reasons for accepting their current job

Detailed analysis of quantitative and qualitative data relating to graduate career decision-making ten years after graduation, for an earlier comparable cohort, revealed that occupational decisions had rarely been based on the rational pursuit of economic or individual career-maximising self-interest. Even at the earliest career stages, both men and women had made choices designed to maximise other aspects of their lives, involving the interests and needs of others and, increasingly, the need to balance dual-career partnerships and family concerns (Purcell *et al.*2006). Respondents were asked to indicate their reasons for accepting their current job, in a multiple response question where they could select as many of the options that applied. Analysing their responses according to their SOC(HE)2020 categories, Table 3.3 shows that the patterns of response are surprisingly different.

Table 3.3 Reasons for taking current job, by SOC(HE) categories

Reason	Expert	Orchestrator	Communicator	Non-graduate
Exactly the kind of job wanted	62%	47%	58%	35%
Salary level was attractive	47%	58%	37%	29%
Other employment conditions	37%	45%	36%	31%
Wanted work in region	47%	43%	38%	39%
Already worked for employer	20%	28%	17%	21%
It offered interesting work	57%	57%	48%	39%
Is socially-useful work	26%	20%	24%	21%
Experience to get to the job I want	15%	14%	13%	15%
It offered job security	34%	32%	30%	29%
Compatible with partner's career	9%	8%	8%	8%
Suits me in the short term	14%	14%	16%	21%
Better than being unemployed	12%	9%	12%	25%
Other reason	1%	0%	1%	1%

Source: Futuretrack Stage 5 survey, all in employment (n=5,502)

Those in Expert occupations were most likely to have responded that it was exactly the kind of job they wanted (62 per cent), with those in Communicator jobs closest to this (58 per cent) and those in the other categories significantly less likely to have chosen this option. (only 47 per cent of Orchestrators and interestingly, 35 per cent of those in Non-graduate jobs). Satisfaction with salary levels reflects the findings that are discussed in detail in Chapter 4, but also reflects the fact that expectations of salary levels and satisfaction with them, reflects subjective variables and are closely related, as has been found in previous graduate tracking

studies. Graduates in Education and Humanities subjects, for example, generally do not expect to earn the kinds of salaries anticipated by graduates in Mathematics or Medicine, and the relationship between actual earnings and satisfaction with earnings has been found to vary widely by subject and by gender, reflecting different expectations and, effectively, the different 'graduate labour markets' that different types of graduate operate in. (e.g., Elias *et al.* 1999:93-94). There is no significant difference in the extent to which those in Expert and Orchestrator jobs had chosen them because they offered interesting work, but both were significantly more likely to have chosen this option than respondents in the other two categories. Career motivations are discussed in detail in Chapter 6 in this report, but if we focus here on the intrinsic reasons[10] for having chosen their current jobs: exactly what they wanted, interesting work and opportunity to do socially useful work, we find an interesting divergence, and possibly a clue towards explaining the relatively surprising levels of a substantial proportion of graduates in non-graduate jobs.

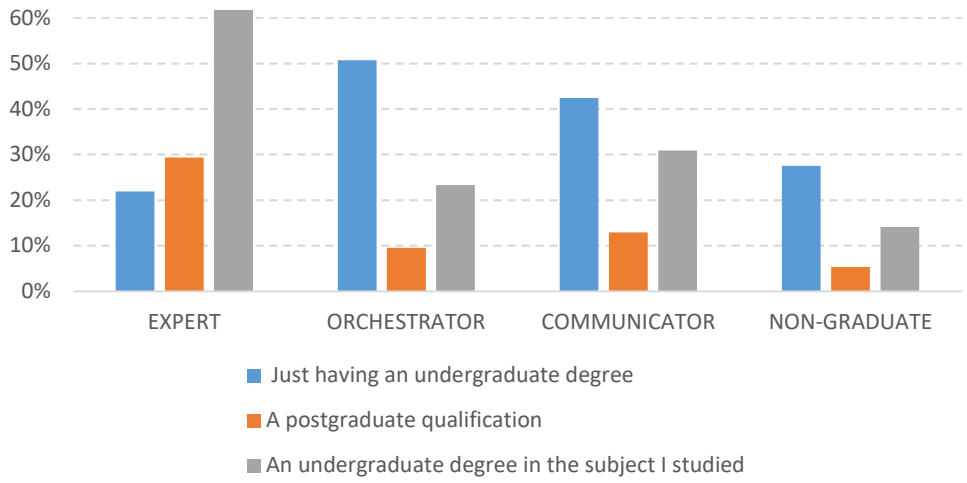
Those who had come from a course with vocational specialist or technical knowledge and skills and were in employment that used those competences appear to have been significantly more likely than others to be in jobs that were 'exactly what they wanted'. Experts and Communicators, as has been discussed above, were most likely to have done so. The Non-graduate job-holders generally had a greater propensity to report less positive and more negative reasons for taking their jobs, but the fact that over a third of them reported that 'it was exactly the kind of job I wanted' and an even higher proportion that it offered interesting work, requires more detailed exploration of the data. A quarter of them gave the reason that 'It is better than being unemployed' and so, disturbingly, did small but significant minority of members of the other groups. A quarter of those giving this reason were in Associate professional occupations, who constituted only 17 per cent of the sample, and they were disproportionately likely to have been employed in the Private rather than the Public sector.

[10] As opposed to extrinsic reasons (salary and conditions), instrumental reasons (*e.g.* to get experience towards the job I really want) or reasons of expediency (*e.g.* I wanted to work this region).

3.3.2 Job requirements of current jobs

Looking at the prerequisites for the different types of graduate jobs are revealing, we find clear differences across the categories. It is no surprise that Expert jobs most often required a specific undergraduate degree and postgraduate qualifications, as shown in Figure 3.6. Those in Expert jobs were significantly more likely to be in jobs that required postgraduate qualifications, followed, again, by those in Communicator jobs.

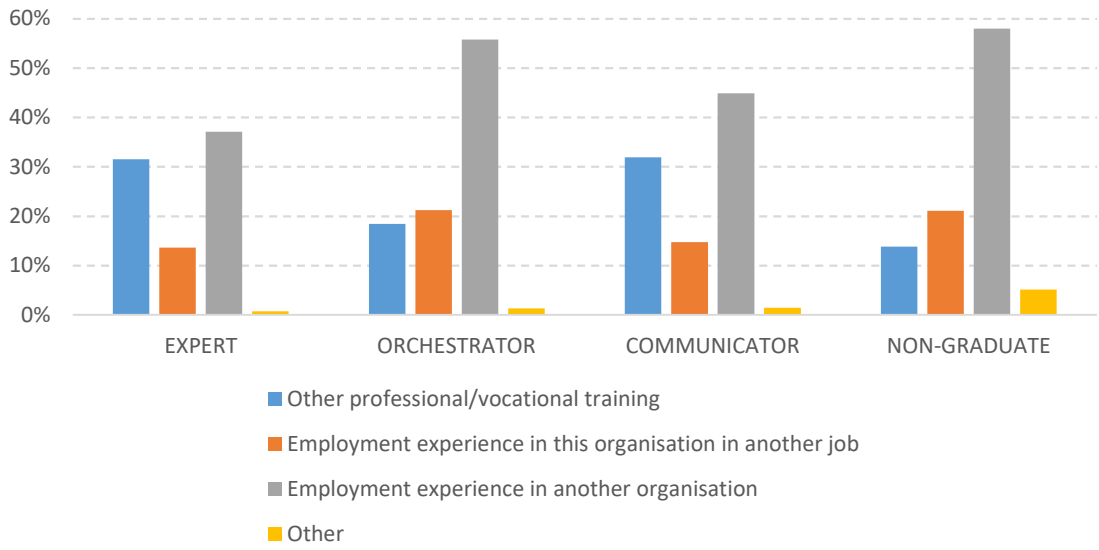
Figure 3.6 Formal qualifications required for current job



Source: Futuretrack Stage 5 survey, all in employment (n=5,507)

By comparison, Figure 3.7 shows that other employment experience in the organisation or, even more important, in another organisation, were significantly more important for those in orchestrator jobs. The latter two criteria were most important for those in Non-graduate jobs.

Figure 3.7 Other prerequisites for current jobs

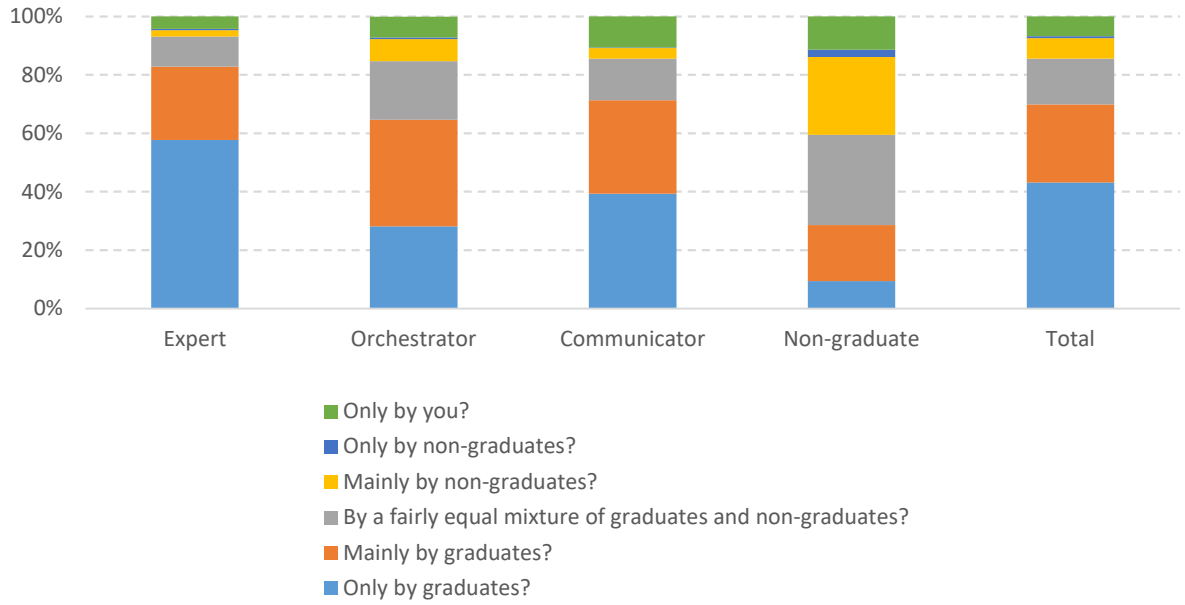


Source: Futuretrack Stage 5 survey, all in employment (n=5,507)

Respondents' answers to the question investigating how far their job in their organisation was done by graduates or non-graduates, or by a mixture of the two, shows distinctly different patterns according to the SOC(HE)2020 classifications, but continues to reveal substantial numbers of respondents classified as being in Non-graduate jobs, in jobs done solely or mainly by graduates in their current organisations.

The final column in Figure 3.8 shows the overall responses. Seventy per cent worked in jobs done solely or mainly by graduates. The appropriately coloured 'grey area' of 16 per cent may illustrate occupations that, as a result of the increased proportions of young people entering the labour market, are becoming 'graduate' jobs'. The yellow area, makes sense, checking across the individually- identified SOC(HE) categories, where those in Non-graduate jobs are most likely to be working alongside predominantly non-graduate colleagues. It appears that a slightly higher proportion of non-graduate jobholders than in the other groups appear to have been carrying out unique roles in their organisations, but overall, 58 per cent of the 360 graduates in unique roles in their organisations were in Managerial or Professional occupations and 24 per cent in Associate Professional jobs, mainly in Other Public Services, Education. Business Services and ICT. Figure 3.8 consequently shows up most clearly the extent to which the Non-graduate category (which derives from the SOC2020 classification) almost certainly leads to misclassification (and thus, inflation) of the proportion of graduates in non-graduate employment.

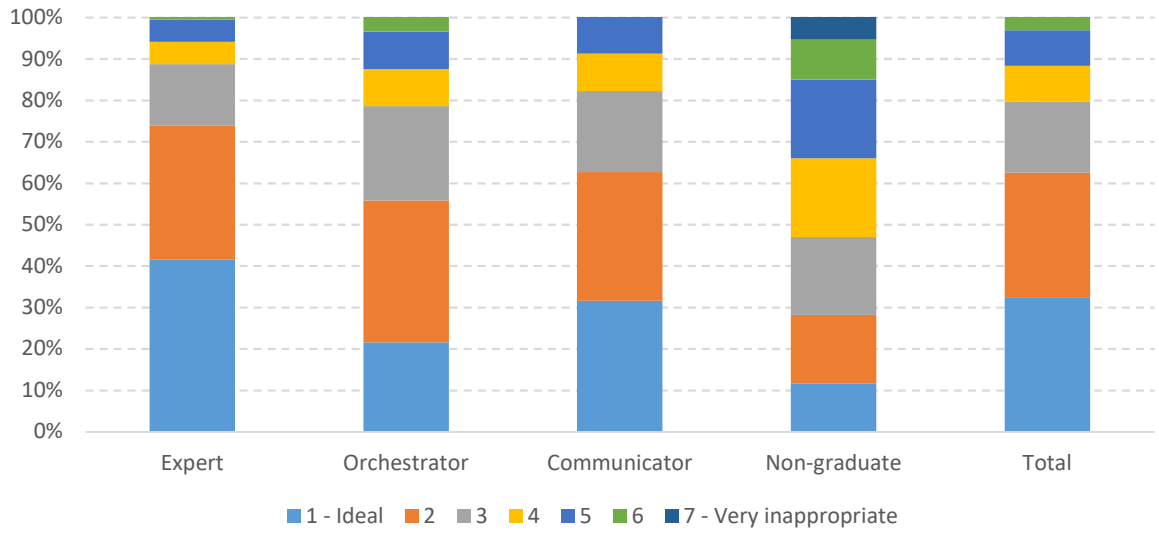
Figure 3.8 Extent to which current job in current workplace was done by graduates



Source: Futuretrack Stage 5 survey, all employees and self-employed (n=5,481)

Figure 3.9 shows respondents' evaluation of the extent to which their current job was an appropriate one for someone with their skills and qualifications, on a scale of 1-7 where 1 meant 'ideal' and 7 meant 'completely inappropriate'. It reveals clearly that those in 'graduate' jobs had a significantly greater propensity to consider their employment appropriate, with those in Expert jobs most positive in their ratings. The 29 per cent of those in Non-graduate jobs who gave high positive ratings to their jobs is likely to reflect a mixture of the inescapable vagaries of occupational classification and differences in the values that informed respondents' career development choices, as will be discussed in Chapter 6.

Figure 3.9 Appropriateness of current job according to SOC(HE) category



Source: Futuretrack Stage 5 survey, all employees and self-employed (n=5,507)

3.3.3 Where did members of the sample work?

Table 3.4 shows the different sectoral distributions of the respondents, showing that although we find broadly similar minorities in Expert jobs across the industry sectors, the majority (as with most of the working population as a whole) were working in services. However, over 60 per cent of the Experts were concentrated in Other Public Services and Education; Orchestrators in Other Public Services (but to a lesser degree than Experts), Business Services, Banking and Distribution; Communicators in Education, ICT and Other Public Services; and Non-graduates also in Other Public Services, Distribution and Retail and Education.

Table 3.4 Distribution of current jobs by industry, by SOC(HE)2020

%

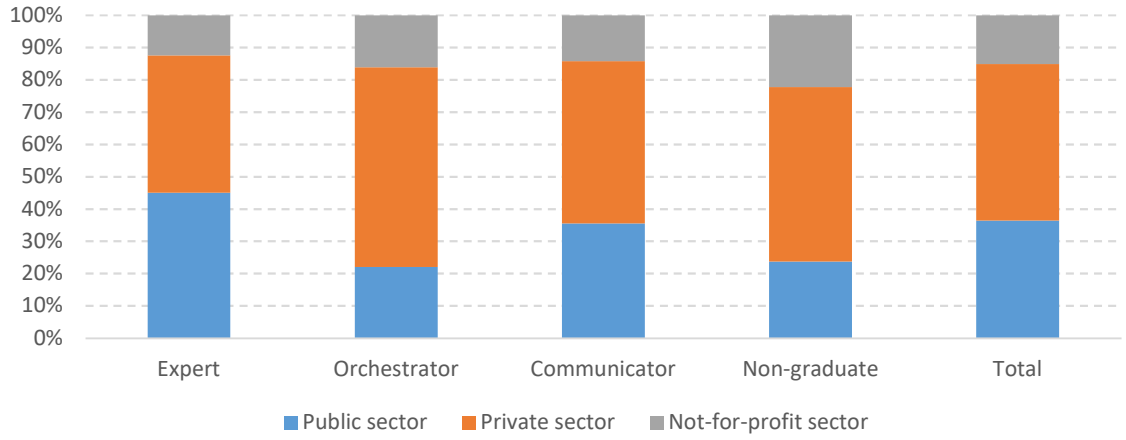
	Expert	Orchestrator	Communicator	Non-graduate	Total
Primary sector	1%	2%	1%	3%	2%
Manufacturing	6%	7%	5%	4%	6%
Electricity, gas, water supply	2%	2%	1%	1%	2%
Construction (includes civil engineering)	3%	2%	1%	3%	2%
Distribution & retail	1%	8%	5%	14%	5%
Transport and tourism	1%	5%	1%	8%	3%
Information and Communication	6%	10%	18%	3%	8%
Banking & finance,	7%	12%	4%	6%	7%
Business Services	11%	15%	9%	7%	11%
Education	24%	7%	40%	13%	22%
Other Public Services	38%	29%	15%	38%	33%
Total (100%)	3,303	803	804	864	5,501

Source: Futuretrack Stage 5 survey, all employees and self-employed (n = 5,501)

Key: Primary sector industries are Agriculture, Mining & Quarrying (including oil & gas extraction); Distribution & retail includes hotels, catering, supermarkets, wholesale and retail distribution; Construction includes civil engineering; Information & communications (ICT) includes media; Business services includes legal services, computing, advertising, public relations, R&D; Education includes schools, colleges and universities; Other Public Services include local and central government, health services, police, social services.

All these sectors include occupations ranging from very senior professional and managerial jobs to those with low educational requirements and they encompass Public, Private and Not-for-Profit organisations (although the boundaries between these overlap and are sometimes hard to draw, particularly in formerly Public Sector organisations that are now wholly or partially outsourced). Figure 3.10 shows the self-assessed broad sector employment locations of the Stage 5 employed and self-employed respondents. We see that Experts were most likely to work in the Public Sector, as might have been expected from their industry sector locations, with Orchestrators and Non-graduates most likely to be employed in the Private Sector.

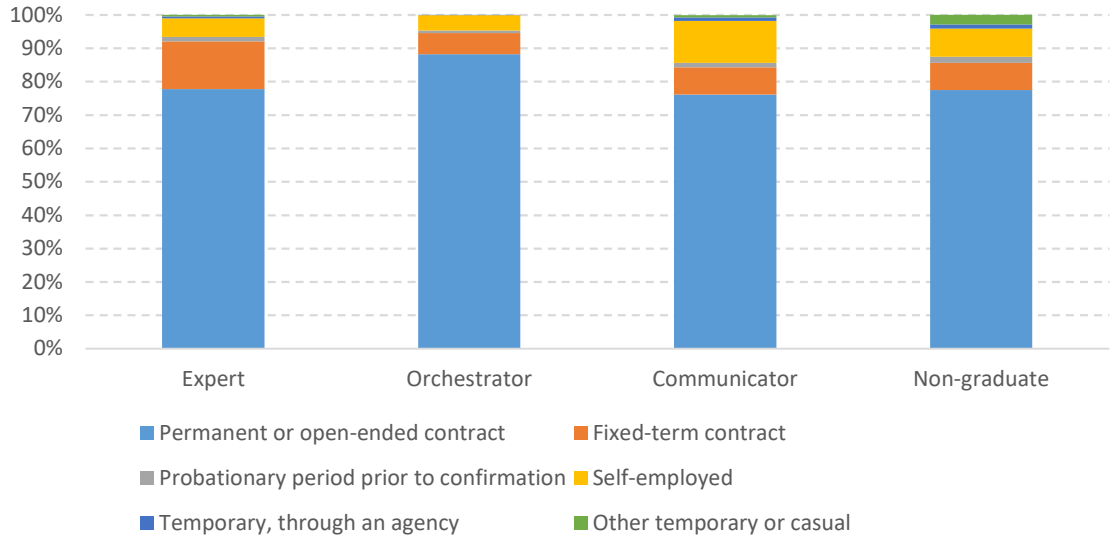
Figure 3.10 Broad sectoral distribution of current jobs by SOC(HE)2020



Source: Futuretrack Stage 5 survey, all employed and self-employed (n= 5,474)

Figure 3.11 reveals that Orchestrators were also most likely to have permanent contracts of employment and be least likely to be self-employed. Communicators were most likely to be self-employed, and Experts most likely to be employed on fixed-term contracts.

Figure 3.11 Contractual basis of employment in 2019 by SOC(HE)2020



Source: Futuretrack Stage 5 survey, all employed and self-employed (n = 5,500)

As far as the incidence of part-time employment was concerned, in terms of the SOC(HE) categories, most was concentrated in Expert occupations employing those who had studied Subjects Allied to Medicine, Medicine & Dentistry; Biological Sciences and Interdisciplinary

Subjects; and to a lesser extent, in non-graduate jobs filled by graduates with degrees in Biological Sciences, Interdisciplinary Subjects, Creative Art & Design, and Social Studies. Among Communicators, only a small number of education graduates were in part-time employment, and the incidence of part-time employment among Orchestrators was negligible. Self-employment was concentrated mainly in Expert occupations (41 per cent), followed by Communicators (25 per cent), non-graduate occupations (23 per cent) and with Orchestrators least likely to be self-employed (11 per cent) – although the first of the examples below shows how as careers develop, the orchestration skills required by Experts can become a predominant requirement of their roles.

> *"I set up the company with two friends from university...*[ ] *delivering affordable energy to some of the world's poorest.* … [He graduated in 2010 and they founded the company that year.] *We currently have over 450 staff in the UK, Africa and China, .We are expanding into new markets this year and sourcing talent can be a challenge, but it is essential that we install the expertise required to facilitate and support growth. We work closely with* [several research-led UK universities] *offering internships, PhD sponsorships and project collaboration which has been beneficial to students and enabled* [the company]*to nurture future talent. Our proposition is an exciting one to prospective candidates: travel, diverse projects, and the opportunity to work for a company with social impact."*
>
> [Self-employed co-owner of an environmentally responsible social enterprise, studied Engineering at a highest tariff HEI, from Managerial& Professional background, earned £90,000-£99,999.]

> *"I had spent seven years within the NHS, and I wanted a new challenge. I always knew that I wanted to set up my own practice, and I felt that the NHS had a bit of a glass ceiling in terms of where I wanted to get to. So, I set about setting up the business…It's usually risky. My earnings obviously went down and are probably still down compared to what I would be earning if I was at NHS. But I suppose it fulfils me in terms of learning a whole new load of business-related information. And longer term, I hope that the financial returns will be better, although I don't know if that's going to be the case".*
>
> [Interviewer: "What were your reasons for leaving the NHS?"]
>
> *"I think in terms of the quality of care that you give to your patients, you're so pressurised and time pressurised; whereas, now that I run my own business, I'm able to give really bespoke care to everybody, which I really enjoy. You can spend more time collaborating with consultants and doctors, whereas in the NHS there's not enough time for that. So yes, it gave me greater opportunities in those areas."*
>
> [Self-employed Physiotherapist, studied Physiotherapy and then a specialist Master's degree at highest tariff HEI, female, from Managerial and professional background, earned £24-26,999.]

The examples above also give an indication of the diversity of opportunities and motivations for becoming self-employed in different occupational and sectoral areas, and the wide range of rewards associated with these, as does the example below, from a graduate who initially found labour market integration difficult.

> *"I wanted, when I left university, to get a job in a design house and to work for somebody else, but when I came out of university, that was 2010, and I applied for lots of jobs within that year, and then I found myself working in a bar, and I was also working in a retail store. …I was working about 80 hours a week… I was working two full-time jobs: I was full-time in the day and full-time at night……… and doing that alongside [building up my Design company with my partner]. I did that for a couple of years [and] slowly, I was able to quit the bar job, and then quit the retail job, and then just have [the company]. Because I was working in a shop at the time, they offered to let me put the stuff that we were making on the shelves in the shop, so that was an easy way to see if it was popular, if it would sell. From that, someone told me about Etsy, and online selling, so I tried that out, and it all just snowballed, and here we are now, seven years later. But there was no purposeful 'This is what I'm going to do, I'm going to have this business." At the beginning it was very much a sort of hobby or side line that we were doing, and then, in our heads, it's always been*

that we would make more money than the previous month, and if we didn't manage to do that, then we would stop doing it, basically. And that's still working out for us, so that's good".
Interviewer: "Now, are you settled in that? "
"Yes, definitely. I can't imagine doing something different right now".
[Self-employed MD, Jewellery Manufacturing Company, studied Creative Arts & Design at high-tariff HEI, from Managerial & Professional background, earned less than £9,999.]

Like both the previous respondents cited, the jewellery designer regards her job as ideal for someone with her knowledge and skills and is completely satisfied with it.

We now look more closely at the working patterns of respondents: their modes of work, hours of work and the sizes or organisations that they worked in. In Table 3.5 the contracted working arrangements, or modes of work, of the different SOC(HE) categories are explored. Over a third in all categories had standard employment contracts and working arrangements, whether full-time or part-time, but the patterns are different.

Table 3.5 Modes of working according to SOC(HE)2020 category %

Working hours contract	Expert	Orchestrator	Communicator	Non-graduate	All
Flexible working hours	33	42	25	29	33
Annualised hours	18	14	17	19	17
Term-time working	7	1	21	3	8
Job sharing	1	0	2	1	1
Compressed hours	4	2	2	3	3
Zero-hours contract	2	0	3	6	2
On-call working	4	3	1	2	3
None of these	39	43	36	43	39

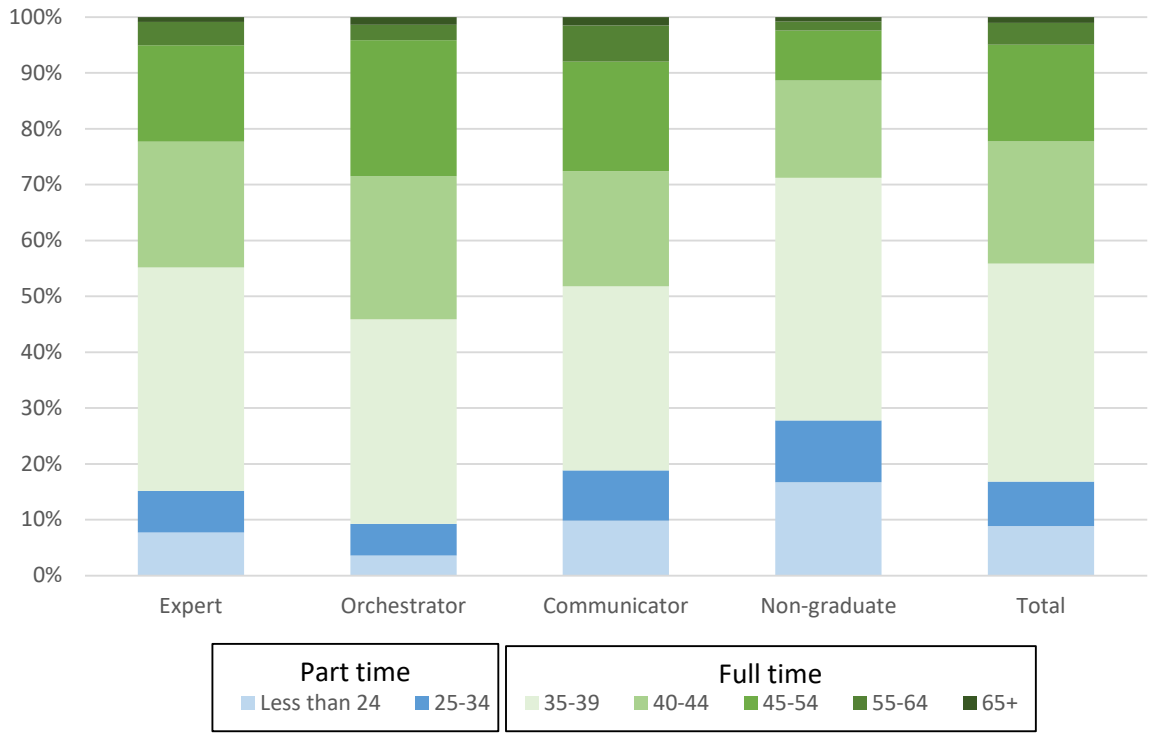
Source: Futuretrack Stage 5 survey, all employed and self-employed. (n= 5,449)

N.B. Respondents could select more than one option, for example, in the case of teachers with job-shares or with term-time working to which other listed modes of working also applied.

The extent of annualised hours arrangements is not significantly different across the Expert, Communicator or Non-graduate categories, although less common among the Orchestrators. The last of these claimed a significantly higher incidence of flexible working hours or 'flexitime', followed by the Experts. Apart from term-time working (explained by the secondary school and less secure HE teachers) the Expert category appear to be least likely to have non-traditional or flexible working arrangements, with the Communicators least likely to have flexibility in working hours. Non-graduates were most likely to report being on zero hours contracts.

Further insight to differences in the modes of working and organisation of work can be seen in a comparison of the reported weekly hours of work by respondents in different SOC(HE) categories, Figure 3.12.

Figure 3.12 Hours worked per week by respondents*, by SOC(HE)2020 categories



Source: Futuretrack Stage 5 survey, all employed and self-employed (n=5,449)
*Actual hours worked, as reported at the time of survey completion in 2019

Figure 3.12 reveals that those in Non-graduate jobs reported working significantly shorter working hours than those in other categories, followed by those in Communicator jobs. In the latter group, there is an interesting polarisation of those reporting over 55 hours per week and those working less than 34 hours, reflecting the greater incidence of part-time working by both males and females in this category, but also the fact that there are some very 'greedy jobs' (Coser 1974) in this category, as there are in the Expert category. The shortest average hours were reported by women in Non-graduate jobs, which possibly reflects the likelihood that women working part-time to accommodate parenthood may still find it more difficult to obtain appropriate part-time opportunities in the occupation, as has been found for previous cohorts of female graduates. Female respondents reported working shorter hours on average in all the SOC(HE)2020 categories. Males in Orchestrator jobs reported working longer hours than others, but women in that category also worked longer hours than both males and females in all other sectors except males in Expert jobs. One Expert, asked about what he did yesterday, said:

> "*I started at 7am. That's every day. And then finished at 6pm. Part of the day was responding to client queries via email, based on our products. Another part was on-boarding some new accounts. Part of that was working with some of the procedural on-boarding teams at our company. Then the third part was building some more tools for research, through Excel and that kind of thing.*
> [Interviewer: "And what would you say the share between these three broad areas, in your 11-hour working day?"]
> "*I would say something like 30* [per cent] *on the client queries, 20* [per cent] *on the on-boarding, and 50* [per cent] *on the Excel tools etc.*"

[Interviewer: "Any of these tasks, did you work by yourself focusing… Or was there any team working involved, any meetings?"]
"*For the time creating the Excel, I was working on my own. For the on-boarding I was acting more like a directing leadership role. Other teams are involved, and I was trying to help make some of the final decisions so that they could continue on their path*".
[Interviewer: "Would you say this was in any sense a typical day?"]
"*Yes, it's pretty typical…on a busier day, there's definitely more news flow. Trump will say something, or something is going on in Europe, or something is happening in Russia, which affects what we would do during the course of the day. At the moment it is a little bit quieter than usual*".
[Emerging Markets Investment Analyst, Banking and Finance, studied Engineering at highest tariff HEI, male, Managerial & Professional background, earning £120,000+]

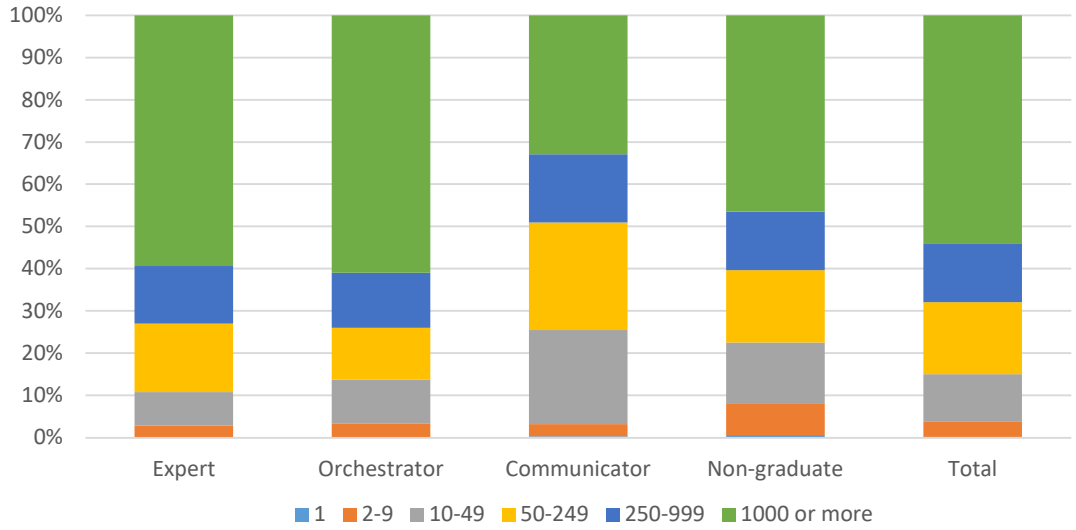
Not all those in Expert jobs were equally sanguine about the stresses of their working conditions and hours of work.

"If I could go back in time, I wouldn't take this as a career option, because there's just a lot of pressure on pharmacists. And a lot is demanded from us day to day. It's just too much, too much is demanded at the moment. It is interesting, it is a good job, it's just the way things have changed over the past six years or so, has just made it very, very hard, and very challenging for pharmacists.
[Interviewer "Why has it changed…?"]
" It's just like with nurses as well, the main funding has reduced drastically. For my company now, they've lost 52% profit just in the past year… It's just getting very hard and very challenging, and a lot of pharmacists are moving from community to hospital just because of the pressure. And, you go home feeling tired, you go back to work feeling drained, and you just can't keep up".
[Interviewer: "And you work very long hours, don't you?"]
"We work long hours, yes."
[Pharmacist, studied at medium-tariff HEI, female, Black, from Managerial & Professional background, earning £35,000-£39,999]

Similar comments were made by many of those employed in Other Public and Community Services and in Education, but also among the highest-paid in the Private Sector:

"It's a matter of public record that the partners of the firm I work has, on average, seven figure incomes, but, that does bring with it, obviously, significant hours in the office, and I think, almost everybody would agree, reduced work life balance. And that is, obviously, a perfectly valid choice for your career and your life …[but]. …I think, it's definitely difficult to have working hours that are quite unpredictable and also quite long. So for example, as a rule, I don't plan anything on weekday evenings, because I'm too worried about having work come up and then having to cancel, and losing friends, as a result. And that of course restricts the time when you can have guaranteed free time, as it were, to weekends. So that is a definite downside of working the longer hours".
[Solicitor, studied Law at highest tariff HEI, male, from Managerial &Professional background, earning £110,000-£199,999.]

Figure 3.13 Size of organisations where those in employment worked

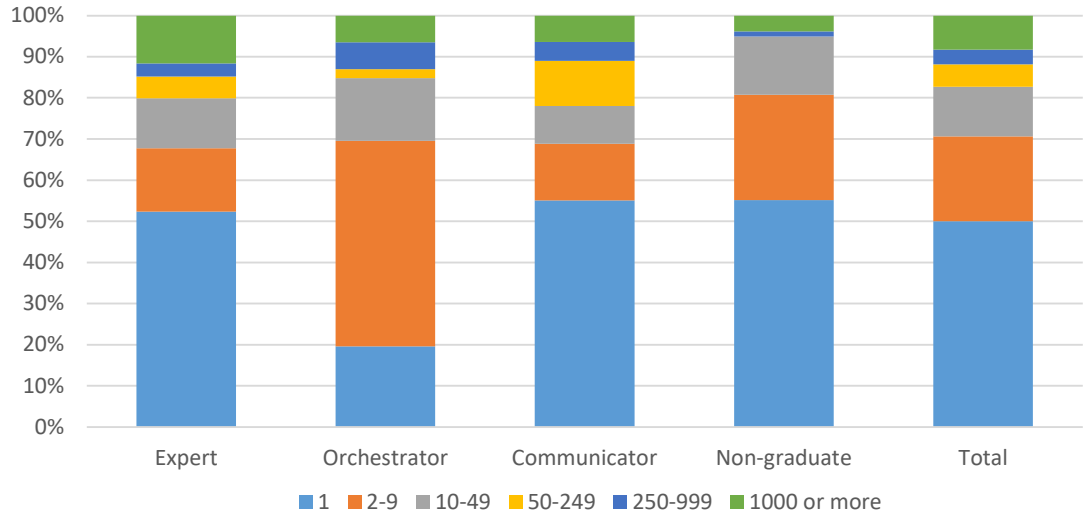


Source: Futuretrack Stage 5 survey. All in employment (n=5,080)

The majority of those in employment worked in large organisations, as shown in Figure 3.13, but particularly among Non-graduates and Communicators and those in self-employment (as Figure 3.14 shows), we found a significant number in small organisations and, in the latter case, on their own.

Note the different pattern of these in the case of self-employed Orchestrators, mainly working as Information & Communications (ICT) or management consultants. The self-employed Orchestrators were almost all specialist sub-contractors with financial, ICT or consultancy skills whose clients tended to be large organisations but given the small sizes of self-employed sub-samples in each category, these differences must be regarded as at best indicative.

Figure 3.14 Size of organisations where the self-employed respondents worked



Source: Futuretrack Stage 5 survey. All in self-employment (n = 422)

3.4 Respondents' use of knowledge and skills in current jobs

The differences among use of skills and knowledge in their current jobs by members of the four SOC(HE)2020 groups are shown in Table 3.6. Reassuringly, these make sense in terms of the expertise, orchestration, and communication competences that we identified as core to graduate occupations in developing the SOC(HE), and the respondents' accounts of their working patterns, employment contexts and job content below reinforce this.

Table 3.6 Use of knowledge and skills according to SOC(HE)2020 category %

	Expert	Orchestrator	Communicator	Non-graduate
Ability to manage my time	93	92	98	84
Spoken communication	87	90	87	82
Ability to work individually	82	75	82	77
Written communication	82	86	84	66
Ability to work in teams	73	80	73	66
Critical evaluation	71	68	57	40
Innovative thinking	52	54	58	35
Presentation skills	41	49	53	21
Numerical analysis	42	45	36	28
Research skills	39	39	3	21
Entrepreneurial skills	8	21	15	9

Source: Futuretrack Stage 5 survey, all employees and self-employed (n = 5,478)

Perhaps the most surprising aspect of this table is the extent to which those in non-graduate jobs, according to this classification, reported using some of these categories of knowledge and skills, but closer examination and consideration of the range of probable uses in different occupations make this easier to understand. For example, people in routine call centre or retail jobs certainly must manage their use of time (and in some cases are rewarded and punished according to their output or efficiency in use of time)[11]. The use of spoken, written communication and numerical skills are required to do most jobs, but the range of usages vary according to the complexity of tasks carried out; and this, of course, goes for all areas of knowledge and skills. Nevertheless, we found examples of graduates in 'non-graduate jobs' who were clearly drawing substantially on their HE knowledge and skills and we will examine the range of non-graduate jobs below in detail to see how far this reflects misclassification, employers capitalising on the abilities of their highly qualified low-paid workers, or occupational change due to changing technologies and other developments that affect how work is organised and objectives met. As at Stage 4 and in previous surveys (Purcell *et al.,*2013:67-69), we find entrepreneurial skills (which were least developed on undergraduate programmes) to be least widely used, but most often used by those in Orchestrator roles, followed by those in Communicator occupations. Perhaps it is less surprising that those using these skills a lot were less likely to be in permanent post (62 per cent compared to 79 per cent overall) and more likely to be employed on some form of temporary of fixed-term contract (26 per cent compared to 15 per cent) and more likely than respondents overall to be self-employed (12 per cent compared to 7 per cent), and working in small organisations (29 per cent as opposed to 20 per cent in organisations employing less than 50 employees; 53 per

[11] For example, in call centres and supermarkets where time use is monitored and pay is deducted, or workers denied future shifts for inadequate throughput of clients. *c.f.* Taylor and Bain (1995).

cent as opposed to 49 per cent in organisations employing less than 250 people). In the examples that are provided below, it will be possible to evaluate the extent to which enterprise skills are used, and how they are used, by members of the 2009/10 cohort of graduates by 2019. Those using these skills a lot were also most likely to be working in the Private Sector (76 per cent as opposed to 46 per cent of all employees in Public Sector employment) and within that, in Manufacturing (10 per cent using enterprise skills 'a lot' compared to 3 per cent overall), Business Services (16 per cent compared to 8 per cent overall), the Information and Communications Sector (14 per cent compared to 7 per cent overall) Distribution, hotels, catering and retail (6 per cent compared to 3 per cent overall), and Transport and tourist service (5 per cent compared to 2 per cent overall). This may seem unsurprising, since these are all serving markets dependent on customer demand, but the different use of these skills between these and increasingly-customer and client-focused Public Sector occupations is interesting.

Table 3.7 allows us to compare the relative proportions of graduates from each subject in each SOC(HE)2020 occupational group.

Table 3.7 Distribution of respondents in full-time employment by subject studied and SOC(HE)2020 %

Subject/Discipline	Expert	Orchestrator	Communicator	Non-graduate
Medicine & Dentistry	98	2	0	0
Subjects Allied to Medicine	86	4	4	6
Biology, Vet. Science, Agriculture & related	56	10	12	22
Physical Sciences	65	16	8	11
Mathematical & Computer Science	72	13	5	10
Engineering, Technologies	70	16	4	11
Architecture, Build & Plan	67	13	5	15
Social Studies	44	24	12	20
Law	61	12	9	18
Business & Admin studies	41	29	18	13
Mass Communication & Documentation	15	21	32	32
Linguistics and Classics	36	20	26	19
Languages	34	16	36	14
History & Philosophical studies	43	21	15	21
Creative Arts & Design	41	10	27	22
Education	29	5	51	15
Interdisciplinary subjects	46	18	17	19

Source: All Futuretrack Stage 5 survey respondents in full-time employment (n = 5,412).

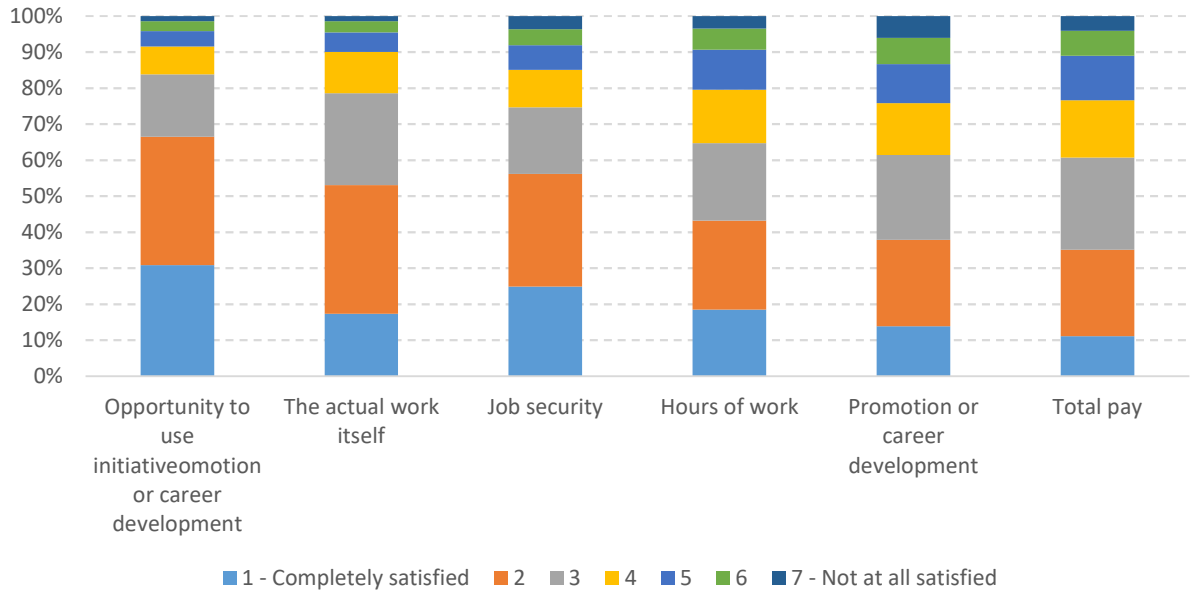
The distributions among the three graduate categories reflect the knowledge and skills inculcated on the courses in question. The variation in the extent to which graduates were found to be in Non-graduate jobs, ranging from none in Medicine and Dentistry to just under

a third (32) of the considerably smaller cohort of graduates who had obtained degrees in Mass Communication & Documentation, raises questions about the classification of occupations in both SOC(HE)2020 and SOC2020, where new areas of economic activity are more vulnerable to misclassification than more established occupations, as is discussed below.

3.5 Satisfaction with current employment

In the Stage 5 survey, respondents were asked how satisfied they were with various aspects of their work. Figure 3.15 shows the extent to which they were satisfied with these aspects, ranging from the area of greatest satisfaction – the opportunity their employment provided to use their initiative – to total pay. Despite this variation, it is notable that 60 per cent or more of the respondents overall were positive or reasonably positive about all of these, although there is significant variation in the extent to which respondents in different occupational categories evaluated some of them.

Figure 3.15 Respondents' satisfaction with various elements of current work and employment



Source: Futuretrack Stage 5 survey, all in employment or self-employed (n = 5,507)

Table 3.8 shows the extent to which respondents in the different SOC(HE) categories reported high satisfaction rates in relation to these different elements of their current jobs.

Table 3.8 Respondents' satisfaction with various elements of current work and employment, by SOC(HE) category

Aspect of job	% rating satisfaction at 1 or 2 (very satisfied)			
	Expert	Orchestrator	Communicator	Non-graduate
The actual work itself	57	45	53	46
Total pay	38	41	39	23
Job security	60	57	52	47
Promotion or Career development	50	42	34	26
Opportunity to use initiative	69	66	69	56
Hours worked	38	41	31	23
Current job overall	51	45	48	37

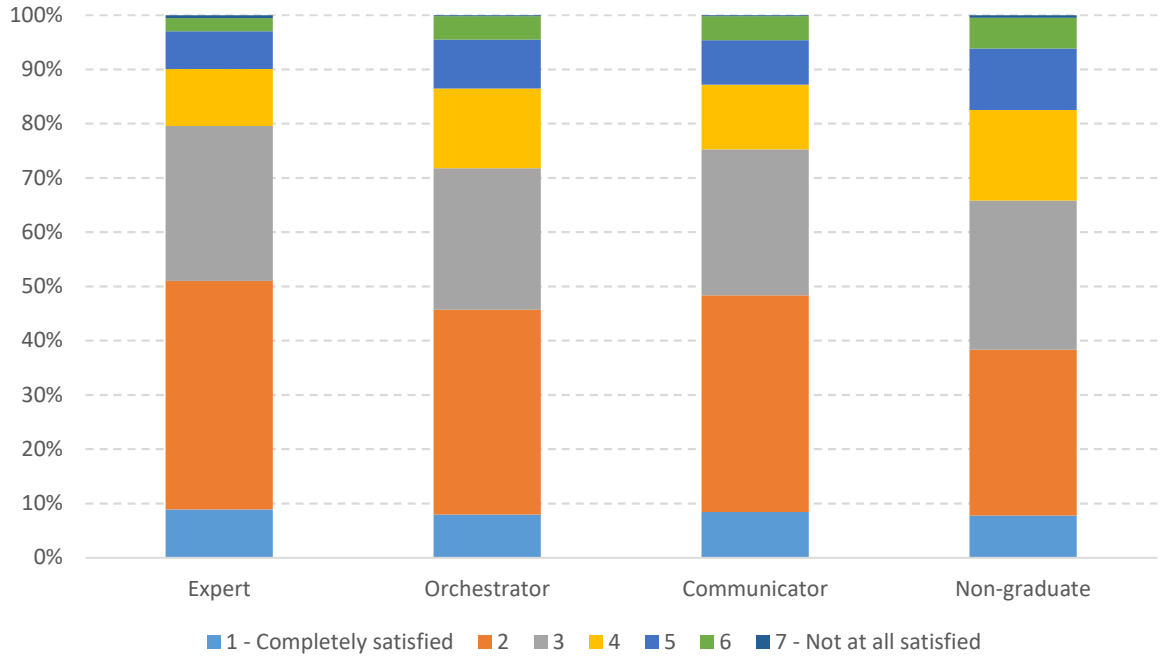
Source: Futuretrack Stage 5 survey, all in employment or self-employed (n = 5,507)

Not surprisingly, those in the Non-graduate occupations expressed significantly lower average levels of satisfaction than members of the other groups on all but one of the dimensions, but even so, well over half rated the capacity to use their initiative at 1 or 2, and substantial proportions of Non-graduate jobholders gave similarly positive ratings related to the actual work itself (46 per cent) and job security (47 per cent). Having seen their greater propensity to have relatively shorter hours of work than any of the other categories in Figure 3.12, the substantially lower propensity of Non-graduate jobholders to have been 'very satisfied' with their working hours may reflect involuntary short hours working at the lower end as well as dissatisfaction on the part of the 29 per cent working over 45 hours per week. The comparison also raises questions about the second-least satisfied category: Communicators were revealed by Figure 3.12, which showed somewhat larger proportions at both end of the hours-of-work scale than either of the other two graduate job categories, to have been working very long and short working hours. A substantial minority had classified themselves as working part-time, but a rather lower proportion than those in Expert jobs.

As far as promotion and career development prospects were concerned, the Non-graduates and Communicators were significantly less satisfied, with only 26 and 34 per cent rating this dimension highly. Not surprisingly, the Non-graduate jobholders were less satisfied by their total pay, with only 23 per cent selecting 1 or 2 on the scale, compared to almost identical ratings of around 40 per cent of the three 'graduate job' categories.

When we examine the levels of overall job satisfaction in greater detail in Figure 3.16, we find surprisingly little difference in the ratings of the members of different categories. Certainly, a significantly higher proportion of the Non-graduate jobholders were disaffected and their average score over the range is lower, but the proportion expressing complete satisfaction is virtually identical to the proportion in the other categories. This polarisation within the Non-graduate category is discussed below.

Figure 3.16 Overall satisfaction with current job, by SOC(HE)2020



Source: Futuretrack Stage 5 survey. All in employment or self-employment (n = 5,484)

When we examine the data collected in the detailed telephone interviews, related to the responses provided by these selected respondents, it is possible to gain more insight into the reasons that underlie these patterns of response.

3.6 A more detailed focus on the SOC(HE)2020-classified jobs done by respondents

3.6.1 SOC(HE)2020 Experts

The Expert group is by far the largest of the three graduate job categories, in the survey response as whole and among the interviewed sub-sample. We interviewed 94 graduates in this category, covering the full spectrum of subject areas and academic disciplines, and coming from all categories of HEI. The Expert interview accounts reinforce the picture provided by Figure 3.16, as being most likely of the three graduate categories to be in a job that was exactly what they wanted and which had lived up to their expectations. However, the range of occupations and situations within these was very wide, ranging from Consultants and Professional Specialists in Banking, Finance and Insurance earning over £120,000 to graduates working in Information and Communication Service (including media) and Other Public Services earning less than £27,000 for full-time employment that required and used their graduate knowledge and skills. Virtually all the Experts rated their current job as between 1-3 on the scale where 1 meant 'Completely satisfied' and 7 meant 'Completely unsatisfied', with only 12 of the 94 rating it lower, and none Completely unsatisfied. They were also the most likely group, as Figure 3.9 showed, to rate their job highly on a similar 7-point scale that ranged from 'Ideal to 'Completely inappropriate'. The quotes that follow illustrate something of the range of examples of responses and an indication of what they valued about them which

will be explored in greater detail in Chapter 6 they gave then asked what they liked about their job:

> "*I think the opportunity to be challenged and to do quite complex work and you're intellectually challenged, combined with international high-profile work and clients and salary and the chance to work in London, in the city…All those things*".
> [Associate Solicitor, studied Law at highest-tariff HEI, female, from Intermediate background, earning £110,000-£119,999]

> "*It's a nice mix of both theoretical stuff and practical. It involves a lot of thinking and looking at data, but then also, I am getting hands on with, basically,' big boys' toys' around the power station. I get to interact with quite a lot of people every day, so there's a bit of a social aspect to it. And I find it interesting myself, it's a bit of a niche industry, so it keeps me interested*".
> [Nuclear Operations Engineer in a Utilities industry, studied Physical Sciences at highest-tariff HEI, male, Intermediate background, earned £70,000-£79,999.]

> "*I manage my own time, my own schedule. As long as I've got my work done in the day, it's kind of down to me how I do that. It's just a nice job. You're with women at an important time of their life, and they do remember you and they remember the care that you gave them. So, I do enjoy it*".
> [Community midwife, NHS, studied Nursing and then Midwifery at medium tariff HEI, female, Managerial & Professional background, earning £27,000-£29,999.]

3.6.2 SOC(HE)2020 Orchestrators

The Orchestrators were the most polarised of the three groups: the most highly paid on average, the least likely to be working in the Public sector, least likely to be using their undergraduate degree subject-knowledge, but most likely (among the interview samples) to regard themselves as being in jobs that were very appropriate for someone with their qualifications and skills. They were most likely to be in permanent full-time employment rather than self-employment or other non-standard contractual arrangements. The range of rewards and scope of responsibilities are wide.

> "*I wanted to work for a big global company. .Every day's different. I'd say on a typical day there will be operational queries and problem-solving. There will be a bit of coaching and line management. And then there will be a bit of project work and customer work as well. It's very rare that I will come in and focus on one thing for eight hours. It's usually a mix of different things across the day. I think the only time I come in and focus on one thing would be around budget periods, like our mid-year business reviews and budgets for next year*".
> [Logistics Manager, Multinational Manufacturing company, male, did a sandwich degree in Business & Administration at a Medium-tariff HEI, Intermediate background, earned £65,000-£69,999.]

Conversely, the next Orchestrator had a significantly more local range of duties but could be argued to doing similarly wide-ranging and responsible work within a less well-paid area of employment.

> "*There's a new government-funded initiative: it's called Somewhere Safe to Stay and it opened about six months, seven months ago. Yes, and it's about preventing rough sleeping and homelessness. So it's a preventative service to people who will become homeless in the next 56 days or so. Though it's working with those people to prevent them having to rough sleep at all and in need of a manager.* [The Charity] *are very rigid with their recruitment processes. So, it tends to be like almost I think five-part recruitment process which includes personality fair, verbal reasoning, numerical casting, they've got to be interviewed, role play and everything, but I think it's really good because they succeed in recruiting really high-level people who can do their jobs really well. So, it's a really good job*…" .
> [Deputy Manager, Other Public Services charity, female, studied Social Sciences at high tariff HEI, from Intermediate background, earned £33,000-£35,999.]

The final example is an Orchestrator who started out as a Communicator with his current organisation and, as with many of the respondents, found himself required to take on a role that required him to exercise orchestration rather than the specialist communication skills required to access his original job.

> *"… the way the army works: they want you to become a specialist, but as you move up the ranks you have to become more general, or generalist. Because you're going to end up overseeing, potentially, quite large numbers of people who are doing a lot of different things, and you've got to have an idea as to what all of them are doing. So regular changes; changes to your location, changes of job, just so you gain a much wider view of the army as a whole*".
> [Interviewer: "And you said it's become a more managerial role?"]
> "*Yes, so certainly when I first joined it was completely non-managerial. I was managed and I was a teacher. In my last post I had five officers under my card who were instructors themselves. And then in my current post I've got four senior soldiers"*.
> [Interviewer: "And do you enjoy that aspect of the job? "]
> *" Currently, it's awkward because only one of them is actually here in the same location as me. The headquarters that I'm in [overseas trade], goes across the whole of the UK. So I've got one subordinate who's in Brecon Beacons in Wales, and one down in Warminster, which again is down in Salisbury. So it's actually managing across the whole length of the country; it's quite awkward*".
> [Army Officer, studied Biological Sciences followed by a PGCE at a highest-tariff HEI., male, Managerial & Professional background, earned £40,000-£44,999.]

3.6.3 SOC(HE)2020 Communicators

Only 18 Communicator jobholders were included in the interview sample, but proportionately, were more likely to have taken their job because it was exactly the kind of job they wanted. As their overall survey response had suggested, they were generally satisfied and in jobs they regarded as appropriate. However, despite the fact that they were equally likely to have done postgraduate qualification in addition to their first degrees. they generally expressed lower levels of satisfaction with their current jobs and had lower earnings, and lower expectations, than those in Expert jobs. It initially appeared that this might be related to earnings levels, since the salary range among those interviewed ranged between only one respondent earning over £50,000 to six earning less than £18,000 *per* annum. Interestingly, though, their levels of satisfaction were not related to earnings, although it may be related the fact that they were likely to be employed in the Public sector or in precarious work. In fact, of those interviewed, 10 had embarked upon their current job because 'it was exactly the kind of job I wanted', but levels of satisfaction and the evaluation that it was not an appropriate job for someone with their knowledge and skills polarised, as for the Communicator sample as a whole. As we saw in Figure 3.11, they were more likely than those in the other groups to be self-employed or in temporary work, which led to a higher proportion having changed jobs between the survey and being interviewed than was the case among other interviewees.

> "*You can develop your career as a translator in the EU in a way that you just can't anywhere else in the industry, unless you're very lucky and translate in house for an agency and they've got progressive steps that you can take, or if you're working for the UN. But otherwise it's difficult to get that sense of progression if you're working freelance, basically, I suppose, is what I'm trying to say. You can push your rate up a bit more, but then that's pretty much it. Whereas, here I can learn more languages and become more senior within my unit. Move elsewhere, if I want to*".
> [Translator for an EC Public Services organisation, with an undergraduate degree in Languages and a Master's degree in Translation from highest tariff HEIs, female, Intermediate background, earned £33,000-£34,999.]

> "*I graduated in 2009, so – recession - so my incredibly useful undergraduate degree in archaeology and medieval history, and my even more useful postgraduate degree in medieval*

British studies really wasn't going to get me anywhere. I worked in any job I could for a little while; really bad retail jobs, then Cover Supervisor (which was like a supply teacher but unqualified) in schools, until I realised I really hated children. And that was when I I[this government organisation]*...and this job is the first time, I think 'Actually, yes; this is something I enjoy. This is something I could progress at. It's something that's actually using my brain a bit and having vaguely intelligent conversations and something I'm actually good at", which is nice.… There are two bits of the job. One bit is proofreading, which is literally every single thing that* [the organisation] *puts out ... and then the bit that's really the content editing bit, where we're constantly working on our website to make it better*".

[Content editor working part-time in Public Services, with degree plus postgraduate degree for high tariff HEI, female, Intermediate background, earning £15,000-£19,999.]

In addition, it seems from all the accounts from members of the three graduate groups that as their careers have moved forward, most have been increasingly required to develop hybrid skills across the Expert, Orchestrator and Communication spectrum.

3.6.4 SOC(HE)2020 Non-graduate jobs

The minority in the Non-graduate jobs group exhibit much greater diversity. When we scrutinise their characteristics, we find that they fall into four groups:

Those in new or restructured jobs

Most members of this first group were in jobs for which a degree has not normally been required in the past, but reflect the changing pattern of employment resourcing, where change in the use of ICT, the skills requirements of jobs, or employers' construction of jobs. These changes, along with the increased supply of graduate labour, has led most employers to reorganise and restructure their workforces. Almost all the graduates identified in this group were female, working in Other Public Services or Education, working in administrative or technical occupations. Several were working in part-time posts, balancing these with childcare responsibilities or other activities. Examples include an Education and Engagement Manager in Other Public Services, and a Tax compliance officer in Other Public Services, an IT User Support Manager in in Education, an Ambulance Technician and Cardiology Data Technician in the NHS and a Police Constable. There are graduate-entry routes to some of these occupations, but their classification reflects the majority occupational entry requirements. A number of these Public Sector employees might well have been overqualified for their jobs, but their responses on appropriateness of their jobs and high levels of satisfaction with them suggest that this is unlikely – or it may reflect the predominance of other values, as will be discussed in Chapter 6.

Those in specialist self-employment

Members of the second group were often self-employed or fixed-term contracted specialists using their knowledge and skills in a Not-for-profit enterprise, reflecting the priority of other values than earning potential. They included a Service User Analyst in a charity, the Deputy Manager of a project on homelessness, a NHS One-to-One Carer, a charity Conservation Administrator and a part-time Project Manager who was basically applying for funding and managing a community project. The descriptions of their daily work activities showed clearly that they were drawing on, and in some cases, explicitly using their HE knowledge and skills, as illustrated by the example that follows:

[Interviewer: "In the survey, you said that your current job used the skills and knowledge that you developed on your undergraduate course, and that's quite interesting in the context of your pathway, your career. Can you say a bit more about that?"]

"Yes. Quite a lot, with deaf students, you have to explain the English, because their first language isn't English, it's sign language, and the syntax is completely different. If you're saying,

'What time are we meeting?', you would say, 'Time, meeting, when?" or something like that, that's the order that you would say it in. And you have to help them understand why it is you can't write that down and expect to be understood by English-speaking people. Me, having a degree in English, backs me up on that sort of thing".
[Interviewer: "And you understand the structure of language, presumably?"]
"*Yes, exactly. Also, the expressiveness. I guess people often say I'm suited to it. Because I did theatre and I act and stuff when I'm not working, it means that I have a very expressive face and body, and that always really, really makes you much easier to be understood by a deaf person. If you look unhappy when you're saying you're unhappy, if that makes sense*!"
[Communication Support Worker for the Deaf, Degree in English and Physical Theatre, Lower tariff HEI, female, earns £21,000-£24,999.]

Graduates whose job titles had led to misclassification in SOC2020
In their survey responses, members of this group had provided insufficiently detailed job-titles or standard SOC2010 job title labels that led them to be misclassified in the coding: For example, the self-employed graduate in the fairly early stages of developing his start-up company who simply gave his job-title as Managing Director, but was working overseas using his both his undergraduate languages and politics knowledge and skills from both undergraduate and postgraduate HE (and indeed, considerable enterprise skills); two Art & Design graduates who were working on a self-employed basis, using the skills they had acquired in HE marketing their products, one describing herself as co-founder of a jewellery manufacturing business, the other giving his job title as Shirt maker. This group also included administrators in the private sector such as a Customer Operations Officer in Distribution earning between £40,000-£44,999.

Those in unequivocally Non-graduate jobs
Finally, there was a small residual group, who were clearly in jobs which did not require degree-level knowledge or require high level expertise, orchestration or communication skills developed by undergraduate programmes: the Ski Boot-fitter developing a career in Winter Sports coaching (who was, actually, using his Languages degree skills in his work overseas), the Bus driver, and the respondent describing himself as Bakery colleague. As will be discussed in Chapter 6, these, like many of the graduates interviewed during this research, had drawn on a range of values and aspirations to inform their career and lifestyle decision-making.

A small number of junior administrative and charity workers were also in this category. It is well-known that to work for charities, candidates need to have experience of voluntary work in the sector and paid jobs are highly sought after by graduates, even at non-graduate entry level. This final example illustrates well the way in which financially constrained Not-for-profit organisations can take advantage of the graduate labour supply, as was apparent at earlier stages of the longitudinal study, but they do provide opportunities for development for those who are able to survive in low-paid work to support causes to which they subscribe. This final example is of a full-time employee who has chosen to value the quality of working life over potentially higher earnings in less congenial context.

"The thing I really like is it is a really good working atmosphere…. I've never worked in an office where everybody has got on, on a personal level as well as a professional level. We all meet outside of work and support each other. Everybody in work, if you're in need of doing something, even if it's not their role, they'll support you. And they do the same outside of life as well…. where you feel like everybody cares about everybody, and everybody will help everybody. And also, just it's full of really passionate, intelligent people. So, it's the conversations that go on in the office and the meetings we're involved, whether just intellectually stimulating. And like I said, I've been given a huge amount of responsibility. My role is very varied, so there's a lot of different things that I do. What else do I like about it? I think one of the things that I've not made the most of yet,

but I can see is that they're quite good at encouraging development. So, they're quite good at finding the secondments you might be interested in doing or supporting".
[Conservation Administrator, Charity, female, studied education at medium tariff HEI, from Managerial & Professional background, earned £12,000-£14,999.]

It is clear from the above analysis that, for most graduates interviewed in a sample that was selected to be as representative as possible of the survey population, very few of those in the Non-graduate SOC(HE) job category were in inappropriate employment for graduates. As members of the 2009/10 'recession cohorts', some had had difficulty in accessing the kinds of opportunities they sought, and some had taken a different direction in their lives to the one they may have intended to follow at the outset of their undergraduate studies, but the experiences of many reflected the changing structure of employment and new combinations of skills sought by employers. There were few 'highflyers' among the Non-graduate subsample, but it seems that most had benefited and were using their educational opportunities. The structure of employment and even more, the value placed on different kinds of employment and the earnings potential in different sectors perhaps goes further to explain differences in the classification of jobs and the very wide range of annual incomes of the Futuretrack respondents ten years on. These questions are addressed further in the chapters that follow.

3.7 Summary

In this chapter we sought to better understand how much we could learn about the current diversity of the graduate labour market from the survey and interview data we had collected in the Futuretrack Stage 5 survey, focusing on those in employment and self-employment, examining the characteristics of different categories of jobholders, through the analytic lens of the SOC(HE)2020 classification. Our analyses indicated that all the Experts, Orchestrators and Communicators were in SOC major occupational groups 1-3: Managers, Directors & Senior Officials, Professional or Associate Professional occupations, as might have been expected. Over 90 per cent of the first two were in major groups 1 and 2, and half the Communicators in major group 3, but we also found that two-fifths of those classified as being in Non-graduate occupations were also in the top three categories, which indicates not just the fallibility of occupational classification but in this case, flags up interesting issues in relation to labour market change and the evolution of the graduate labour supply.

We examined the extent to which the graduate respondents were distributed in the different SOC(HE) job categories according to the subject they had studied as undergraduates, their age at which they commenced HEI study, gender, socio-economic background, ethnicity, the type of HEI they attended and their tariff points on HE entry. The proportions of graduates in different categories of SOC(HE) varied in line with the knowledge and skills they brought to the labour market. Those classified as having Non-graduate jobs ranged from none of those who had studied Medicine and Dentistry and few in Subjects Allied to Medicine and Engineering Technologies, to more substantial proportions of those who had studied Interdisciplinary subjects, Biological Sciences, Social Studies and Creative Art & Design, but it is important to note that there were substantial minorities in almost all the subject areas.

Even with this comparatively successful cohort of graduates, we found that long-established patterns of restriction and advantage persist to some extent. Those who had embarked on higher education aged over 26, women rather than men, those from Routine and Manual backgrounds and black graduates were more likely to be in Non-graduate employment. Those from the highest and high tariff HEIs appear to have been more likely to access graduate jobs. Those with relatively low HE entry qualifications were significantly more likely than those from more socially advantaged backgrounds to be in Non-graduate jobs and less likely to be in Expert or Orchestrator jobs. In Non-graduate jobs, 30 per cent of jobholders had embarked on their HE studies with tariff points of 420 points or more.

Across the board, the reasons respondents had taken their current jobs were mainly positive, with Experts most likely to have indicated that 'it was exactly the kind of job I wanted', almost as high a proportion of Communicators saying so, and somewhat lower proportions of the Orchestrators (but still 47 per cent) responding thus. The Orchestrators were most likely to have obtained their current job after working in a previous role at the same organisation and been attracted by the salary offered. Experts and Orchestrators were more likely than members of the other groups to have been attracted by the opportunity to do interesting work. Over one in five of respondents in all categories had taken the job because it involved doing socially useful work and just under one in ten because it was compatible with their partner's work. Wanting to work in the region was a frequent consideration for respondents all categories, slightly more often cited by Experts and Orchestrators than by the other two categories. A quarter of those in Non-graduate jobs and around one in ten or more of those in the other categories gave as a reason that 'it is better than being unemployed". This is a disturbingly high proportion of highly qualified people ten years after graduation and requires further investigation.

Examination of the formal qualifications required for current jobs revealed systematic differences across the categories. Among the Experts, 60 per cent had required a subject-specific degree, compared to around 30 per cent of Communicators, 23 per cent of Orchestrators and 14 per cent of Non-graduates. Just under 30 per cent had required a postgraduate qualification, compared to 12 per cent of Communicators, 9 per cent of orchestrators and (again, these mis-classified cases) 5 per cent of Non-graduate jobholders. For half of the orchestrators, but less in all the other categories, 'just having an undergraduate degree' had been enough – but this requirement had also applied to 27 per cent of those in Non-graduate jobs.

Substantial proportions of those in all categories reported employment experience in another organisation had been an important in obtaining their current employment; most often seen as significant in the Non-graduate and Orchestrator categories. Other professional or vocational training had been required by just under a third of Experts and Communicators, but only by 18 per cent of Orchestrators and 14 per cent of Non-graduate jobholders. Asked what had helped them to gain appropriate jobs for people with their knowledge and skills, subject of degree studied, qualifications and university attended were cited as important by many, but the accounts provided by those respondents who were interviewed suggest that most regarded these as a foundation for experience since graduation, which had become very much more important in accessing the kinds of jobs they now held and aspired to.

We looked at the reported graduate density of occupations (as reported by respondents to a question about the extent to which people doing the same job as them in their organisation were graduates), finding clear distinctions among the groups, with those in Non-graduate jobs less likely to work among other graduates and more likely in jobs where there were equal numbers of graduates and non-graduates or where the latter predominated. Not surprisingly, when we examined the graduates' subjective responses to how appropriate they regarded their jobs as being for someone with their qualifications the Non-graduates were least likely to rate their jobs positively, but there was interesting variation across the other three groups.

Those in Expert occupations were most frequently employed in other Public Services, Education and Business Services. Orchestrators were also employed in Public Services, but to a lesser extent and more likely to work in Private Sector, in Business Services, Banking & Finance, Information & Communication, and the Distribution industries. The Communicators were the most concentrated of the categories, mainly working in Public Services, Education, and in ICT. Minorities in all the graduate categories were more likely to work in Manufacturing than the Non-graduates. The distribution of graduates according to the subjects and disciplines they had studied as graduates clarified the basis for the sectoral employment distribution of those in graduate job categories.

The Non-graduates were mostly employed in the other Public Services, Education and Business Services, but more were in the predominantly low-paying, low-skill sector of Distribution & Retail, in which significantly higher proportions had been employed at the time of the Stage 4 Survey[12]. The distribution of graduates according to the subjects and disciplines they had studied as graduates clarified the basis for their sectoral employment distribution.

In outlining their contractual status and modes of working, we found the Orchestrators most likely to be in standard permanent employment, and the Experts and Communicators most likely to have fixed-term appointments. In both cases this reflects their relatively high incidence of working in Education, which is also the explanation behind their greater likelihood of having term-time contracts. Flexible working was the most frequent non-standard working mode in all cases, more so among Orchestrators and Experts than in the other groups. Their hours of work showed a wide range of diversity in all categories, with Communicators and Orchestrators most likely to work long hours, but Communicators also more likely to have part-time employment. Over half overall worked in organisations employing over 1000, very large organisations, with Communicators and those in Non-graduate jobs most likely to be found at the other end of the scale, in organisations with less than 50 employees.

The overwhelming majority of employees in all the SOC(HE) categories claimed to use the knowledge and skills developed in HE, although there was a marked difference in the extent to which members of the 'graduate' categories and those in Non-graduate jobs were required to exercise skills such as critical evaluation, innovative thinking and research skills. The jobs done by Experts and Orchestrators were again distinct from the others in being substantially more likely to involve numerical analysis and critical evaluation, whereas the Communicators were most likely to cite innovative thinking and presentation skills as part of their job requirements: pointing to the diversity of graduate labour occupations and the competences they require. Virtually all those interviewed mentioned the importance of 'soft skills' and the requirement to exercise hybrid skills as their careers developed.

Investigating respondents' satisfaction with their current occupations, the overall picture was positive. Comparing levels of overall satisfaction with their current jobs according to SOC(HE)2020 category, we find virtually similar levels of satisfaction across the three graduate categories, and significant only somewhat lower likelihood of high satisfaction ratings among the Non-graduate jobholders.

This chapter concluded with evidence of the similarities and differences found when interviewing members of the three groups in the detailed interview programme, ending by focusing on those in the SOC(HE) Non-graduate category. Close attention to their characteristics and the location of their current employment suggested that very few of them *were* in employment that did not make use of (and indeed, benefit from), their HE knowledge and skills. Most were in areas of employment where organisational restructuring and access to ICT has changed divisions of labour in the workplace and the way that work objectives are met, or were in low-paying sectors in the Public or Not-for-Profit sectors where employers have been able to enhance the skill-base of their workforce, or (in the case of the latter) simply cannot afford to pay more when there is a ready supply of well-qualified and able workers willing to accept low wages. The minority of those interviewed who clearly were in inappropriately lower skilled employment are likely to have been making choices that reflected lifestyle values, as will be discussed in Chapter 6.

The findings outlined in this chapter have implications for future occupational classification, not only in terms of the extent to which SOC(HE) is fit for purpose but how far the national

[12] Purcell *et al*, 2013:82-83. At the time, 37 per cent of respondents were working in this sector, but only around 12 per cent of these were in jobs done solely or mainly by graduates.

standard occupational classification on which it is based can distinguish and classify the complexities of knowledge and skill required by post-industrial societies. The interview evidence also raises questions about the relationships between the social and financial value of such knowledge, skills and the competences required in different occupations.

4 The earnings of Futuretrack graduates

4.1 Why study graduate earnings?

One of the many ways in which higher education contributes to economic and social well-being is through the boost it gives to earnings, an increase that is known variously as the 'graduate earnings premium' or 'the rate of return to a degree'. While this is just one measure of the impact of a degree, it has commanded the attention of economists and education policy makers over the past forty years. In this chapter the information on earnings reported by the Futuretrack cohort at this latest stage in their careers is analysed to find out how it aligns with what is already known about graduate earnings and what additional contributions it can make to this knowledge.

Following a brief review of what we know already from the most recent studies of graduate earnings, the chapter is presented in three parts, each designed to address specific issues. In section 4.2 we conduct an analysis of the earnings of Futuretrack graduates in 2019. Who has done well and who has slipped behind in the earnings league? We provide a detailed analysis, seeking to provide evidence about the factors that influence graduate earnings beyond that which is currently available from other sources. Section 4.3 delves deeper into graduate earnings, via an examination of the growth of earnings in these early stages of their careers. What are the factors that place some graduates on a higher growth path? Section 4.5 presents a comparison between the growth of the earnings of Futuretrack graduates with that of an earlier cohort we observed between 1995 and 2002 (Purcell and Elias 2004). This earlier cohort graduated into what was a stable and growing economy. This was not the case for Futuretrack graduates, who were joining the labour market following the major recession of 2008 and were experiencing the 'years of austerity' following this economic collapse. Did the Futuretrack cohort do better or worse than their predecessors in this post recessionary environment?

4.4.1 What is already known about graduate earnings?

Many studies of graduate earnings have been conducted over the past 40 years. We focus upon the contribution to knowledge made by two of the most important and recent (Belfield *et al*. 2018 and Britton *et al.* 2020), both making use of a large and novel source – the Longitudinal Educational Outcomes (LEO) dataset. This source has been built up from national individual taxation and earnings records matched to school and higher education records, tracking the progress of large numbers of individuals born in the mid-1980 who may have gained a higher educational qualification in the mid 2000s, observing their earnings up to age 30. Analyses of these data has shown the following:

- For both men and women there is, on average, a significant increase in earnings associated with attending a higher education institution and gaining a degree, compared with similarly qualified individuals who did not participate in higher education. The increase for the LEO cohort at age 29 averages 6% for men and 26% for women, though the larger effect for women may reflect the longer hours worked by women who hold degrees, an effect that the LEO data cannot quantify.
- This return varies by HE entry qualifications (STEM versus non-STEM grades), by subject studied (*e.g.,* maths, economics, law giving higher than average returns and creative arts, social care, communications studies lower than average). This variation is also reflected in the type of institution attended, with leavers from Russell group institutions having higher than average returns.
- Earnings growth for male and female graduates is rapid through to age 30 compared with the growth of earnings for non-graduates

In next section of this chapter, we extend these findings by exploring the factors associated with the earnings of Futuretrack graduates at stage 5, the majority of whom are aged 30 to 31. While we have no information about those who did not gain a degree, we can compare the Futuretrack cohort with information from another source – the UK Labour Force Survey. This comparison indicates how representative the cohort is of all graduates in this age range in 2019. Following this comparison, we show how the same factors revealed via the LEO dataset lead to variation in the earnings of cohort members. We then unravel the separate influences of these factors on earnings, including those which are not currently available in the LEO dataset.

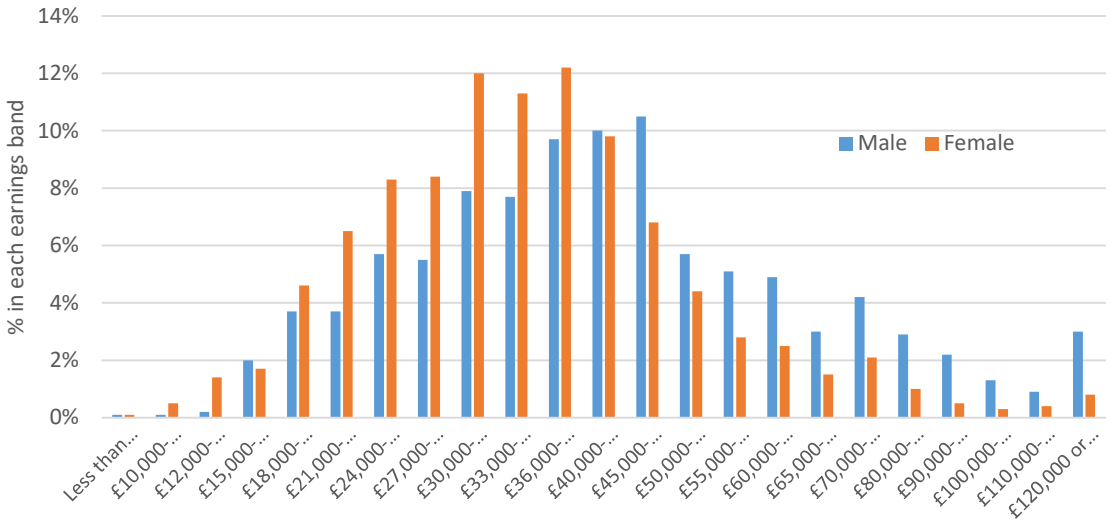
4.2 The earnings of Futuretrack graduates and graduates in the UK Labour Force Survey

4.2.1 Employees in full-time jobs

Figure 4.1 shows the distribution of gross annual earnings for graduates in full-time employee jobs at the time of Stage 5, revealing the continuing difference between the earnings of graduate men and women in the sample first demonstrated in our Stage 4 report (Purcell *et al.* 2013). For all Stage 5 respondents in full-time employee jobs in 2019, women's gross annual earnings are clustered in the £30,000 to £40,000 range, whereas for men the modal value is in the £40,000 to £50,000 band. At all earnings bands above £50,000, men are observed more frequently in each band, often by a factor of 2 to 1.

As we have indicated elsewhere in this report, the sample of Stage 5 respondents is, like Stage 4, biased towards those who graduated from higher tariff universities and those who gained better than average degree results. The impact of this on the earnings distributions shown in Figure 4.1 is difficult to quantify, but we can gain some indication by comparing the earnings of this cohort with information from the Labour Force Survey (LFS), which records the gross weekly earnings of employees. Futuretrack respondents are predominantly aged between 29 and 33 at the time of Stage 5[13], so we draw on earnings information for this age group in the three Labour Force Surveys conducted between January and September 2019.

Figure 4.1 Distribution of gross annual earnings by gender (Futuretrack Stage 5 employees in full-time jobs)



Sources: Futuretrack Stage 5 survey (n=4,348)

[13] 90% of the sample fall within this age range.

Table 4.1 below compares the mean and median earnings of male and female graduates in full-time employee jobs as recorded in the LFS and Futuretrack Stage 5.

Table 4.1 Comparison of gross annual earnings of graduates in full-time employee jobs in 2019, Futuretrack and LFS

	Futuretrack Stage 5 full-time employees aged 29-33		Labour Force Survey full-time employees aged 29-33	
	Mean	Median	Mean	Median
Men	£48,000	£42,500	£43,800	£40,000
Women	£38,400	£34,500	£35,700	£31,000

Note: LFS gross annual earnings computed from the derived gross weekly earnings, weighted by income weights.
Sources: Future Stage 5 survey (weighted) (n=4,264). Labour Force Surveys, Jan-March, April-June, July-Sept 2019.

The earnings of Futuretrack respondents are, on average, higher than for graduates in the same age group as recorded in the Labour Force Survey, especially for women where the difference in median earnings between these two sources of information is just over 10 per cent. This indicates that the earnings information we have from Stage 5 Futuretrack respondents is biased towards those with higher earnings, particularly for female respondents.

Table 4.2 presents a similar comparison between these two sources of information, showing the economic activity status of Futuretrack respondents, distinguishing between those in full-time employee jobs, part-time employees and those who are self-employed. Futuretrack respondents could report multiple statuses in response to this question. The classification shown here includes those with multiple economic activity responses, modified according to the response that they considered as their main activity.

Table 4.2 Comparison of the economic activity status of graduates in 2019, Futuretrack and LFS

Main activity at time of survey	Futuretrack Stage 5		Labour Force Surveys Jan-Sept 2019	
	Men	Women	Men	Women
Employee full-time	81.1%	66.2%	83.6%	72.8%
Employee part-time	4.4%	14.1%	4.3%	19.4%
Self employed	7.4%	7.3%	10.5%	6.5%
Other	7.1%	12.4%	1.6%	1.2%
	100%	100%	100%	100%

Note: LFS data are for 29–33-year-olds in each quarterly survey, weighted with person weights.
Sources: Futuretrack Stage 5 survey data (n=6,053). Labour Force Surveys, Jan-March, April-June, July-Sept 2019.

For both men and women, the comparison shows that the proportion of the Futuretrack respondents who are neither employees nor self-employed is higher than in the Labour Force Survey. This could reflect the self-classification of their economic activity made by Futuretrack respondents, a process that is not followed in the Labour Force Survey.

To gain a better understanding of the ways in which earnings have evolved for Futuretrack graduates over the past seven years, we explore the impact of age, gender, social background, ethnicity, their higher education experience, any further study they have undertaken, and their labour market experiences since gaining their first degree.

Given the complexity of the potential interactions between these influences on earnings, the following analytical strategy was adopted. Four statistical models were estimated. For each model the dependent variable is the natural logarithm[14] of the respondent's gross annual earnings in 2019, for those in full-time or part-time jobs as employees in their main activity. The first model introduces controls for weekly hours worked, gender, age, social background, and ethnicity. The second model then expands on the first to include information of the type of higher education institution the respondent attended, the subject studied for their first degree and the degree results obtained. The third model continues this process, adding variables to characterise the respondent's current working environment. This includes information on the type of occupation that the respondent currently holds, the sector in which they are currently working, the size of their organisation, and the 'graduate' environment (responses to a question about the extent to which the type of work in their current job is performed by graduates). The fourth model adds information on their work history since graduating with their first degree, further study they may have undertaken, caring responsibilities and the region of their workplace. The full set of regression results for these four models is shown at Appendix B (table B1).

Model 1 (age, gender, social background, and ethnicity as influences on graduate earnings, controlling for weekly hours worked) indicates a 19 per cent difference between the earnings of men and women in the presence of these other variables. Significant effects are seen for those who entered higher education for their first degree when aged 21 years or older, and there is a marked variation associated with their social background. In terms of ethnicity, the most striking finding is the 14 per cent earnings premium recorded by graduates classified to the 'Asian' ethnic group[15].

Model 2, which includes additional information about their higher educational experience (type of institution attended, subject studied and degree result) reveals that the social background effect seen in model 1 now disappears in the presence of these additional descriptors, indicating that the social background effect is now captured by the variables added to this model. Relative to the highest tariff universities[16] (a category which approximates the so-called 'Russell Group' of institutions) there is a strong and significant negative effect on earnings associated with the type of institution attended, with the lower tariff institutions showing an increasingly negative effect, except for the specialist HE colleges. The subject studied for the first degree also impacts on earnings nine to ten years after graduation. As expected, those who studied medicine and dentistry have a large and positive earnings premium relative to the reference group, social studies, while the arts and humanities, education and interdisciplinary studies all have a negative effect on earnings in comparison with the reference group. In addition to the effect of the type of institution and subject studied, the class of degree obtained shows that the higher the degree class gained on graduation in 2009 or 2010, the higher the earnings in 2019.

Model 3 extends these findings to include the separate and additional influences of the respondent's current working environment. Being in a graduate job, particularly the 'Orchestrator' category is positively associated with earnings and there are strong sectoral

[14] The natural logarithm of earnings is used for two reasons. First, given that earnings are right censored at zero and skewed towards higher earnings, a logarithm avoids some of the problems of model misspecification. Secondly, where the right-hand side variable in the model is a binary variable, the coefficient can be interpreted as the percentage effect on earnings of the presence of the unit value of that variable.

[15] A more detailed categorisation of ethnic backgrounds was employed, but the sample sizes are such that a broader grouping into 'Asian/white/black/mixed and other' had to be employed.

[16] Purcell *et al.* 2009.

influences relative to the reference sector (Distribution, hotels, catering). The strongest positive effects are for those working in banking, finance, and business services.

We asked graduates to tell us about the proportion of other graduates doing their type of work in their current job, with responses ranging from 'my type of work is done '*only by graduates'* to '*only by non-graduates*'. Interestingly, in addition to the impact of sectors and occupation on earnings, the graduate density (the proportion of graduates in the organisation doing the same type of work as the respondent) has a powerful association with their earnings – the more graduates there are doing their type of work, the higher their earnings. This association between graduate earnings and graduate density at the workplace reflects the demand for graduate skills and knowledge in the type of work the respondents are performing – the higher the proportion of graduates who are doing the same type of work as the respondent, the higher the respondent's earnings.

Additional influences displayed in model 3 relate to whether the respondent is working in the public, private sector or not-for-profit sector, and details of the size of the organisation worked for. As others have shown[17], larger organisations pay more, as does the private sector, having taken account of broad sectoral differences in earnings.

Model 4 extends model 3 further by adding information about the respondent's work history and further study or training leading to a qualification. This includes information about their experience of unemployment, the number of jobs held since graduating, the nature of these jobs, together with indicators of the type of further qualification gained since their first degree.

It is worth noting that the addition of these work and qualification history variables does not impact upon the results shown in model 3. In other words, these variables pick up on some of the variation in earnings not already captured by the variables in model 3. The experience of unemployment, measured as the cumulative duration of joblessness since graduating, has a strong negative effect on earnings. It appears also that the number of jobs held is associated negatively with earnings, but this is a complex issue and is dependent upon the types of jobs held. For example, if a respondent reports having had six jobs since graduation and if none of these jobs required a degree or the skills and knowledge associated with their first degree, that would have an average effect of an 18 per cent reduction in earnings. But if all six jobs required a degree and the skills/knowledge associated with their first degree, that would counteract the negative effect to produce a net positive effect of 10 per cent.

For respondents who reported that they had gained further qualifications since their first degree, we do not find any such study having a positive effect on their earnings. A Postgraduate Teaching Certificate in Education is associated with an 8 per cent reduction in earnings, while a PhD associates with a 7 per cent reduction. The latter result confirms what has been shown in earlier studies[18], though there is some evidence that PhD graduates working in private sector organisations can command higher than average salaries.

Stepwise regression methods were also used to determine which among this large set of variables, has the strongest link to the variation in the earnings of these graduates in employee jobs. This procedure highlighted the impact of gender, hours worked, sector, region, experience of unemployment, graduate density, subject of study for first degree and ethnicity as key variables in this respect. In terms of hours worked, the predominant mode of working for graduates in employee jobs is full-time, with hours in the range of 35 to 64 hours per week

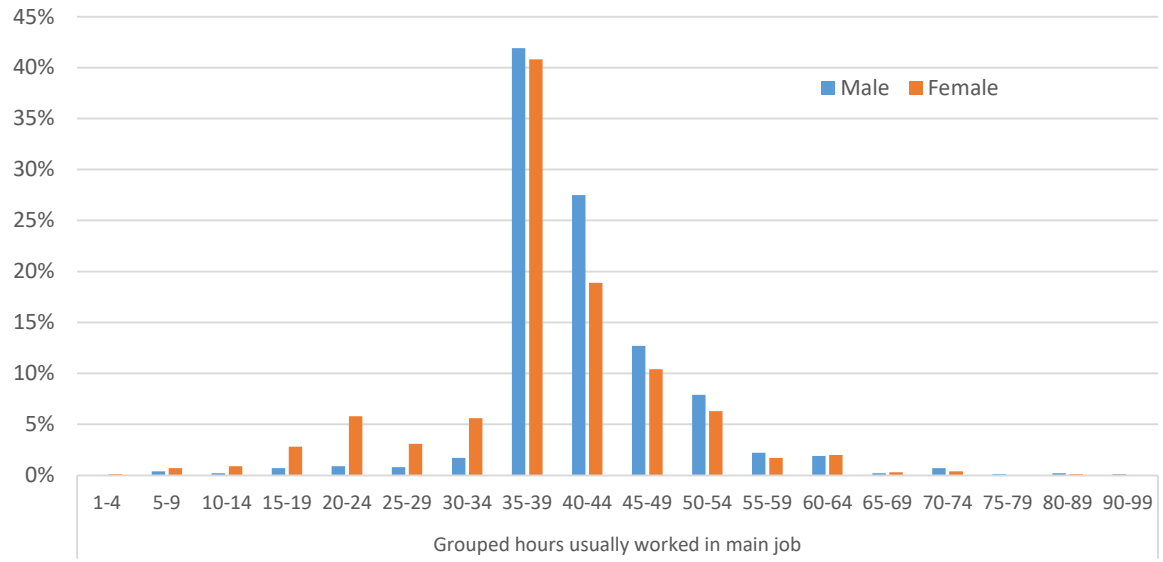
[17] See, for example, the review by Cowling (2001) of pay and performance systems in 15 EU countries.

[18] Elias*, et al.* (2005) and Raddon and Sung (2009) reveal that the concentration of such highly qualified graduates in the academic sector and publicly funded research institutes has a negative impact on their earnings.

for most employees. More women than men work part-time, with the proportion working less than 30 hours per week at just under 14 per cent for women versus 4 per cent for men.

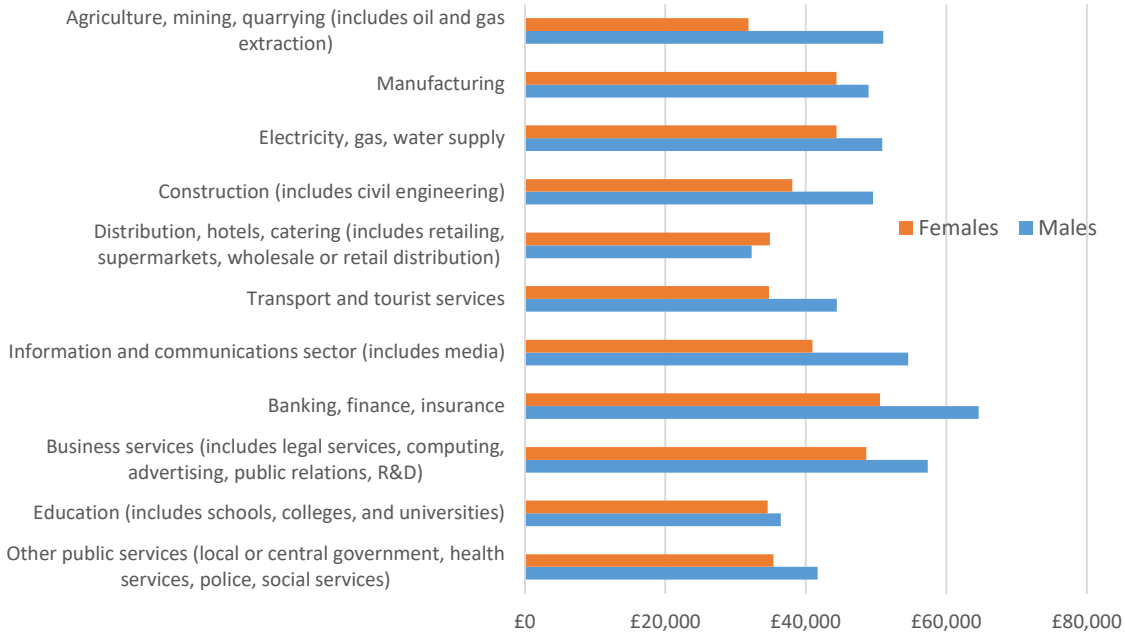
Figures 4.2 to 4.8 show the strength of these associations in a more visual manner, comparing the earnings of male and female graduates across these variables.

Figure 4.2 Distribution of usual weekly hours worked in main job (employees only)



Source: Futuretrack Stage 5 survey (n=5,146)

Figure 4.3 Mean gross annual earnings of full-time employees by sector and gender



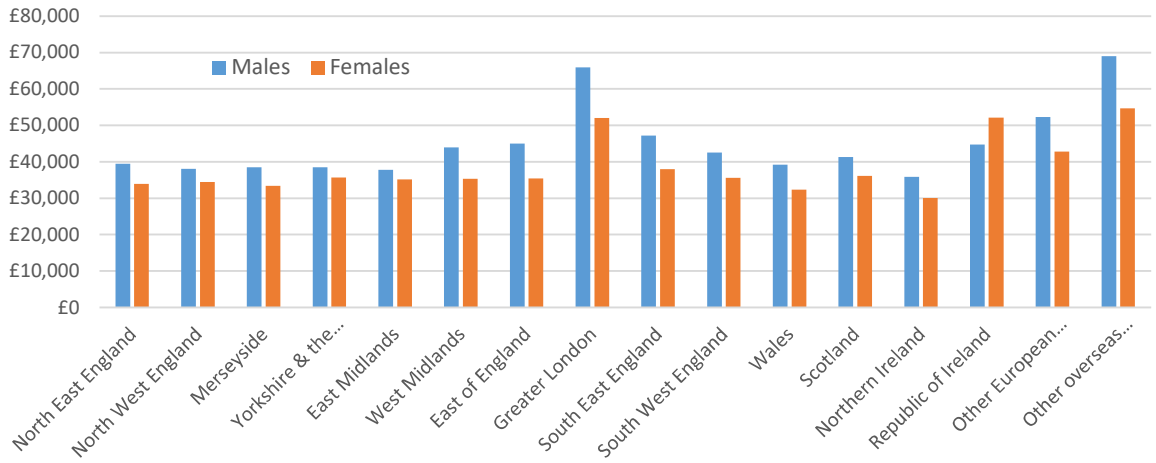
Source: Futuretrack Stage 5 survey (n=4,348)

Figure 4.3 presents information on the distribution of mean gross annual earnings by sector. As was shown in the multivariate analysis, the banking, insurance, and finance sector stands out as a high paying sector, with distribution, hotels and catering as the lowest paid sector for

these respondents. It should be noted that this is also the only sector where the mean earnings for female graduates exceeds that of men.

The distribution of earnings by location of the respondent's workplace is shown in Figure 4.4. Two locations stand out here – those working in Greater London and, particularly for men, those currently working abroad and outside Europe.

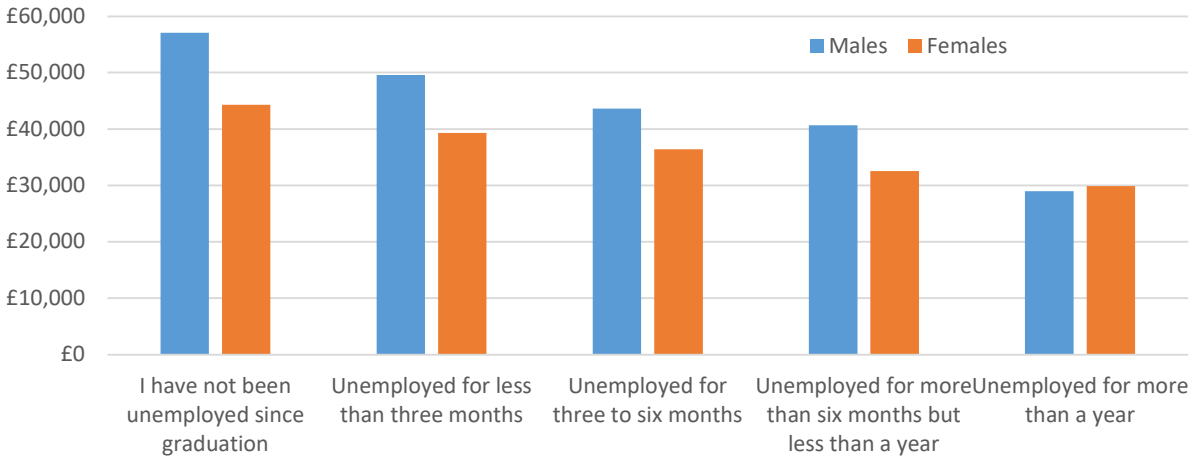
Figure 4.4 Mean gross annual earnings of full-time employees by location of workplace and gender



Source: Futuretrack Stage 5 survey (n=4,348)

Figure 4.5 reveals the strength of the effect picked up in the multivariate analysis relating to the cumulative experience of unemployment since gaining their first degree. For men, mean gross annual earnings ranges from over £55,000 for those who have experienced no unemployment, to £29,000 for those who have experienced one or more spells of unemployment of more than one year's cumulative duration.

Figure 4.5 Mean gross annual earnings of full-time employees by experience of unemployment since graduation and gender

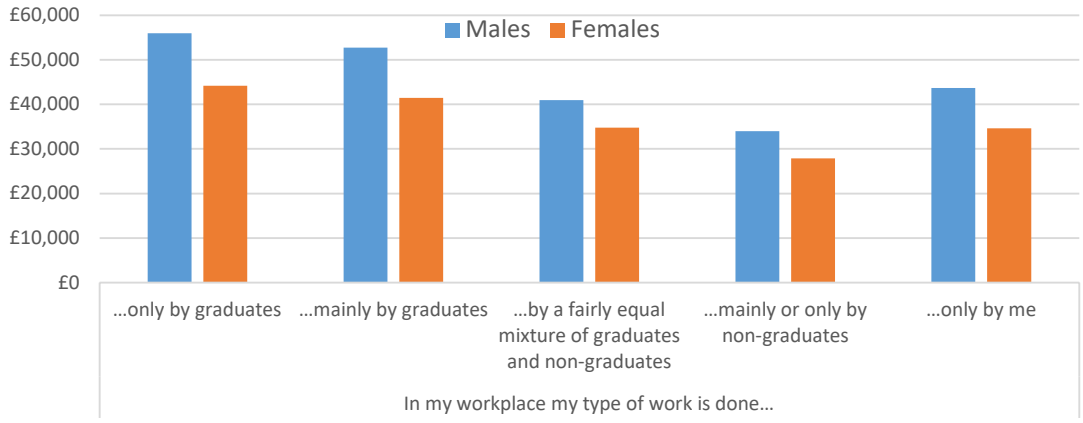


Source: Futuretrack Stage 5 survey (n=4,348)

Graduate density at the workplace was shown in the multivariate analysis to have an important association with annual earnings in the respondent's current job. This relationship was first revealed in our report on Stage 4 (Purcell *et al.* 2013, p. 53) and is still very noticeable seven

years later as indicated in Figure 4.6. This is an intriguing result, given that it may act as an indicator of the mismatch between the type of work the respondent is performing and the extent to which employers recruit graduates to perform such work. The lower the proportion of graduates undertaking similar work, the lower the graduate's earnings.

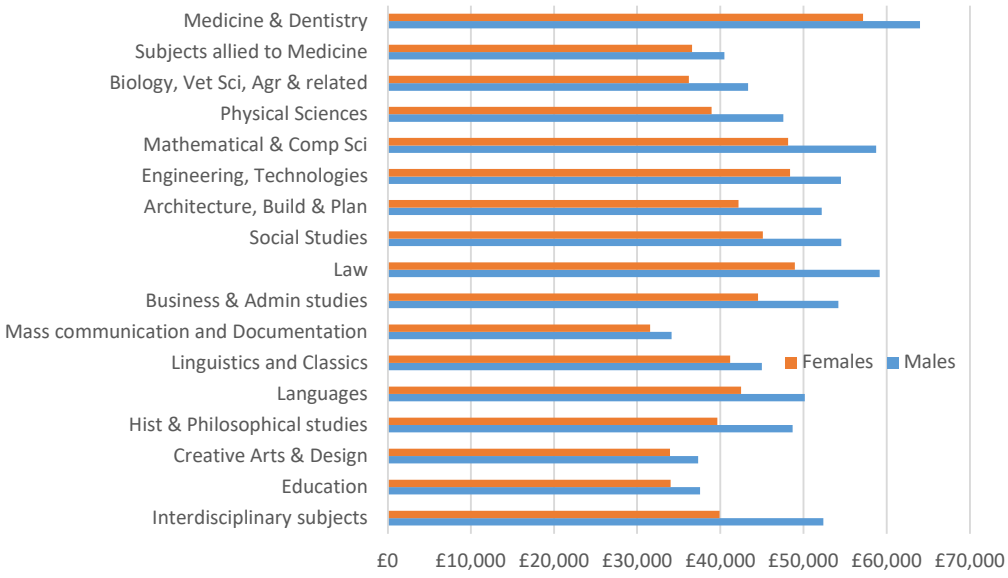
Figure 4.6 Mean gross annual earnings of full-time employees by graduate density in workplace by gender



Source: Futuretrack Stage 5 survey (n=4,348)

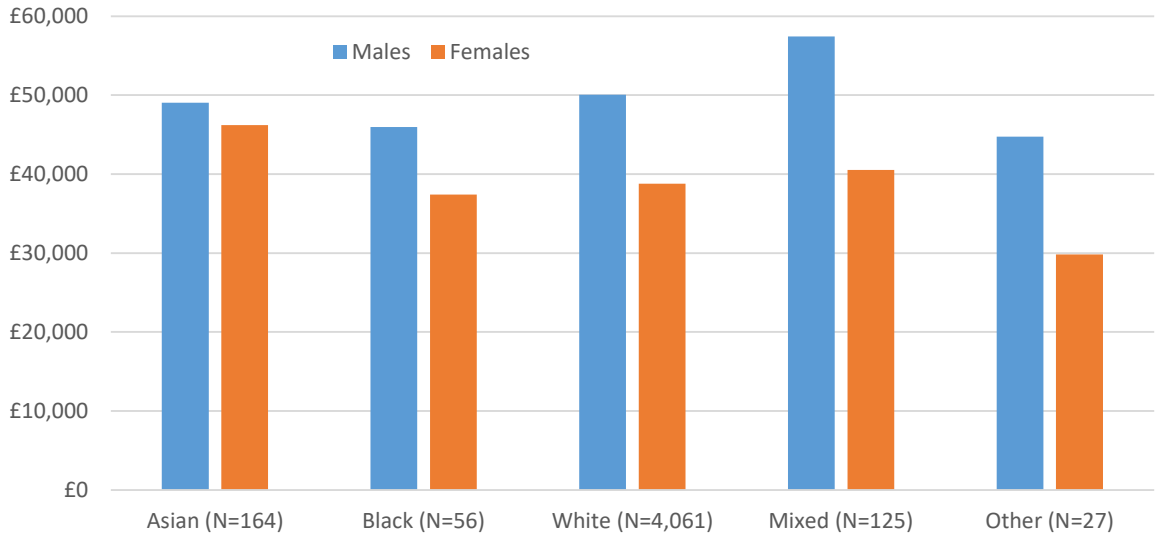
We have shown in our earlier studies of graduate careers, that one of the most important influences on their subsequent earnings is the subject they studied at undergraduate level. This appears to establish a pathway into an area of work or a 'career ladder' which is then typified by a particular reward structure. As can be seen in Figure 4.7, those who studied medicine and dentistry have moved into jobs that value skills and knowledge, the development of which was started in the undergraduate degree. The same holds true for those who studied law subjects and mathematical and computing courses. For graduates from education first degrees, the pathway into subsequent jobs, usually as teachers, is not so profitable.

Figure 4.7 Mean gross annual earnings of full-time employees by subject of first degree and gender



Source: Futuretrack Stage 5 survey (n=4,348)

Figure 4.8 Mean gross annual earnings of full-time employees by ethnic group



Source: Futuretrack Stage 5 survey (n=4,348)

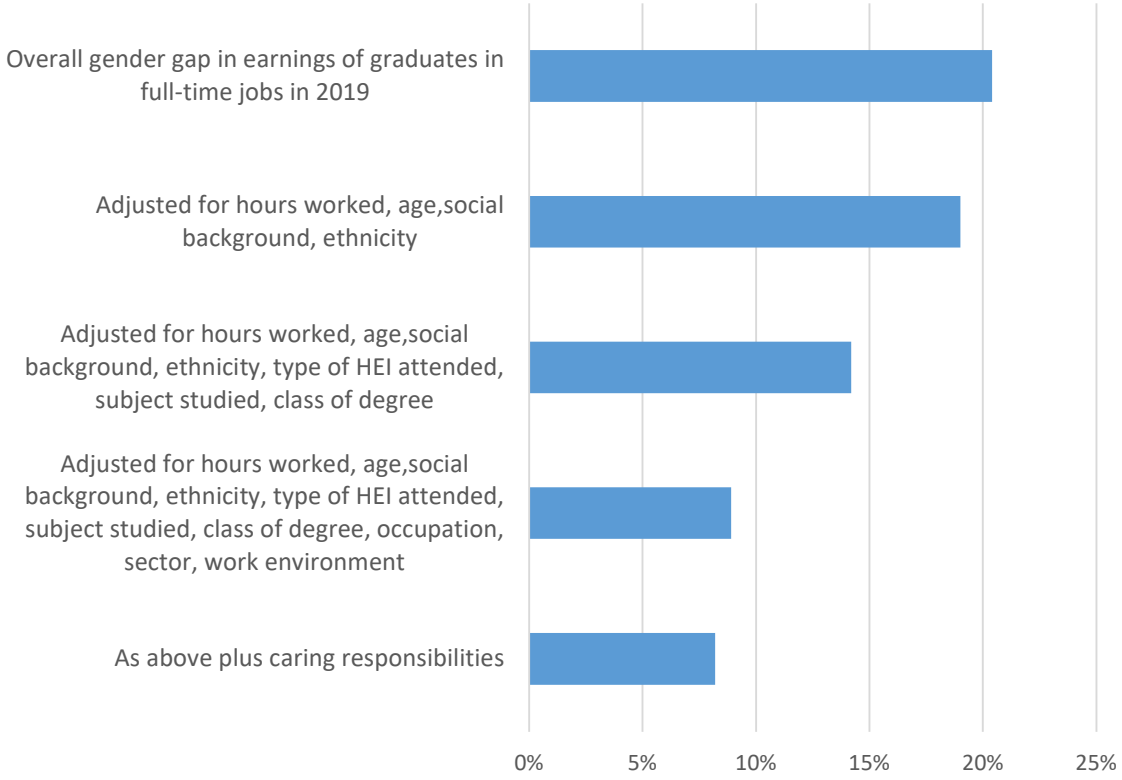
The relationship between ethnicity[2] and graduate earnings is complex and most probably conflates several related influences on earnings, such as social background and age. Figure 4.8 appears to show that the gross annual earnings for males in full-time employee jobs who are categorised as 'Mixed race' exceed the earnings of all other ethnic groups, but the small size of this group means that this finding may not be significant. The multivariate analysis shown at Appendix B reveals that this is indeed related to other characteristics of the individuals in this ethnic category. However, the earnings premium shown by those categorised as 'Asian' is a strong and significant effect that relates to the ethnic category alone, particularly for graduates who are Asian females.

Before moving on to examine the earnings of those whose main activity in 2019 was self-employment, we consider one of the most striking findings that runs throughout this analysis of the earnings of graduates in employee jobs some ten years after graduation - the gender difference in their earnings. These results are summarised from the regression results shown in Appendix B, Table B.1.

[2] Ethnic groupings are as defined on the Universities and Colleges Admission System (UCAS) application form and constitute data supplied by UCAS to the research team with permission of respondents. These data were incomplete, so the similar question on ethnicity as that asked by UCAS was included on the Stage 2 questionnaire. The category 'Mixed' consists of those respondents who selected the categories 'Mixed/Asian', 'Mixed/black' and 'Mixed/Other' on the UCAS application form and at Stage 2.

The 'raw' or unadjusted difference in earnings is described simply as the difference in the average gross annual earnings of male and female graduates in full-time jobs as recorded in Stage 5. This takes no account of hours worked, differences in social background, age and ethnicity and is 20 per cent. Accounting for these factors brings the difference down to 19 per cent. When adjustments are made for the fact that men tend to study subjects that attract higher rates of pay, the type of HEI attended and degree results, the difference drops further to 14 per cent. But earnings also reflect the working environment, such as sector, occupation, and graduate density at the workplace. As is shown graphically in Figure 4.9, adjusting for these factors brings the difference down to 9 per cent. In other words, ten years after graduation in 2019, there is an average 9 per cent difference in earnings between men and women, which does not relate to factors such as the hours they work, subjects studied, sector in which they work and a host of other factors, many of which themselves reflect gendered constraints and/or choices.

Figure 4.9 Analysis of factors associated with the gender difference in earnings of graduates in full-time jobs in 2019



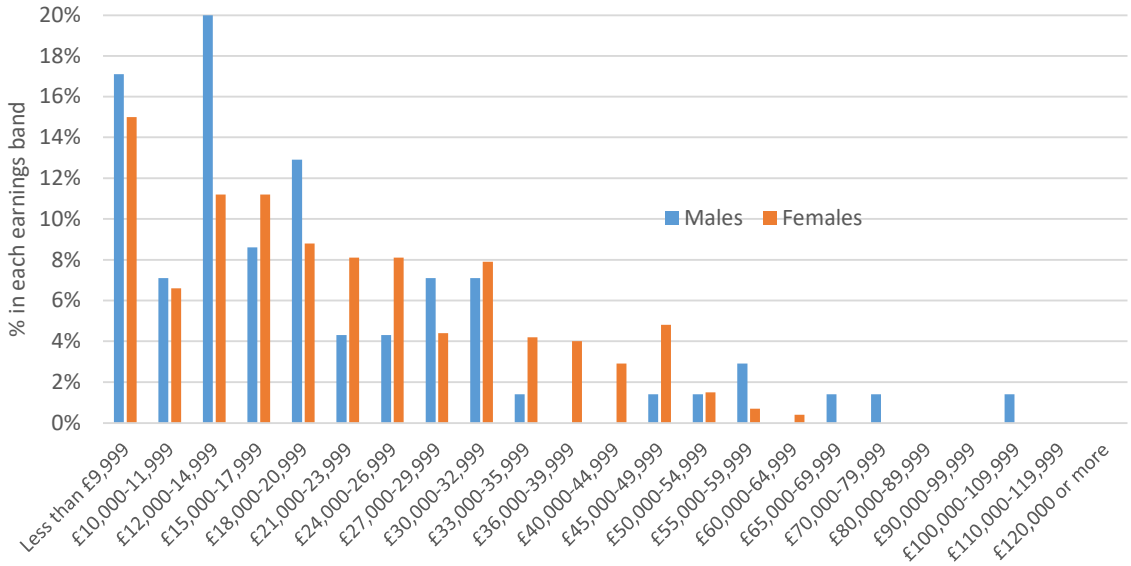
Source: Futuretrack Stage 5 survey, appendix table B1

4.2.2 Employees in part-time jobs

As is seen in Table 4.2, the proportion of men who classified themselves as employees 'holding one or more part-time jobs' is relatively small, hence the information on their earnings is subject to a higher degree of sampling variation than for full-time employees. Figure 4.10 shows the distribution of gross annual earnings separately for male and female graduates who defined their main activity in 2019 as one or more part-time jobs (and were not self-employed). One in seven female respondents indicated that they were working part-time as their main activity, with almost one fifth reporting gross annual earnings of less than £10,000. Over half of female graduates in part-time jobs are earning less than £21,000.

We note that a small number of men and women who defined their main activity as 'one or more part-time jobs, not self-employed' recorded gross annual earnings more than £40,000. Close inspection of these cases revealed that most were general practitioners with one or more part-time contracts.

Figure 4.10 Distribution of gross annual earnings by gender (Futuretrack Stage 5 employees with main activity as one or more part-time jobs)



Source: Futuretrack Stage 5 survey (n=542)

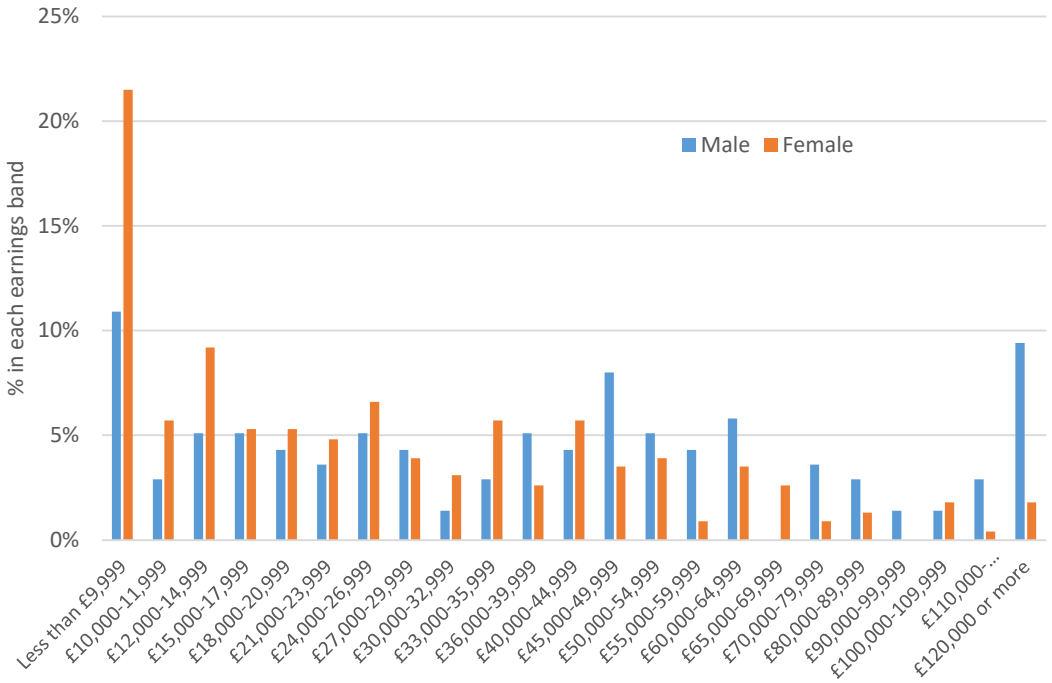
4.2.3 The self-employed

The Labour Force Survey does not collect earnings information from the self-employed, so we have no yardstick against which to evaluate the earnings information provided by those graduates who self-classified as self-employed. Figure 4.11 shows that male and female graduates classifying themselves as self-employed are spread across the wide spectrum of annual earnings recorded in the survey. The distribution for both men and women is bimodal, with peaks at less than £10,000 per annum and at £120,000 per annum. There are twice as many self-employed women as men in the lowest earnings band and five times more men than women in the top earnings band.

A similar analysis to that shown in the preceding section was carried out for analysis of the earnings of those respondents reporting that self-employment was their main activity. The number of variables reported as having an association with the earnings of the self-employed is reduced, primarily because of the smaller sample size but also probably indicating the lack of an association between these variables and earnings of self-employed graduates.

Appendix B, Table B.2 shows the results of this analysis. While there are many non-significant associations, those that are significant conform with our expectations. In addition to the impact of gender and hours worked, two sectors stand out as having quite opposite associations with the earnings of graduates who are self-employed. Those who studied medicine and dentistry have a huge positive premium associated with their self-employment earnings, presumably because of the nature of private practice for such respondents. Conversely, those who studied creative arts and design courses for their first degree have much lower than average self-employment incomes. In terms of the sectors in which they work, the self-employed in the banking, insurance and finance sector have the highest earnings relative to the reference group, the distribution, hotels and catering sector. Other sectors where we note a strong positive association with the earnings of the self-employed are manufacturing and the information and communications sectors. As with employees, a strongly positive 'London and the South East' regional effect is also evident.

Figure 4.11 Distribution of gross annual earnings by gender (Futuretrack Stage 5 with main activity as self-employed)



Source: Futuretrack Stage 5 survey (n=394)

4.3 The growth of graduate earnings

Section 4.2 focussed on the gross annual earnings in 2019 of the graduates who responded to Stage 5. As can be seen, some did very well, but even amongst this sample of graduates which is biased towards graduates from the high tariff universities, some did not experience the kind of earnings growth that the top earners have seen. In this section we explore this further, focusing on the factors behind earnings growth. Who did well and who slipped back a little in terms of their economic situation and why? To do this we investigate the growth of the earnings of Futuretrack graduates, from the time of our previous contact with them at Stage 4 to our recent contact in 2019, a period of approximately seven years. We investigate how the growth paths of their earnings vary with a variety of factors, including their social background, university entrance qualifications, the type of higher education institution attended, subject studied and degree results.

The growth of graduate earnings at the stage in the life of the cohort is calculated by comparing their earnings as reported at Stage 4 (1½ to 2½ years after graduation) to their earnings at stage 5 (8½ to 9½ after graduation). Some stage 5 respondents were recruited back into the cohort from stage 3, having been absent from the stage 4 survey. To include information from this group, the stage 3 respondents at stage 5 were asked to recall their earnings at the time of stage 4. In computing the average annual growth rate over this seven-year period, no adjustment has been made for inflation[19]. Growth rates can only be computed for graduates who were in their first main job in 2012 (Stage 4) and who held a job as an employee in 2019. Approximately one quarter of the Stage 4 respondents were engaged in further study or were unemployed, this cautions against over interpretation of the findings.

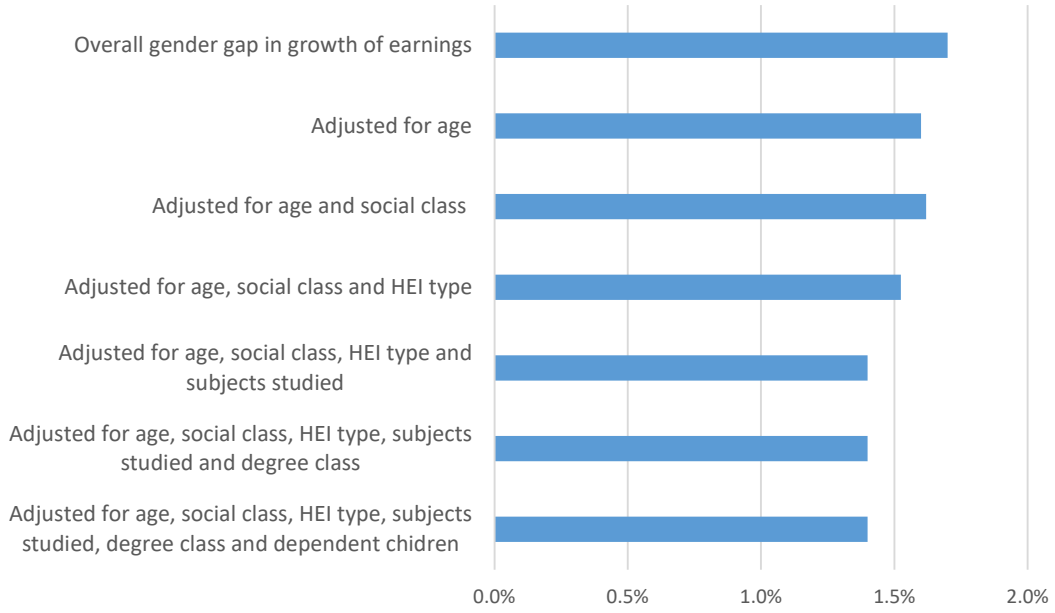
Recent research using the large scale and detailed LEO dataset, covering the period 2006 to 2017, has shown that for men and women with first degrees, the first ten years following entry into the labour market are a period of rapid earnings growth (Britton *et al.* 2020). We confirm this high growth rate, finding that the average annual growth of the earnings of Futuretrack graduates over the seven-year period from 2012 to 2019 is just under 10 per cent per annum. There are variations in individual growth rates, from 6 per cent in the lowest quartile to 13 per cent in the highest. Using multivariate analytical methods, we can explore the variables that are most closely correlated with the variation in these growth rates, including gender, social background, age, type of institution attended, subject studied, and degree class obtained. This is done in a series of regression models, with earnings growth as the dependent variable, introducing additional sets of variables in successive models. The full results, together with information on each set of variables, are shown in the Appendix B, Table B.3.

This analysis indicates that the variation in growth rates has a strong association with the subject studied at the undergraduate degree level, with those who studied architecture and law showing strong growth paths, while those who studied subjects allied to medicine on lower growth paths. Having studied at a university with high entry tariffs correlates with a strong rate of growth of earnings, with a separate and additional boost coming from those who gained a first or upper second-class degree. However, the most important factor differentiating growth paths is gender.

[19] Nominal growth rates are used throughout this chapter. This has no impact upon the multivariate statistical analysis of the variation in growth rates, given that any adjustment for inflation is constant across the sample.

From these results we can identify how our estimates of the growth gap in earnings between men and women is affected via the introduction of these sets of variables. Figure 4.12 summarises this information, revealing how the 1.7 per cent growth gap declines somewhat as each set of variables is added to the regression models. However, with all the factors introduced, including whether the respondent has dependent children at Stage 5, the gap only declines to 1.4 per cent. In other words, we cannot provide any adequate understanding of the reasons for the major part of the pay gap in terms of the variables we have analysed.

Figure 4.12 Analysis of factors associated with gender difference in the growth of graduate earnings, 2012 - 2019



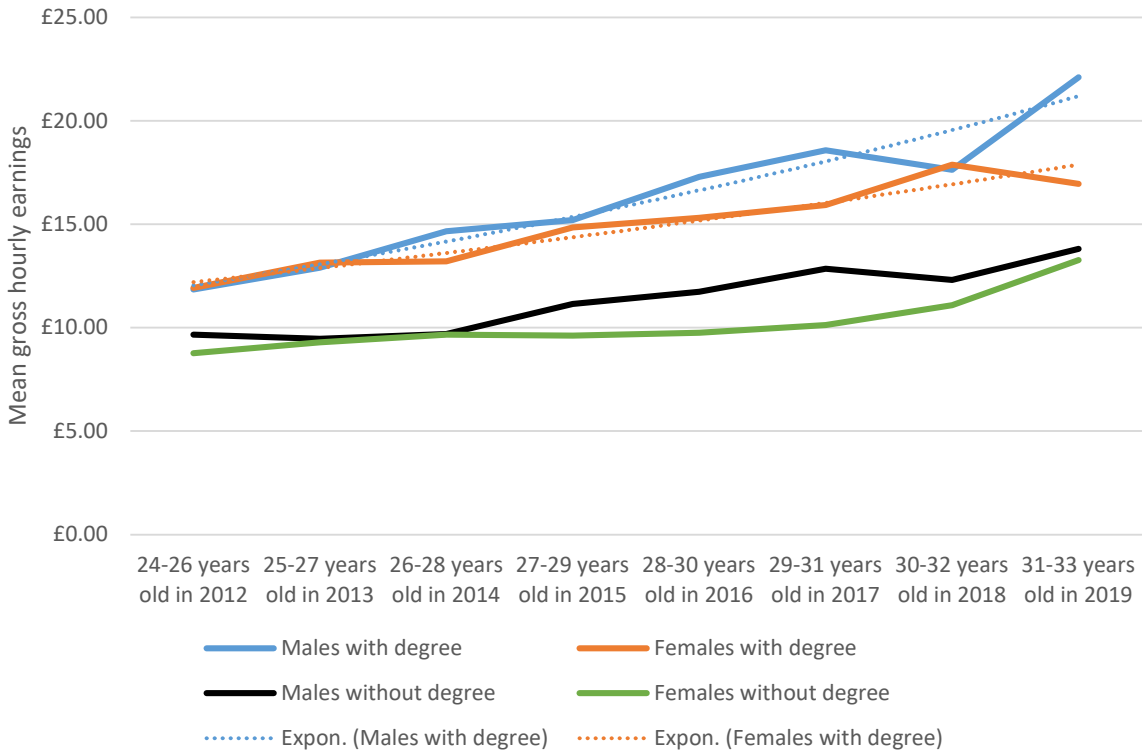
4.4 Is this gender gap in earning growth reflected in other sources of information?

The sample of graduates in Stage 5 of the Futuretrack study is biased in two ways that could affect the estimate of the gender gap in earnings. First, the sample consists of a disproportionate number of women. Second, it is biased towards the more successful graduates with higher entry qualifications and attendance at high tariff universities. Our analysis has shown that, after adjusting for the effects of age, social class, type of HEI attended, subjects studied and degree class, Figures 4.12 and 4.9 indicate that, for graduates in full-time employee jobs, the gender gap in earnings we observed 1½ to 2½ years after graduation in our Stage 4 report had continued to widen via a gap of just over 1½ percentage points per year to create a gap of just over 8% by 2019. This growing gap cannot be accounted for by factors such as hours worked, age differences, subjects studied and qualifications.

Is the growing gender gap in earnings the result of a biased sample or can it be seen in other sources? The quarterly Labour Force Surveys identify first degree holders and provide detailed information on their gross hourly earnings. While these surveys are essentially cross-sectional, we use successive surveys to construct what is termed a 'pseudo cohort', selecting a specific age group in one survey, then examining an age group one year older in the following year, doing this for a series of years. From these pseudo cohorts we can gain an indication of the different growth trajectories for earnings of men and women and between those who do and do not have a first degree.

Figure 4.13 shows these estimates of the growth path of the earnings of those aged 24 to 26 years in 2012, through each year from 2012 to 2019 and for this selected group ageing by one year each year. Four growth paths are shown for those in full-time employee jobs each year, contrasting males and females with an undergraduate degree or higher qualification against men and women whose highest qualification is NVQ level 2 or above (equivalent to at least five A*–C grades at GCSE), but no HE qualification. Given the small sample sizes, these estimates show some variability, hence a trend line has been fitted to the estimates for those with a degree. The different growth paths for graduates versus qualified non-graduates is clear. Graduate earnings in these age groups grew by 7.5 per cent per annum from 2012 to 2019, versus 5.4 per cent per annum for qualified non-graduates. What is also clear is the growing gap between the growth in earnings for male and female graduates. These estimates are shown in current earnings, with no adjustment for inflation. Nonetheless, the gap grows from zero to £3 per hour over this seven-year period, the same period for which we have information from a true cohort, the progress made by Futuretrack respondents from Stage 4 to Stage 5.

Figure 4.13 Growth of mean gross hourly earnings of graduates and qualified non-graduates in full-time employment by gender, 2012 - 2019



Note: The dotted lines for male and female graduates represent trend lines designed to smooth out the year-on-year variations in the mean values of gross hourly earnings.
Source: Labour Force Surveys 2012 - 2019

4.5 How well did Futuretrack graduates fare compared with an earlier cohort?

We contrast the growth path of the earnings of Futuretrack graduates over this period with the earlier graduate cohort study we undertook between 1995 and 2002, termed 'Seven Years On' (Elias and Purcell 2004; Purcell and Elias, 2004). Our intention in doing so is to shed light on two major questions. First, how does the growth of earnings of our most recent cohort, Futuretrack, compare with that of the earlier cohort study we undertook 16 years earlier? Such a comparison will address the concerns of some that we have been producing too many

graduates in the UK. An increasing oversupply of degree-qualified workers and/or a fall in the demand for graduates following the 2008 recession could lead to a relative decline in the growth of earnings of the most recent cohort compared with the earlier cohort.

Table 4.3 shows the average annual growth rate in earnings for two cohorts of graduates, the 1995 – 2002 cohort ('Seven years on') and Futuretrack graduates, 2012 – 2019, comparing the annual average growth in their gross annual earnings over these seven-year periods. These comparisons must be treated cautiously given the differences in methodology and sample biases present in each cohort. The 1995 graduates were respondents to an enquiry first held in 1998, followed up in a second stage study conducted in 2003. Thirty-three higher education institutions were selected at random to participate in the 1998 enquiry, with this sample of HEIs boosted by a further five HEIs in 2003 to compensate for attrition. Earnings growth rates are computed from information on gross annual earnings at the time of the second stage, compared with gross annual earnings in their first main job. Futuretrack respondents provided similar information at Stage 4, one and a half to two and a half years after graduation and again at Stage 5, seven and a half years after Stage 4. For comparative purposes, we also show the Labour Force Survey estimates of the growth of hourly earnings for graduates in full-time employee jobs, based on the constructed 'pseudo-cohorts' shown in Figure 4.13. Mean gross hourly earnings are computed for graduates in full-time jobs in three-year age groups[20] seven and a half years apart.

Table 4.3 Annual earnings growth rate comparisons – graduates in full-time employment

	Labour Force Survey[1] (31-33 years old in Apr/Jun 2019 cf.24-26 years in Oct/Dec 2011)		**Futuretrack Stages 4 and 5**[2] (April/May 2019 cf. Nov/Dec 2011)		**Seven Years On**[3] (Dec 2002 cf. July 1995)	
	% p.a.	N	% p.a.	N	% p.a.	N
Males	7.4	68 to 131	10.6	1,488	9.7	1,328
Females	5.6	103 to 127	8.9	2,078	8.0	1,801
Difference	1.8		1.7		1.7	

Notes:

1. LFS estimates are pseudo-cohorts selected to approximate Futuretrack Stages 4 and 5. Three-year age groups are chosen due to limited information on earnings of graduates in single year age groups in each quarterly survey. Growth rate estimates are based on the trended values of the weighted means of gross hourly earnings for those in full-time jobs in each year. Earnings information is only available for employees and weighted with the LFS earnings weights.
2. Futuretrack estimates are for graduates in full-time jobs (employees and self-employed) at Stage 5. Growth rates computed from those who supplied earnings information for each point in time from banded gross annual earnings information with means computed from the mid-points of bands.
3. 'Seven Years On' estimates are for graduates in full-time employment in 2002 for graduates from 38 randomly selected HEIs. Growth rates are based on banded gross annual earnings information with means computed from the mid-points of bands.

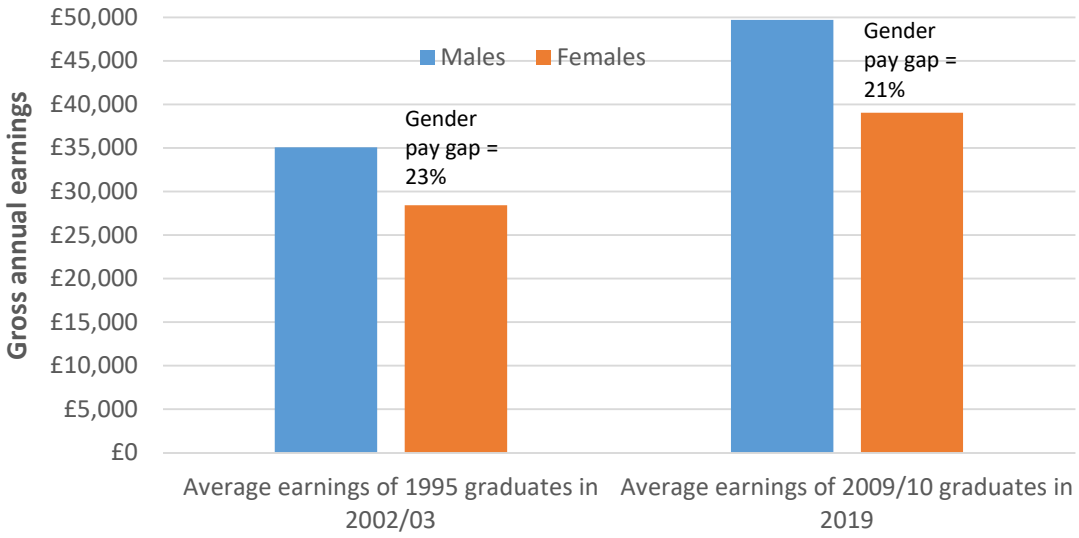
Despite the methodological differences in the ways that data were collected, the comparisons shown in Table 4.3 reveal some interesting findings. First, the LFS estimates of the growth of gross hourly earnings for graduates in full-time jobs derived from the pseudo cohorts of male and female graduates are somewhat lower than the corresponding estimates from Futuretrack. This probably reflects the response bias in the 'Seven years on' and Futuretrack cohort towards graduates who have had relatively successful labour market experiences[21]. These pseudo cohorts can be constructed on a year-by-year basis to display the trend in

[20] Three-year age groups are selected in each quarterly Labour Force Survey, given the small sample sizes that would be associated with single year age groups.

[21] See Appendix A for details of sample biases.

earnings for male and female graduates over the period for which we have information from Futuretrack respondents. Figure 4.13 has shown that, despite some variability associated with the small sizes of the samples in these age groups, the LFS reveals a significant and growing gap between the earnings of male and female graduates in full-time jobs. This gap, which emerges as a difference in the growth of male and female graduate earnings over the seven years since graduating, is almost the same as that displayed in the Futuretrack cohort and, most disconcertingly, like that shown in the 'Seven years on' cohort some 17 years earlier[22]. Figure 4.14 demonstrates this clearly via a comparison of the average gross annual earnings in 2002 of the 1995 graduates with similar information collected in 2019 for the 2009/10 graduates.

Figure 4.14 Gender pay gap for graduates in full-time jobs, 2002/03 compared with 2009/10



Sources: Seven Years On survey 2002-3, cited in Elias, P. and K. Purcell (2004) 'The earnings of graduates in their early careers', Futuretrack Research Paper No.5, Warwick Institute for Employment research, and.Futuretrack Stage 5 survey (all full-time employed and self-employed respondents in both cases).

Both the *Seven Years On* cohort and the Futuretrack cohort show similar rapid earnings growth for those in full-time jobs in these early years following graduation. This is an interesting finding, given that the Futuretrack cohort entered the labour market in the years immediately following the 2008 recession and during the subsequent austerity budget years. Further comparisons of earnings growth for the 'Seven Years On' and Futuretrack cohorts have been undertaken, showing that the same factors have similar influences on these growth rates despite the 17-year period between them. These include the influences of age, social background, type of university attended, subject studied, and degree class obtained.

4.6 Summary

In this chapter we have analysed the earnings of Futuretrack graduates at a point in time nine to ten years after they gained their undergraduate degrees. Additionally, we have explored in

[22] We compared the immediate post-graduation earnings in the 'Seven Years On' cohort and Futuretrack Stage 4 in our last report (Purcell, *et al.* 2013), showing that the gender pay gap was already in evidence at this early stage in their careers.

detail the growth in graduate earnings for the Futuretrack cohort from 2012 to 2019 and have compared their experience with that for an earlier cohort that graduated in 1995.

In the first part of this chapter, we observe the same pattern of variation in earnings by gender, age, degree results, type of institution attended, region, and other factors as has been observed in other studies. We note the strong negative impact on earnings of a prolonged spell or cumulative experience of unemployment between 2012 and 2019. Approximately 5 per cent of graduates in this cohort who were unemployed in 2019 had experienced a year or more of unemployment, and this was associated with a reduction in their earnings by more than a quarter compared with their counterparts who had no experience of unemployment. As we place more reliance for our knowledge about graduate earnings on large and evolving data sources such as the Longitudinal Educational Outcomes dataset, it is worth noting the need to control for the influence of hours worked and spells of unemployment on graduate earnings.

From comparison with the Labour Force Survey, we note that graduate earnings in these early years after graduation grow more quickly than the earnings of those whose highest qualification is NVQ level 2 or above (equivalent to at least five A*–C grades at GCSE), but no HE qualification. An undergraduate degree confers a graduate premium, and relative to this lesser qualified group, the premium grows rapidly in these early years. But the financial rewards to a degree are mixed, with subject studied and sector of employment playing a significant role in modifying the growth rate. There is a marked distribution in the growth of graduate earnings. Those who chose subjects allied to medicine, those who went to lower tariff higher education institutions and those who failed to achieve good degree results have significantly lower rates of growth of earnings.

To discover the impact of the 2008 recession and tight fiscal control that followed, we compared the growth of earnings for this cohort with that of a cohort which had started to enter the labour market in 1995. The average annual rate of growth of nominal earnings for the earlier cohort was lower than for Futuretrack graduates. Given the lower overall rate of inflation prevailing between 2012 and 2019 compared with 1995 to 2002, this suggests that, on average, real earnings have grown more rapidly for graduates in this post recessionary period. However, offsetting this finding we must caution against underestimating the impact of unemployment in the work histories of Futuretrack graduates. Those that experienced a significant spell of unemployment are on a lower growth path for their earnings. While this is the experience of only a small proportion of the graduates in our cohort, this appears to be a causal factor in the distribution of graduate earnings growth rates.

Most surprising of all is the seeming permanence of the gender pay gap, evident in the growth of graduate earnings and translating into a significant gap some nine to ten years after graduation. Women who graduated in 1995 were on an earnings growth path 1.4 percentage points below that of men. For Futuretrack respondents to the Stage 5 survey, who graduated in 2009/10, the difference is 1.7 percentage points, a finding corroborated via analysis of earnings information from the Labour Force Survey.

5 The long run impact of graduate debt

5.1 Introduction

In our report on Stage 4 of the study, we presented much information about the debt that students in this cohort had accumulated over the three or four years during which they had undertaken their undergraduate studies. We showed the relationship between the level of debt and the socio-economic background of the student, with those who, at the age of 14 years, had parents in routine and manual occupations incurring higher levels of debt. Those who had entered higher education at the age of 17 or 18 had higher debts than the older graduates in the study, and those who had undertaken four year as opposed to three-year undergraduate courses had higher debts. There was also clear evidence of differences between student debt according to the country in which the university at which they had studied was located, reflecting the varying rules relating to student loans operating in England, Wales, Scotland, and Northern Ireland.

When asked at Stage 4 about the impact of debt on decisions that they had made since graduating, those graduates reporting any impact said that the biggest restriction was that they had been unable to undertake postgraduate study due to the possibility that this would raise their indebtedness beyond the point at which they felt comfortable in repaying it. We also showed that progress towards repayment of debts was weakest amongst those who had not at the time of Stage 4 found themselves in a graduate job. There was also a very clear relationship between earnings and the ability to repay, with those in the higher earnings brackets making the most progress in repaying their student debt.

None of these results was particularly surprising, although the information we had at that time about the impact of debt on opportunities for employment and further study was worrying, especially given that the Futuretrack cohort narrowly missed the rise in student fees in England from £3,000 a year to £9,000 a year in 2010. However, a recent review of research in this area (de Gayardon *et al.* 2018) concludes that, although the experiences of US graduates with high levels of debt tend to be negative in terms of their economic and mental wellbeing, these results may not translate into the British context given the income-contingent system adopted in this country for debt repayment. In this chapter we focus further on the potential long run impact of debt, taking advantage of the 10 years that have elapsed since graduation. Is it the case that those reporting in 2011 that their options after graduating were limited by the debt they had accumulated, faced continuing limitations, or has time ameliorated the constraints they reported?

Before addressing this question, we examine the information collected on undergraduate debt at Stage 5. There are two issues that could cause this information to be misleading. First, we are aware that the Stage 5 sample is biased towards those who attended the higher tariff universities and who had better than average degree results. This may influence the interpretation of information they gave on the amount of debt they had accumulated. The second problem relates to what is termed recall error – the likelihood that those who have not done particularly well since graduating may attribute this to higher levels of debt than were reported at Stage 4. Conversely, those who have done well and repaid any debts fairly quickly may underreport the extent of their debt on graduation. The following section provides evidence of sample bias and points also to the possibility of recall error.

5.2 Sample selection bias and recall error in the reporting of undergraduate debt

Selection bias in the Stage 5 sample, relating to the questions on debt can be demonstrated easily by examining the response to Stage 4 questions from Stage 4 respondents and comparing these with the responses when the sample is limited to Stage 5 respondents only. We do this for two questions, the first of which asked:

Were your options after graduating limited by your debts?

This question was presented to Stage 4 respondents in 2011, one and half to two and a half years after they had graduated, depending upon whether they had taken a three- or four-year undergraduate degree. This raises the question as to whether the bias in response at Stage 5, towards those who are higher earners and had attended at higher tariff universities may influence the use of this Stage 4 indicator to characterise Stage 5 respondents.

Table 5.1 investigates this possibility by comparing the response to the question posed at Stage 4 from Stage 4 respondents with the response to this question asked at Stage 4 but with the sample limited to Stage 5 respondents. From this comparison we see that the Stage 5 respondents consist of those who were slightly more likely to report at Stage 4 that their options were not limited by debts than was the case among all Stage 4 respondents, especially for men. The conclusion we draw from this comparison is that the Stage 4 reporting of limited options due to debt, when used as an indicator among Stage 5 respondents, underreports these limitations somewhat due to the bias inherent in the Stage 5 response.

Table 5.1 Comparison of response to a question on debt asked at Stage 4, Stage 4 respondents compared with Stage 5 respondents

	Males	Females	Total
Stage 4 response from Stage 4 respondent (N=12,675)			
My options after graduating were not limited by my debts	82.3	79.1	80.3
My options after graduating were limited by my debts	17.7	20.9	19.7
Stage 4 response from Stage 5 respondents (N=4,020)			
My options after graduating were not limited by my debts	86.3	82.0	83.8
My options after graduating were limited by my debts	13.7	18.0	16.2

Sources: Futuretrack Stage 4 and 5 surveys

The second question we use to examine for bias is a question in which respondents were asked to indicate the extent of their undergraduate debt at Stage 4.

Table 5.2 Comparison of response to a question on the extent of indebtedness asked at Stage 4, Stage 4 respondents compared with Stage 5 respondents

Amount of repayable debt at end of undergraduate course	Reported debt at Stage 4	
	Stage 4 respondents	Stage 5 respondents
None	15.1%	9.0%
Up to £4,999	5.7%	5.1%
£5,000-£9,999	8.9%	7.4%
£10,000-£14,999	12.2%	11.5%
£15,000-£19,999	19.6%	21.3%
£20,000-£24,999	23.2%	28.4%
£25,000-£29,999	10.7%	12.8%
Over £30,000	4.6%	4.5%
N	15,025	4,437

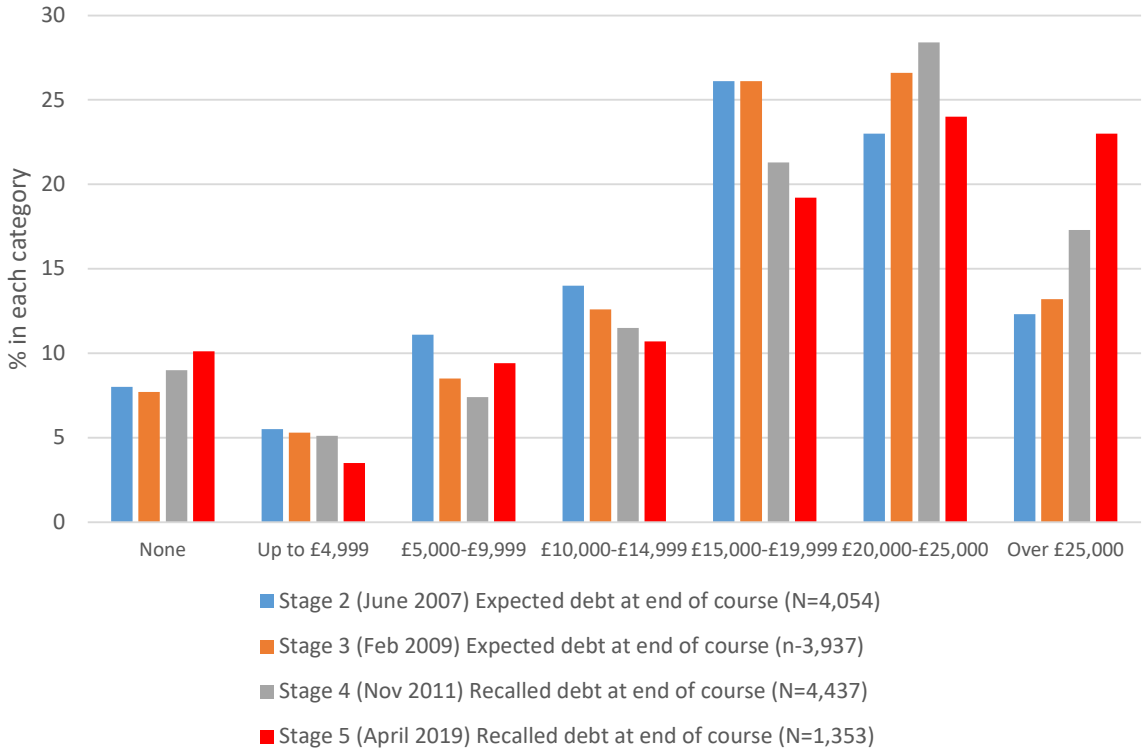
Sources: Futuretrack Stage 4 and 5 surveys

Table 5.2 presents further evidence of the bias introduced into the information on student indebtedness via the response to the survey at Stage 5. It shows a comparison of the response to this question on the extent of indebtedness asked at Stage 4 with the distribution of responses to this same question asked at Stage 4, but with the sample limited to Stage 5 respondents. This shows that the Stage 5 survey is biased towards those who were less likely to report that they had no debt on graduation but also more likely to report high levels of debt at Stage 4. Just over 38 per cent of respondents told us at Stage 4 that they had accumulated debts in excess of £20,000. Examining this same question, but with the sample restricted to Stage 5 respondents, we see that over 45 per cent were reporting debts more than £20,000.

With these biases in mind, we examine the recollected account of student debt that we asked respondents at Stage 5. We included a question identical to that which was asked at stages 2, 3 and 4 of the study. At stages 2 and 3, before they had graduated, the question was about the debt that they *anticipated* holding on graduation. At Stage 4 the question was about the actual amount of debt they had *realised* at the end of their undergraduate course, in 2009 or 2011, 18 to 30 months earlier. At Stage 5 they were asked to recollect the amount of debt they had accumulated at the end of their undergraduate course, approximately ten years ago.

Figure 5.1 shows the changing distribution of responses to these question between Stages 2 and 5, with the sample limited to Stage 5 respondents only. This information, up to Stage 4, was analysed in detail in our Stage 4 report. The Stage 5 response shows a higher proportion stating that they had no debt, and a markedly higher proportion stating that they had debts more than £25,000. This could reflect the fact that the Stage 5 sample is biased towards the more successful graduates, many of whom studied on four-year courses which provided higher earnings, causing then to run up higher debts as a result, but this does not explain why they would report higher debt on graduation when recollecting this information in 2019 compared with what they stated in 2011. The evidence of bias and recall error in the Stage 5 response shown in Tables 5.1 and 5.2 suggests that the information on the extent of indebtedness from the Stage 5 sample is not particularly reliable.

Figure 5.1 Expectations of and recalled information on undergraduate debt as reported at Stages 2, 3, 4 and 5 from Stage 5 respondents



Sources: Futuretrack Stages 2, 3, 4 and 5 surveys

5.3 Exploring the long run impact of student debt

The preceding section has shown that the information on student debt collected within the Stage 5 survey is unreliable. A good indicator of the extent of student debt on completion of undergraduate studies is therefore the information collected at Stage 4. The problem this poses is that almost one quarter of Stage 5 respondents were those who had participated in Stage 3, but not Stage 4. Figure 5.1 shows that the debt anticipated by Stage 3 respondents is a reasonable approximation for the debt subsequently reported at Stage 4. We use this information as a proxy for the actual student debt on completion of their undergraduate course for those for whom we have no Stage 4 response.

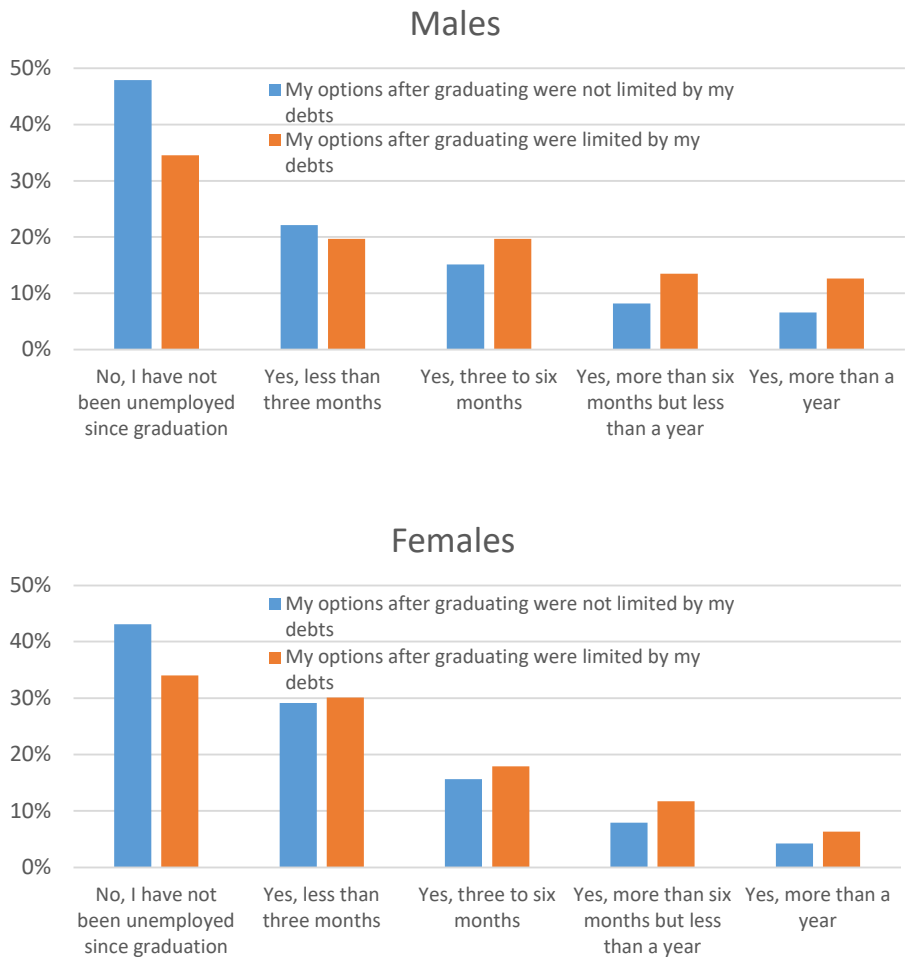
We address the issue concerning the long run impact of debt in two different ways. First, we make use of the question placed on the Stage 4 survey, asking if their options after graduating were constrained by their student debts. This subjective approach is then contrasted with a more objective approach, in which we divide the sample into three groups; those with no debt

on graduation, those with debt below the modal average and those with debt above the modal average, using information on the distribution of debt constructed as described above.

We investigate first the possibility of a relationship between the reporting of options being limited by debt at Stage 4 and the respondents' experience of unemployment between 2011 and 2019, their economic activity and earnings in 2019, the type of job they held in 2019 and their satisfaction with the job they held in 2019.

Figure 5.2 shows, for men and women separately, the distribution of responses to a question about the cumulative experience of unemployment in the period 2010 to 2019, distinguishing between those who stated in 2010 that their options after graduating had been limited by their debts. This indicates that those who stated at that time that their options had been limited were more likely to experience a cumulative spell of unemployment of more than three months, particularly for men.

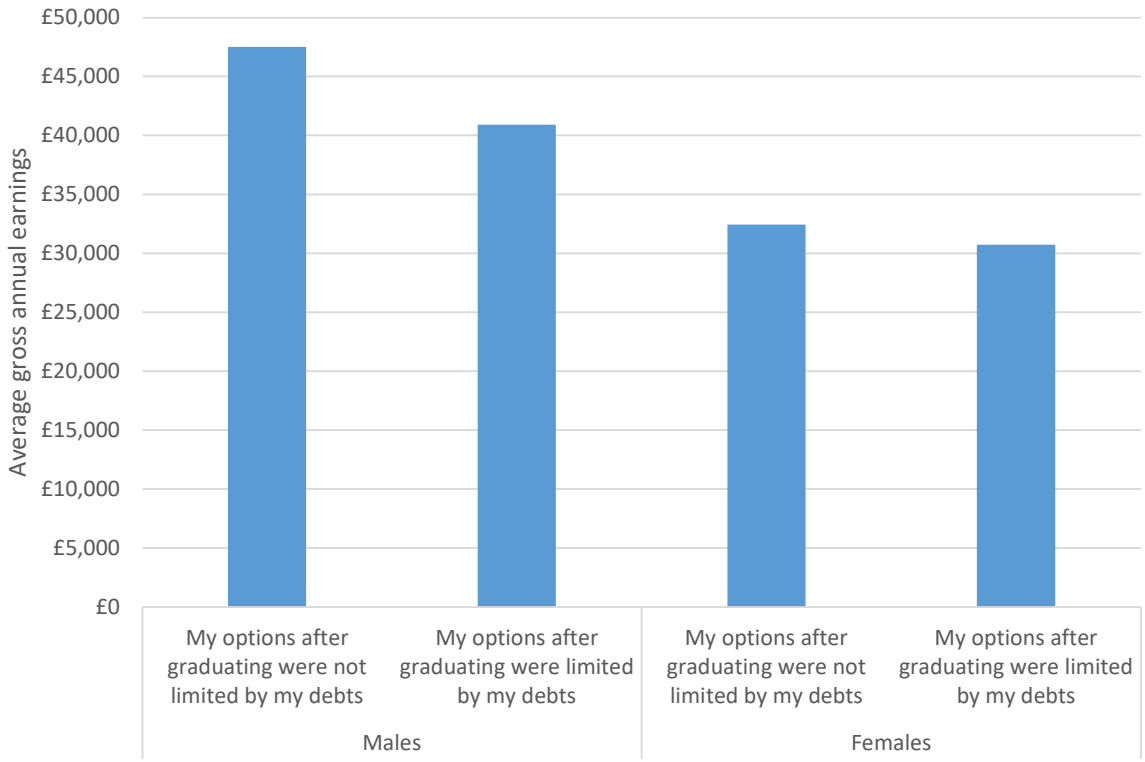
Figure 5.2 Views on undergraduate debt and the experience of unemployment since graduating



Sources: Futuretrack Stage 4 and Stage 5 surveys (n=1,630 males, 2,385 females)

Figure 5.3 shows the average gross annual earnings in 2019 from the respondent's main job (all those in employment at Stage 5) by whether they had reported that their options had been limited by debt in 2011. Men who stated in 2011 that their options after graduating had not been limited by debts were earning on average £6,000 a year more in 2019 than those who stated that their options had been limited by debts they had accumulated in their undergraduate years. For female respondents a smaller difference of less than £2,000 is apparent.

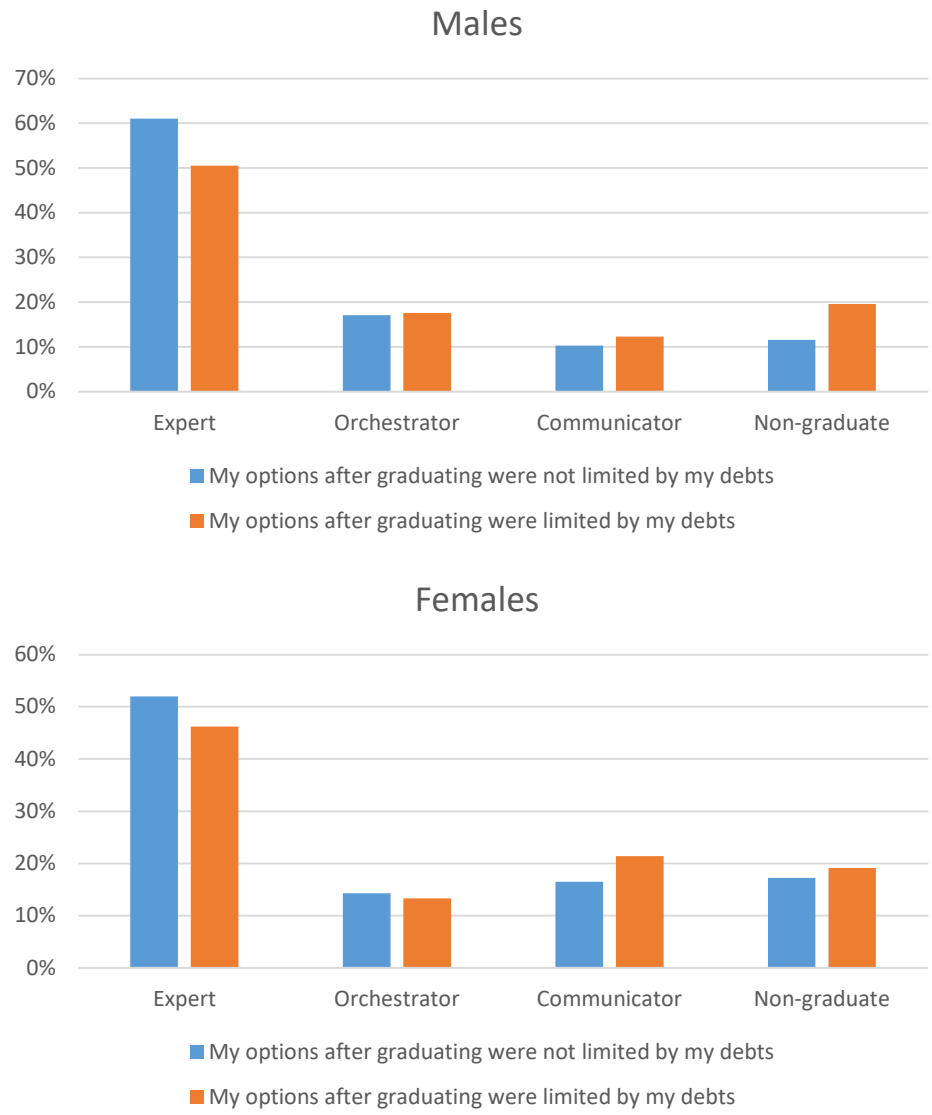
Figure 5.3 Views on undergraduate debt in 2011 by average gross annual earnings in 2019



Sources: Futuretrack Stage 4 and Stage 5 surveys (n=3,656)

We examine next the type of job held by respondents in 2019, grouped according to SOC(HE)2020. Figure 5.4 presents this information for men and for women. We note that there does appear to be a higher proportion of men in non-graduate jobs in 2019 for those stating that their options had been limited by debt compared with those who stated that they had no such limitations (20% compared with 12%). For female respondents the situation is not so clear, slightly more were in non-graduate jobs if they had stated 8 years earlier that their options were limited by debts.

Figure 5.4 Views on undergraduate debt in 2011 and type of job held in 2019



Sources: Futuretrack Stage 4 and Stage 5 surveys (n=1,545 males, 2,148 females)

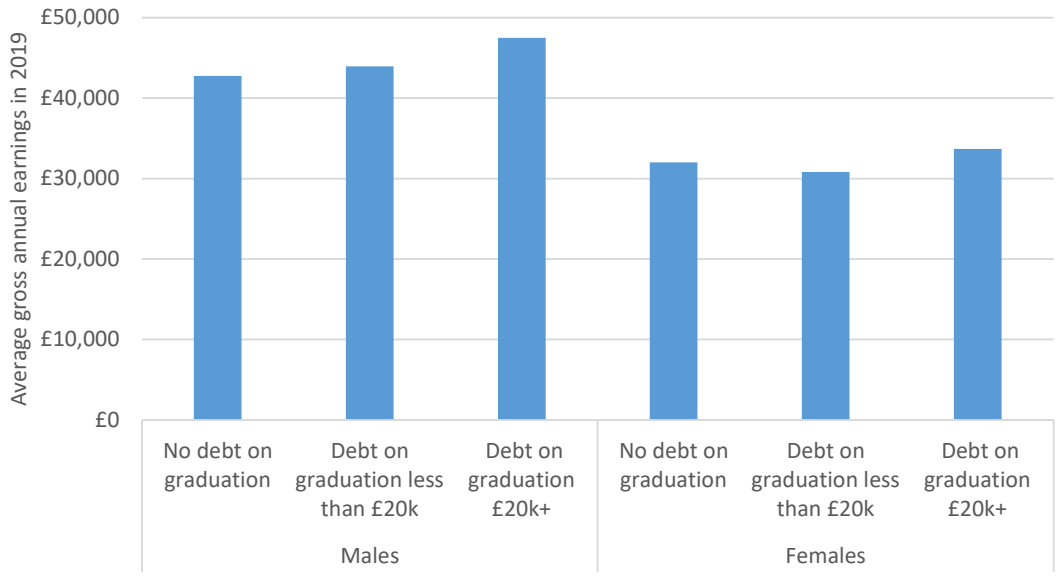
We examined a range of other indicators of the status of respondents in 2019, according to whether they felt in 2011 that their options had been limited by debts, including the extent to which they were satisfied with the job they held in 2019 and views on their career progression, but found no significant associations with these variables.

Given the very clear link between earnings in 2019 and views on debt as a factor limiting their options as recorded in 2011, we make use of the earnings analysis discussed in the preceding chapter. An indicator variable was constructed, having a value of one if the respondent recorded that his or her options were limited by debt in 2011 and included this with the list of

regressors shown in Appendix Table B.1. When the other variables in this regression function are restricted to gender, hours worked, age, social class and ethnicity, this variable shows a significant negative relationship with earnings, as demonstrated in Figure 5.3. However, if additional information on the subject studied and type of institution attended is included in the regression function, no significant effect for this indicator variable can be found.

We turn now to the use of another indicator of the potential impact of debt – the extent of debt accumulated on completion of their undergraduate studies. As stated at the beginning of this section, we have constructed an estimate of their accumulated debt at the end of undergraduate studies from the information gained at Stage 4, supplemented with the anticipated debt recorded by Stage 3 respondents for those respondents in Stage 5 for whom we have no Stage 4 information. Given that this information is subject to a degree of error, we then collapse the data into three bands: those with no debt; those with some debt up to the model value of £20,000; and those with anticipated or actual debts more than this amount.

Figure 5.5 Average gross annual earnings in 2019 by anticipated or actual debt in 2011 and gender



Sources: Futuretrack Stage 4 and Stage 5 surveys (n=1,661 males, 2,355 females)

Figure 5.5 uses this indicator of the extent of student debt in 2011 to examine the average gross annual earnings in 2019 for all in employment at that time. This shows a strong relationship between earnings and the reporting of debt for men, with those reporting no debt on graduation significantly more likely to earn less than those who had debts of £20,000 or more. This may well reflect the fact that higher debts were accumulated by those taking four-year courses in subjects such as medicine and engineering, courses which generally lead into jobs with higher-than-average earnings.

We repeated this type of analysis, investigating the relationship between these three categories of debt and outcomes such as the experience of unemployment between 2011 and 2019, satisfaction with their 2019 job, and the type of job held in 2019. No clear relationships were apparent.

5.4 What did respondents tell us about their student debts?

During the interviews with graduates in Stage 5, questions were put to them about the debt they had accumulated and their views on this debt. A common response was that student

debt was unlike most forms of debt, in that repayment was income related, that the repayment above a threshold was deducted from their salaries at source along with income tax and national insurance, that interest rates were low and, in some cases, that cancellation of remaining debt after 30 years meant that there was no possibility of others inheriting the loan. Typical of such responses were the following:

> *"I don't see it as a debt actually, more as a tax. So, I don't think about it as a debt, it's a credit reference and it hasn't stopped me financially or had any kind of impact like that. If I was unfortunately unemployed then obviously it would, repayment would pause, it's not like if whereas if you have a credit card or if you've got a loan you've got to pay it off regardless. So, I don't think about it as a debt in that way."*
> [Interviewer: "So, if you were a student or if you were 18 today with the … fees, do you think you still would've gone to university and done the same things?"]
> *"Yes, without a doubt. I don't think about it as debt like a loan"*.
> [Senior software engineer, Business services sector, studied mathematical and computing sciences, highest tariff university, male, managerial and professional social background, £50,000-£54,999.]

In a similar vein:

> *"I've never really seen it as debt as such. Because how it appears on my pay cheque and how it's experienced, I think it's closer to a tax. It's just a set percentage of my money. I never see that amount of my money. I've never had it, so I've never missed it when it's not there."*
> [Chartered civil engineer, Construction sector, studied engineering technologies, highest tariff university, male, routine and manual occupations social background, £40,000-£45,999.]

> *"It's a case of when you hit 65, whatever's left remaining they wipe off anyway, it's not a loan that is going to fall onto somebody else to pay in the event of my death, it's going to get written off. I'm not worried about it at all, because it'll either get paid off when I have the income to do it or it won't."*
> [Programme Lead, Higher Education sector, studied Medicine and Dentistry, highest tariff university, managerial and professional social background, £55,000-£59,999.]

Other comments included the analogy with a mortgage:

> *"Respondent: I don't use credit cards, I only ever buy stuff if I've got money. All the cars I've bought outright because I'm not buying it on finance. So, that kind of thing, definitely, but I look at it differently because it's trying to achieve something in life, isn't it? I don't look at that debt in the same way I would anything else. It's like a house, it is a debt, because we've just bought we have a mortgage, but it's not seen as a negative debt, is it?)"*
> [Accounts receiver, Information and Communications sector, studied in biology, vet science, agriculture and related subjects, lower tariff university, female, intermediate occupations social background, £24,000-£26,999.]

Some interviewees did refer to the fact that debt had had a potentially negative influence on their subsequent careers:

> *"It's more of the psychological impact of having huge amounts of debt hanging over you which makes you just want to have some sort of financial security rather than apply for a really good company graduate scheme and wait it out for a few months. You end up taking the first job that you get and sticking with that because having already done three or four years of university you're already destitute."*
> [Catering operator, Distribution, hotels and catering sector, studied social studies, highest tariff university, male, intermediate occupations social background, less than £9,999.]

> *"I actually think it hasn't affected me, but would I advise my children to go to university the way I did? Probably not. Not when there are companies that you can work for, for a reduced wage, who*

will pay for you to go to university. Yes, it might take you then five years to get an undergraduate degree, but you walk out with five years of experience and no debt. I look at a lot of my husband's friends who are all electricians or plumbers and having a great time. They've all got trades."
[Organic waste project coordinator, Electricity, Gas and Water Supply sector, studied physical sciences at a high tariff university, female, routine and manual occupations social background, £33,000-£35,999.]

Repayment of student loans was viewed by some not as a debt to be repaid as soon as possible to minimise the overall cost of the debt, but as a long-term loan which would eventually be written off.

"And, through my calculations, I'm actually financially better off waiting for the student loans to cancel themselves when I'm in my 50s, than I am actually trying to pay any of them beyond what comes out of my pay cheque."
[Part-time working in Customer operations, Banking, Finance and Insurance sector, studied creative arts and design, medium tariff university, male, managerial and professional social background, £12,000-£14,999.]

5.5 Summary

We have sought in this chapter to determine whether or not the debt that graduates had accrued by the time they graduated in 2009/10 could have had a long run and somewhat deleterious impact upon their future careers, either by taking jobs that were not their preferred option, possibly earning less than their peers who had little or no debt, by foregoing further study that could open up new career pathways, or simply in terms of the extent to which they were satisfied with their current jobs. We did this in two ways, relying on a question we asked in 2011 about the extent to which their options had been limited by debt, and by looking at the extent of their debt as a limiting factor.

Causal relationships between debt and later outcomes are difficult to establish, simply because there are many possible factors that underpin the career paths of graduates and the loans that they have taken out during their undergraduate years. The accumulation of student debts can arise in many ways. Besides the obvious factors such as the length of the undergraduate course, debts can vary due to parental contributions, financial mismanagement, planned borrowing against the possibility of higher future earnings, the extent of prior savings and/or term-time working, or even through borrowing in the knowledge that repayment is subject to an earnings threshold and debt cancellation on retirement. There is a temptation in reading some of the statistical information we present in this report to conclude that higher levels of student debt do appear to be associated with negative outcomes. For example, those who told us in 2011 that they felt that their options after graduating had been limited by debt were earning less in 2019 than those who recorded no such limitations at that time, particularly so for men. A more detailed analysis of this relationship indicates that the earnings difference associated with their subjective views on debt and its limiting impact on their perceived options disappears when account is taken of the subject they studied and the type of institution they attended. This is clearly a topic for further investigation.

Unravelling the complexities of these relationships from the responses to questions on surveys places too great an emphasis on the limitations we face via this approach. It was for this reason that we let the graduates speak for themselves about their experiences of debt and the impact it may have had on them. Here we find that most did not view student loans as a form of debt, but more as an advance on their later earnings to be repaid via higher taxes. The cancellation of any outstanding loan after 30 years, the low interest rates and the threshold on earning below which they would not make repayments, all appear to have contributed to this view. Some did mention negative consequences associated with their student debt, but these were a minority of the interviews. There was substantial evidence

from the interviews that many graduates regarded their student loans less as a form of debt than as an inevitable cost of study.

On the face of it, we conclude that the student debts incurred by this cohort of graduates do not appear to have a deleterious impact on their later careers. However, we must stress that the graduates in our study did not pay the higher tuition fees introduced in 2010. How well the experiences of the graduates in this study translate into the experiences of later graduates with borrowings three times greater is a question open for further investigation.

6 It's not just the money: Understanding successful graduate outcomes

6.1 Introduction

Much of the current debate about the value of higher education (HE) focusses on individual financial returns. This recognises both the financial investment of the individual and of the state when student loans are not fully repaid. It also reflects the greater availability of robust data on earnings available from administrative datasets and regular surveys, including the Longitudinal Educational Outcomes (LEO) datasets, and the Labour Force Surveys. However, a focus solely on earnings overlooks the other benefits individuals derive from their time in HE, their personal motivations for entering HE and seeking particular types of work, and the outcomes for society.

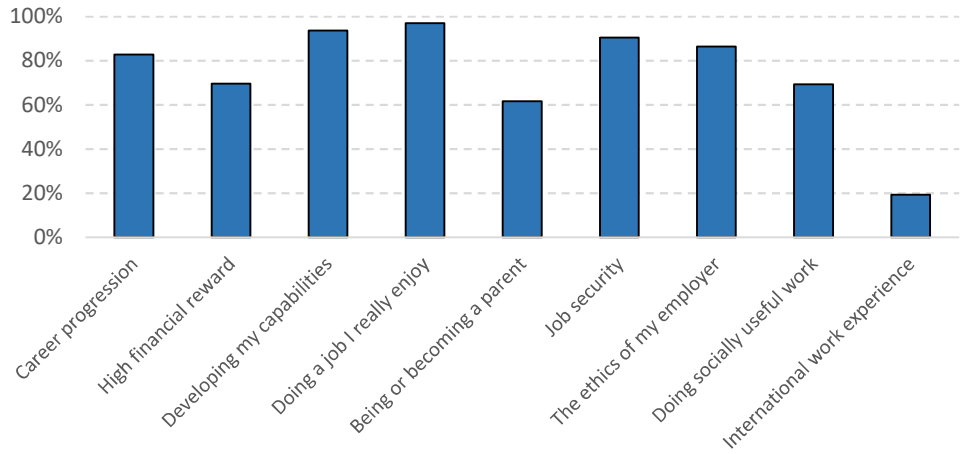
How success in the labour market should be measured and what measures could be used to provide meaningful information on HE outcomes has been the subject of much debate given the changing labour market context. It has been argued that traditional objective measures of successful labour market integration, such as salary, promotions, or status within an organisational or occupational hierarchy, are becoming less relevant as people become less likely to follow traditional linear paths of progression within a single organisation or even career (Shockley *et al*., 2016; Hall and Chandler, 2005). While a range of both objective and subjective measures of career success have been proposed and used, it has also been suggested that greater attention should be given to individuals' perceptions and orientations. As Hall and Chandler (2005: 173) note, "[A] deeper sense of fulfilment comes when those attainments measure up favourably with one's own inner purpose. True success is not just getting what you want [in] life—it's liking what you get".

This chapter looks at the long-term values of Futuretrack participants. From detailed analysis of the information they provided we identify four value orientations that are the primary focus of their motivations. These are: Money and prestige; Social value; Enjoyment; and Security. It shows the extent to which these values sort participants into particular types of job as they seek the kind of work that would allow them to achieve their employment ambitions. It then goes on to look at the relationship between objective and subjective achievements that accord with personal values and job satisfaction, before concluding with a discussion of how successful outcomes of HE might be defined in relation to achievement of personal ambitions and societal benefit, extending the focus of outcome measures beyond the purely financial.

6.2 What do Futuretrack participants value?

Participants were asked to rate the importance of a range of long-term values, using a scale of 1 to 5, with 1 being 'very important' and 5 being 'unimportant'. Figure 6.1 shows the proportion of participants who considered each value to be of some importance to them (1 or 2 on the five-point scale).

Figure 6.1 Percentage of participants considering each long-term value important



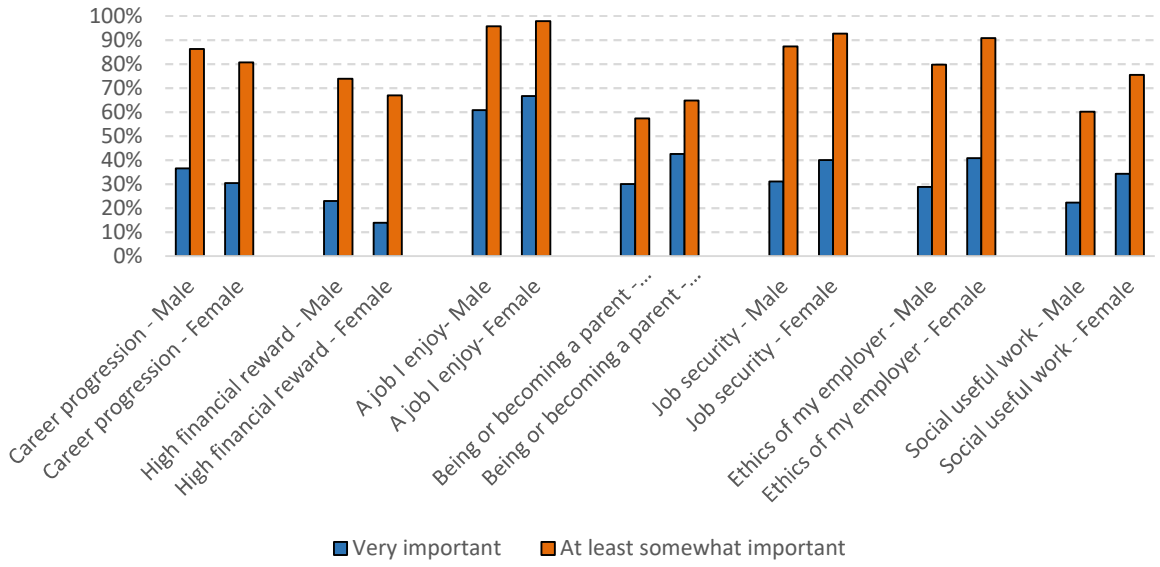
Source: Futuretrack Stage 5 survey, all participants (n=6,040)

As the Figure shows, participants were somewhat more likely to say that intrinsic motivations, such as enjoyment of their job (97 per cent of respondents) and opportunities to develop their capabilities (94 per cent) were important, in contrast to extrinsic motivations such as career progression (83 per cent) and high financial reward (70 per cent).

Ethnicity and social class appeared to have much less clear relationship to values, although there were some exceptions. Although the figures were similar when considering the proportions who considered job security at least somewhat important, participants from a managerial or professional background were less likely than those from intermediate or routine and manual backgrounds to say that job security was 'very important' to them (34 per cent compared to 40 per cent of those from intermediate backgrounds and 41 per cent from routine and manual backgrounds). This perhaps reflects the greater potential for participants from higher social classes to draw upon financial and other resources and support from their parents in the event of job loss, making this a less frightening prospect for them.

However, there were significant differences between different groups within the Futuretrack cohort. Figure 6.2 shows the differences in responses of male and female participants where they were asked whether different values and motivations were very important or important to them. As the Figure shows, male participants were more likely than female participants to consider the objective, more status-related values (career progression and high financial reward) very important and to some extent important. In contrast a higher proportion of female than male participants stated that subjective, extrinsic values were important to them. They were much more likely than male participants to be motivated by social values and responsibilities, including being or becoming a parent.

Figure 6.2 Percentage of participants considering selected values very important or important by gender



Source: Futuretrack Stage 5 survey, all participants (n=6,040)

There was also some difference between ethnic groups, with black, Asian and minority ethnic (BAME) participants being more likely than white participants to place importance on extrinsic values such as career progression and high financial reward. For example, 68 per cent of white participants said that high financial reward was important to them, with just 16 per cent saying that it was a very important long-term value to them. In contrast, 87 per cent of Asian participants and 91 per cent of black participants said that high financial reward was somewhat important and 37 per cent and 42 per cent respectively said that it was very important. Conversely, BAME participants were somewhat less likely to say that having a job that they enjoyed was very important. It must be noted that the size of the black group is very small.

6.3 Strong value orientations

As the above figures illustrate, participants tended to consider that a range of long-term values were somewhat important to them and, as will be seen, seeking employment often involved a trade-off between values. For some, this involved seeking work that was 'good enough' across a range of measures, and for this group, their career direction was determined by the ways in which these values and preferences came together in different combinations and at different points in time. However, a third of Futuretrack participants showed a strong value orientation to one of four values.[23]

[23] Participants were considered to have a strong orientation to a particular value if they placed greater emphasis on this value (scoring it 1 or 2 on the five point scale) than any of the other values. In the

The largest group were those who had a strong enjoyment orientation in relation to their job (14 per cent of Futuretrack participants). It is important to note that this group do not necessarily take a hedonistic or unstructured approach to their careers; indeed a relatively large proportion of this group have security as a secondary value orientation. Rather they are concerned with the everyday experience of working and doing a job; they are, as several interviewees put it, the group that very much 'don't want to dread Monday morning'.

> *"I always used to ask myself the question that I could spend the next 30 years doing this job, potentially. Would I get up after 30 years with the same enthusiasm to do it that I do on day one, if I was to do the same thing forever? And I always ask myself that first and foremost. And that was the main factor in choosing the paths I have. I've never really bothered about how much I get paid. Maybe even less so, sometimes, about the work life balance. I've just wanted to enjoy the work I do, first and foremost"*
> [Senior Software Engineer, studied Interdisciplinary subjects at a Highest tariff HEI. Male, from a Routine and Manual background earning £40,000-£44,999]

> *"I remember graduating from university not really knowing what I wanted to do but thinking, what do I enjoy? And that was my guiding principle. And I think it's still extremely important. I don't want to go five days a week to something that I hate being there. And I've done that a lot. It's not been fun"*
> [Actor, studied Interdisciplinary subjects at a Highest tariff HEI. Male, from a Managerial and Professional background, earning £18,000-£20,999]

The second largest group is composed of participants who place emphasis on extrinsic values and focus on rewards and markers of success related to career progression and/or high financial reward. This group accounts for nine per cent of participants.

> *"I don't worry about money. I've got no financial concerns. If I want to go out for a meal tonight I can do. If I want to buy a new laptop tomorrow, I can do. Those sorts of things are what motivates me. Perhaps it sounds selfish, but I'm not one that's motivated by having a nice job. Yes it's a nice job, but it's what they pay me at the end of the day that motivates me"*
> [Logistics Manager in the Manufacturing sector. Studied Business and Administrative Studies at a Medium tariff HEI. Male from an Intermediate background, earning £65,000-£69,999]

> *"I think the thing that drives me in this profession is the prospect potentially of becoming more senior and therefore to attract a higher wage"*

---

case of the value orientations that are based on combined values (Money or prestige formed from the career progression and high financial reward variables, and social value formed from the contribution to society and employer ethics variables) participants were considered to have this orientation if one of their scores was higher (1 or 2) than the score they gave to other values or if both their scores were greater than or equal to the score they gave to not more than one other value.

The four orientation groups were the ones that contained a significant enough number of participants for statistical analysis. There was a small but notable group of participants who rated being or becoming a parent as a clear single value orientation, something that was also mentioned by a number of participants in the qualitative research, but this group was too small for statistical analysis. This is likely to be because other values, such as having a stable job, were important when participants considered what being a good parent involved. Participants in the interviews anticipated that having a family would become a more important value as they got older. When they were asked whether they thought their values might change in the future, participants anticipated that they would become more likely to value stability in their income and work-life balance more if they had children in the future.

[Solicitor, studied Interdisciplinary subjects at a High tariff HEI. Male, from a Managerial and Professional background, earning £40,000 to £44,999]

The third group, accounting for seven per cent of the sample, is those who are strongly focussed on the social value of their work and/or the ethics of their employer. They value being able to contribute to society and the personal fulfilment they achieve from this.

"I want to work for a company that I can say to people proudly, Yes, that's where I work"
[Product Manager in the Banking, finance and insurance sector. Studied Engineering and Technologies at a Highest tariff HEI. Male, from a Managerial and Professional background, earning £65,000-£69,999]

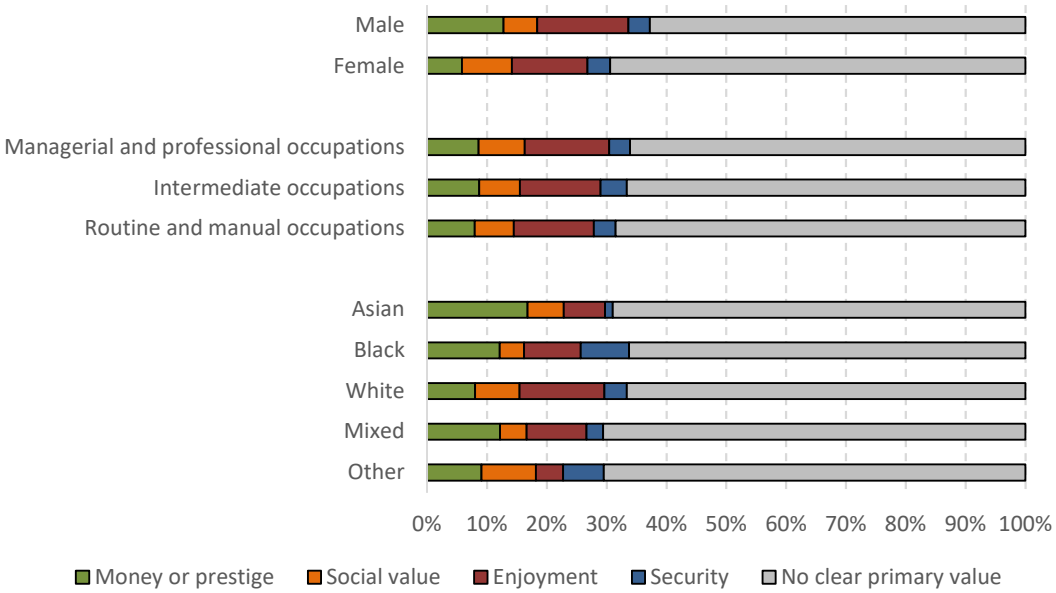
"I wanted to make a difference, and I wanted to be useful and help people. And I think that's just partly my nature and partly because I've been helped and I want to repay that. But I think it's just because I want to feel like when I get up for work, I know why I'm doing what I'm doing. Not just I'm doing it for the money or for something to do. It's that I have that purpose. Today, this is the difference I've made"
[Administrator working in the Conservation sector, studied Education at a Medium tariff HEI. Female, from a Managerial and Professional background, earning £12,000-£14,999]

The final group are people who strongly value job security. This is a relatively small group (four per cent of participants) but an interesting one. As will be seen, the combination of graduating into a recession and a general drive towards greater flexibility in the labour market has seen this group engage in significant compromises to find and sustain work that accords with their values and meets their needs.

"*I've always been very conservative here. I used to always be conservative in terms of I've taken the central option for the job. I've taken the steadier job with more, you know, likelihood of success than the high-risk thing. So, I think also working for a big FTSE 100 company rather than for start-ups, or doing an accountancy qualification rather than going into something where there's a much higher potential for really big success, but also a higher potential for, oh god, everything's gone wrong and I'll have no money at all*"
[Senior Finance Manager in the Information and Communications sector. Studied Social Studies at a Highest tariff HEI. Male from an Intermediate background, earning £90,000-£99,999]

Figure 6.3 shows how membership of the different value orientation groups relates to personal characteristics. As can be seen, male participants are more likely than female participants to have a strong money or prestige orientation, while female participants are more likely than male participants to have a strong social value orientation. BAME participants were more likely than white participants to demonstrate a strong money or prestige orientation and less likely to demonstrate a strong enjoyment orientation, but care must be taken with these figures as the number of participants from BAME groups is small.

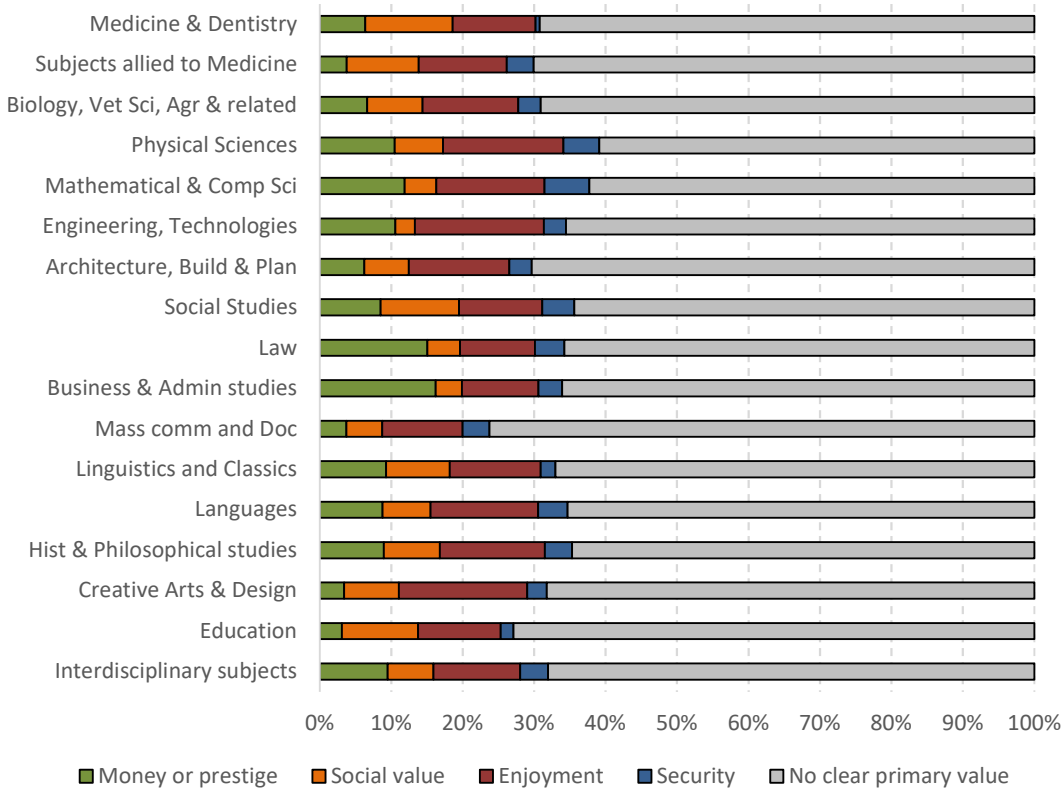
Figure 6.3 Strong value orientations by personal characteristics



Source: Futuretrack Stage 5 survey, all participants (n=6,040)

Later in this Chapter, the sorting effect of value orientations will be examined in relation to employment. However, there is evidence that these values had a sorting effect much earlier, as participants made decisions about entering HE and what and where they would study and these earlier decisions intersect with opportunities and values to produce career outcomes. Figure 6.4 shows how participants with particular value orientations were drawn to certain subjects in HE.

Figure 6.4 Strong value orientations by subject of degree



Source: Futuretrack Stage 5 survey, all participants (n=6,040)

Notably, participants with a strong money or prestige value orientation are over-represented in Law and Business and Administration subjects and under-represented in Creative Arts and Design, Education and Biology, Veterinary Science and Agriculture. As might be expected, participants with a strong social value orientation are over-represented in Medicine and Dentistry, Subjects Allied to Medicine and Social Studies. The distribution of participants with a strong value orientation is largely in line with the average, but interestingly, participants with a strong security focus are over-represented in Physical Sciences and Mathematical and Computer Sciences rather than some of the subjects with a stronger vocational focus such as Education or Engineering and Technologies.

Table 6.1 shows the distribution of the value groups by HEI type. It shows that over half of the participants who had a strong money or prestige orientation studied at a highest tariff HEI. The group of participants with a high security orientation were under-represented amongst graduates from highest tariff HEIs, despite the possession of a degree from such institutions potentially benefiting them in seeking secure employment. Instead, they are more likely than average to have graduated from a high tariff HEI.

Table 6.1 Strong value orientations by HEI type

	Highest tariff (%)	High tariff (%)	Medium tariff (%)	Lower tariff (%)
Money or prestige	50.3	27.1	16.2	5.0
Social value	43.2	23.3	21.7	8.0
Enjoyment	43.4	26.3	20.0	5.4
Security	37.0	34.2	20.5	3.7
No clear primary value	40.1	26.9	22.5	7.2

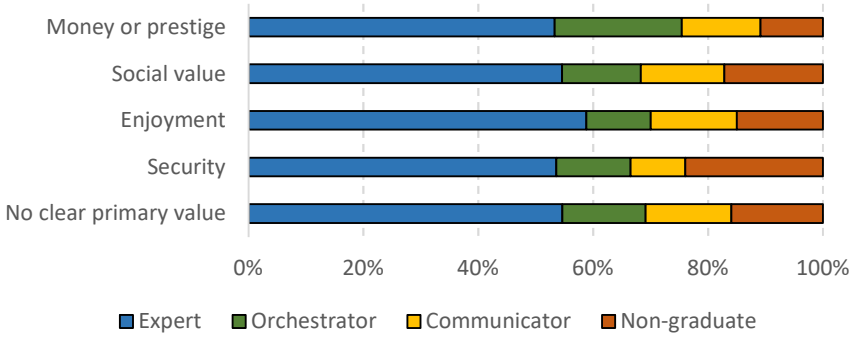
Source: Futuretrack Stage 5 survey, all participants (n=6,040)

6.4 The sorting effects of personal values in the graduate labour market

The previous section indicated that personal values have a sorting effect as potential students make decisions about their HE choices. This section examines the extent to which a similar sorting effect can be seen in relation to the choices graduates make about the jobs they take and the direction of their future careers.

Looking first at the job types of graduates with different value orientations, Figure 6.5 shows the distribution of value groups by the SOC(HE)2020 classification. The distribution of participants with a strong money or prestige orientation accords with the findings in Chapter 3 which suggested that as participants progress in their careers, they take on more managerial responsibilities and become responsible for orchestrating the work of others. As will be seen, the participants who strongly valued money or prestige appear to have achieved greater career progression than those from other groups.

Figure 6.5 Distribution of participants with different value orientations by SOC(HE)2020 category



Source: Futuretrack Stage 5 survey, all participants in employment (n=5518)

The other notable finding in relation to the sorting effects of strong personal values is the relatively high proportion of those who value job security who were working in non-graduate jobs. The proportion of this group in non-graduate jobs is eight per cent higher than average

at 24 per cent and is the first demonstration of a common theme for those who value security: that they seem to make very high trade-offs to obtain job security, often settling for lower paid, lower status jobs that meet few of their desired characteristics beyond offering job security. This is not wholly attributable to their personal values. As a group they appear to value security and stability in life more generally and are less likely, for example, to relocate for better paid or more otherwise appropriate work.

This 'settling' by participants with a strong security value orientation can also be seen when looking at their distribution by the Major Group of the 2020 Standard Occupational Classification, as shown in Table 6.2. They are under-represented in Managerial and Professional jobs, and Associate Professional jobs, but over-represented in Administrative and Secretarial and Sales and Customer Service jobs.

Table 6.2 Distribution of participants with different value orientations by SOC Major Group

	Money or prestige (%)	Social value (%)	Enjoyment (%)	Security (%)	No clear primary value (%)
Managers, Directors And Senior Officials	13.1	8.7	6.8	6.7	9.6
Professional	62.2	63.3	65.8	57.9	62.0
Associate Professional	19.1	15.0	16.2	13.9	18.4
Admin And Secretarial	3.2	7.7	4.8	11.5	5.0
Skilled Trades	0.6	0.3	1.6	0.5	1.0
Caring, Leisure And Other Service	0.6	1.8	1.7	1.4	1.7
Sales And Customer Service	0.8	2.4	1.7	5.3	1.3
Process, Plant And Machine Operatives	0.4		0.4	1.0	0.4
Elementary		0.8	0.9	1.9	0.6

Source: Futuretrack Stage 5 survey, all participants in employment (n=5,518)

Those with a strong enjoyment orientation were also under-represented in the Managerial group. It was suggested by some interviewees in the qualitative research that strongly valuing doing a job you enjoy may result in a certain degree of ambivalence towards moving into managerial roles which may take the participant away from the tasks they enjoy and the teams they enjoy being part of. Not unexpectedly, those with a strong money or prestige value orientation were over-represented in the Managerial group. They represent one of the clearest cases of participants' values leading them to seek particular types of work that would provide them with the outcomes they particularly valued.

Figure 6.6 shows how value orientations have affected the choices participants made about the sector they worked in. As the Figure shows, participants with a strong money or prestige

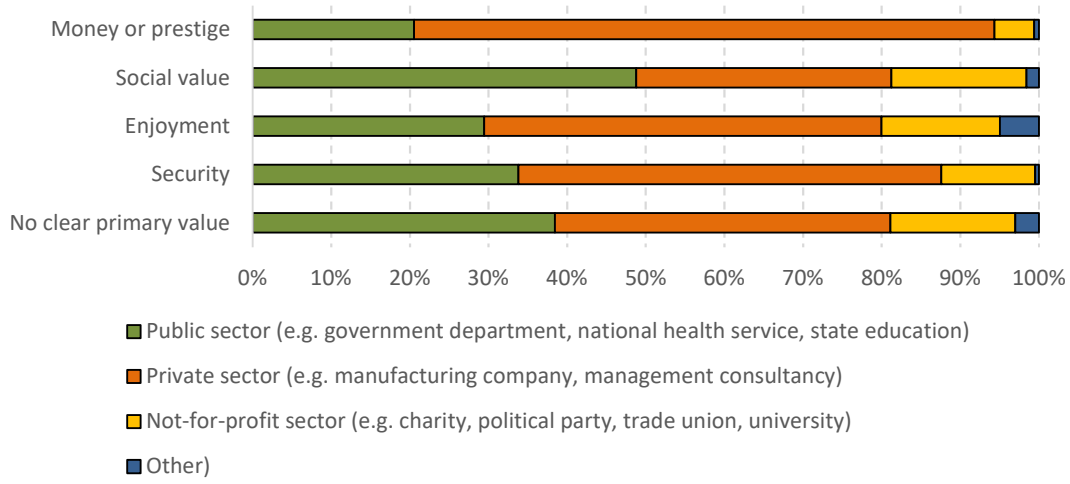
orientation were significantly more likely than the other groups to work in the private sector. Almost three quarters (74 per cent) of those with this orientation were working in the private sector, compared with under a third (33 per cent) of those with a strong social value orientation. Almost half (49 per cent) of the participants with a strong social value orientation worked in the public sector.

> *"So, I'm always toying with the idea of taking the skills that I have and moving over into the private sector. I have friends who do and they work for investment banks and things. Yet I just know it's not where my heart lies. It's not where my values fit. And I know there will be things I need to do to accept and compromise on in order to work in an organisation like an investment bank"*
> [Deputy Manager, studied Social Studies at a High tariff HEI. Female, from an Intermediate background earning £33,000-£35,999]

> *"I really liked the not for profit model. That agreed very much with my ethics and my morals […] It was one of those things, that if a company really cares about its customers, but it's not for profit, it's going to care about its staff. You can't care for one but not the other. Yes, there was the case that the wages were lower, so again, if your wages are lower, then people must want to work for you for a lower wage. There must be a reason. So, I thought, I'm going to go and find out what that reason is"*
> [Project Co-ordinator in the Electricity, gas and water supply sector. Studied Physical Sciences at a High tariff HEI. Female, from a Routine and Manual background, earning £33,000-£35,999]

Perhaps surprisingly, participants who strongly valued job security were more likely than average to work in the private sector and less likely than average to work in the public sector.

Figure 6.6 Distribution of participants with different value orientations by sector

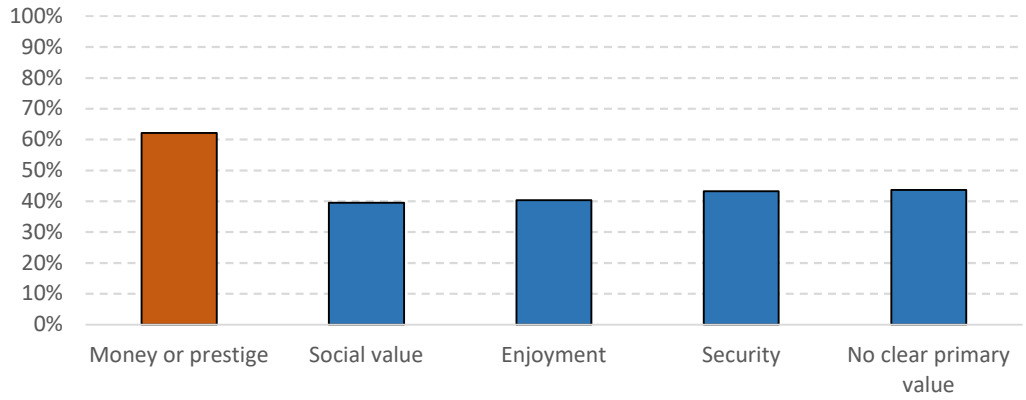


Source: Futuretrack Stage 5 survey, all participants in employment (n=5518)

As well as affecting the type of work different graduates did, there is evidence that value orientations are linked to the characteristics participants emphasised when considering whether to take a job. As has been noted, not all participants sought simply to maximise their pay to achieve the highest possible return on their investment in HE. The following figures show the importance of different job characteristics to participants with different value orientations when they were considering whether to accept their current job. In all cases, participants were more likely to have placed an emphasis on finding work that accorded with their values.

Figure 6.7 shows that participants with a high money or prestige value orientation were more likely than the other groups to say that one of the reasons they accepted their current job was because of the attractive pay level. It is important to note that what constitutes an 'attractive' pay level will vary from person to person and for some, an attractive pay level may not, by the average standards of the cohort, be particularly high.

Figure 6.7 Proportion of participants who took their current job because the pay level was attractive by value orientation

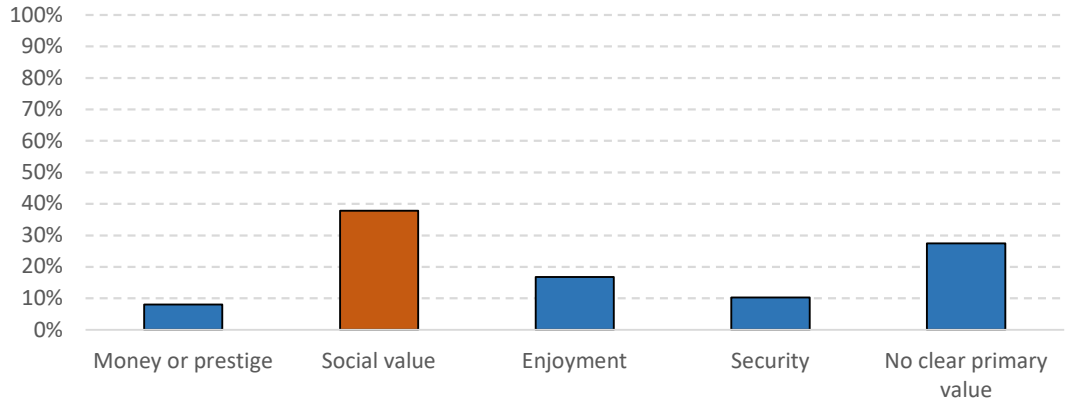


Source: Futuretrack Stage 5 survey, all full and part time employees (n=4,568)

The proportion of participants with a high money or prestige value orientation who said that one of the reasons they took their current job was the attractive pay level was 17 percentage points higher than for the cohort (62 per cent compared with 45 per cent) and 22 percentage points higher than the proportion of those with a high social value orientation or a high enjoyment orientation (both 40 per cent).

As Figure 6.8 shows, a similar pattern can be seen amongst those who had a strong social value orientation. Participants who put a strong emphasis on the social value of their work or the ethics of their employer were more likely than other participants (38 per cent, compared to an average of 24 percent) to say that they took their current job because it enabled them to do socially useful work.

Figure 6.8 Proportion of participants who took their current job because it enabled them to do socially useful work by value orientation



Source: Futuretrack Stage 5 survey, all full and part time employees (n=4,568)

These two figures taken together begin to demonstrate one of the trade-offs made by those with a social value orientation that will be discussed further later in this chapter. Although they

sought some level of adequate financial return, they were amongst the most likely to be willing to sacrifice high levels of extrinsic reward for jobs that met their intrinsic needs.

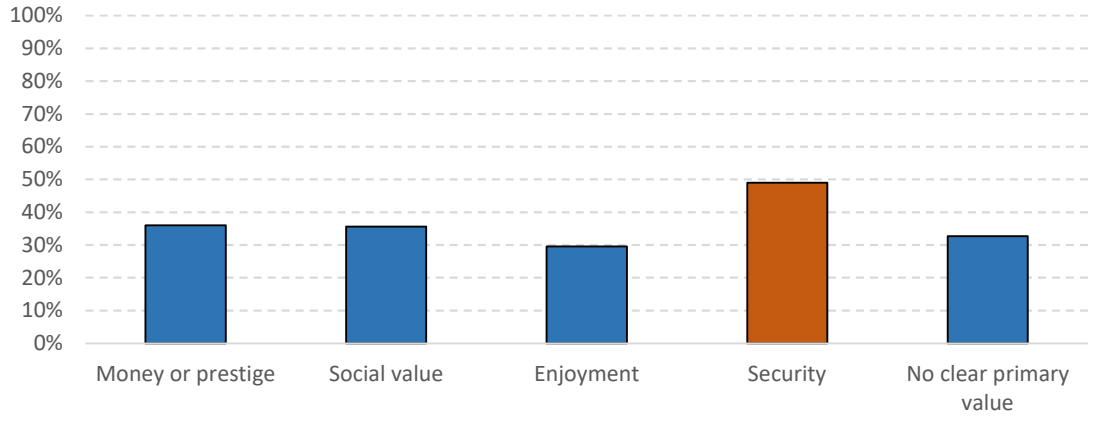
> *"When I was an undergraduate, there was loads of stuff around careers in investment banking. And I did take a look at that and talked to friends who had done internships or had gone into it, just to understand it better and think about whether this was something that I would want to do. But fundamentally that kind of absence of social benefit really pushed me in the direction I've gone in"*
> [Economic Advisor working in Public Services. Studied Social Studies at a Highest tariff HEI. Female, from a Managerial and Professional background, earning £45,000-£49,999]

However, the proportion of this group who took their job because it enabled them to do socially useful work was relatively low, even for this group. This may suggest that even this group find the trade-offs involved in taking work with a high social value too great or that they were able to meet their need to contribute to society through other mechanisms, such as volunteering outside work.

It is also notable that those with a strong social value orientation were more likely than average to say that they had taken their job because it suited them in the short-term (21 per cent compared to 15 per cent for the cohort as a whole), suggesting that they were more likely to view their job as a temporary one while they sought other, more personally rewarding, work. The participants with a strong money or prestige value orientation provide a contrast to this group: just eight per cent of this group said that being able to do socially useful work was a factor in their decision to take their current job.

Like the participants with a strong social value orientation, the participants with a strong security value were significantly more likely than other groups to have taken their current job because it offered conditions that accorded with their primary value. As can be seen in Figure 6.9, almost half of this group (49 per cent) said that one of the reasons they took their current job was because it offered job security. In contrast, only 30 per cent of those whose primary value was enjoyment said that they had taken their current job for this reason and across all participants, just a third said that they had taken their job because it offered job security. It must be remembered that some participants will simply have been unable to find a job that offered them security, regardless of how much value they placed on it.

Figure 6.9 Proportion of participants who took their current job because it offered job security by value orientation



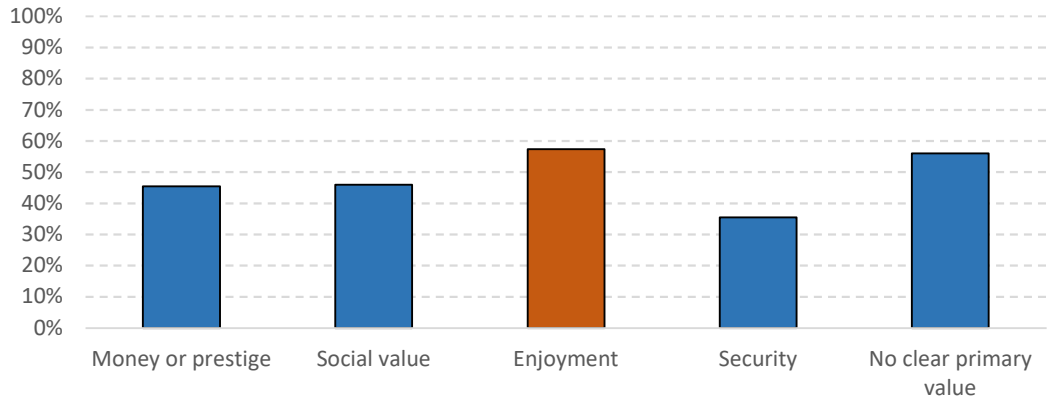
Source: Futuretrack Stage 5 survey, all full and part time employees (n=4,568)

The trade-offs made by those who strongly valued job security is evident in their other responses to the question about why they took their current job. As Figure 6.10 shows, just

35 per cent of this group said that they had taken their current job because it was exactly the type of work they wanted, compared to a figure of 54 per cent across the whole cohort. Similarly, the proportion saying they took their job because it offered interesting work was ten percentage points lower than they average (42 per cent compared with 52 per cent).

Finally, turning to the group with a strong enjoyment value orientation, believing the work would be enjoyable was not a reason for taking their job that was presented to participants in the survey. The closest matching characteristic is whether participants took their job because it was exactly the type of work they wanted. As Figure 6.10 shows, those with a strong enjoyment orientation were more likely than the other groups with strong value orientations to say that they took their job because it was exactly the type of work they wanted, but they were not significantly more likely than the cohort as a whole to say this.

Figure 6.10 Proportion of participants who took their current job because it was exactly the type of work they wanted by value orientation



Source: Futuretrack Stage 5 survey, all full and part time employees (n=4,568)

This group were also more likely than the cohort to say that they took their current job because it offered interesting work (57 per cent compared with 52 per cent of the cohort as a whole).

6.5 The relationship between values and job satisfaction

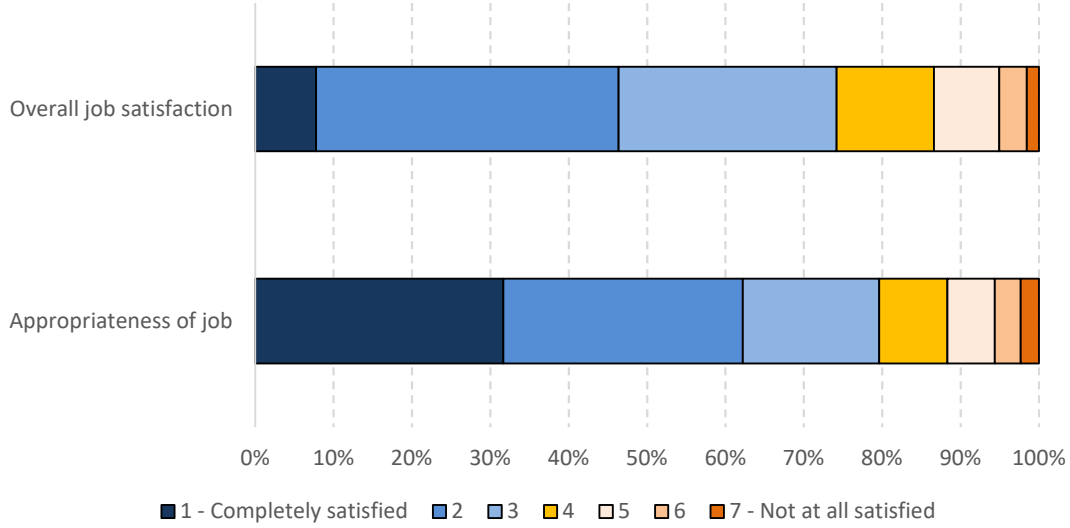
The previous section examined the ways in which personal values impact upon decisions participants made about the jobs they took. This section looks at the impact having (or not having) a job that meets an individual's needs and values has on their job satisfaction. This relationship is not as straightforward as it might appear.

There are questions about the impact of sacrifices participants make, particularly in the case of those with a strong value orientation and about the underlying components of job satisfaction. Mora *et al.* (2007) found that graduates that placed a high value on family life, social prestige and personal development tended to be happier in their jobs, but they also found that job satisfaction increased with salary levels. Research by Lee *et al.* (2016) suggests that graduates in the for-profit sector saw a greater increase in job satisfaction as their salary rose compared to those in the public and not-for-profit sectors. This is to be expected based on the findings from the previous section that showed that participants with a strong money or prestige orientation were significantly more likely to be working in the private sector.

This section looks at job satisfaction amongst the Futuretrack cohort, before examining the relationships between intrinsic and extrinsic values and motivations and job satisfaction.

Figure 6.11 shows how satisfied participants were with their current job. As the Figure shows, overall, three quarters (74 per cent) of participants who were employees were broadly satisfied with their job (rated it one to three on a seven point scale). The proportion who said that they were completely satisfied was only seven per cent, although it became clear in the qualitative interviews that for many this was simply because a job could always be better, whether in terms of pay, hours, or other features. This is reflected in the higher overall opinion participants had of the appropriateness of their job, with 80 per cent considering it at least somewhat appropriate and almost a third (32 per cent) considering it completely appropriate. Overall, 13 per cent were somewhat dissatisfied with their current job and 12 per cent were at least somewhat dissatisfied with their job's appropriateness for someone with their qualifications and experience.

Figure 6.11 Job satisfaction and job appropriateness



Source: Futuretrack Stage 5 survey, all full and part time employees (n=4568)

When looking at the relationship between personal characteristics and job satisfaction, there are few significant differences. BAME graduates were somewhat more likely to say that they were to some extent dissatisfied with their job and black graduates were also less likely to say that they were to some extent satisfied, but the numbers in these groups are too low to draw firm conclusions. Graduates of lower tariff HEIs were also somewhat less likely than other groups to be at least somewhat satisfied with their job (68 per cent compared with an average of 74 per cent) and 18 per cent of this group were at least somewhat dissatisfied, five percentage points higher than the employee cohort.

Similar patterns are seen when looking at the extent to which graduates viewed their job as appropriate, with BAME groups and graduates from lower tariff HEIs again demonstrating lower levels of satisfaction, although graduates from medium tariff HEIs were six percentage points less likely than average to say that their job was appropriate for someone with their qualifications and experience.

When considering the subject of graduates' degrees, those with degrees in Mass Communications and documentation and Creative Art and design subjects were 13 and seven percentage points less likely than average to be satisfied with their job. This gap is wider when considering how appropriate graduates considered their job. The proportion of graduate employees with degrees in Mass Communications and documentation subjects who considered their job appropriate was 24 percentage points lower than average at just 56 per cent and 30 per cent considered it somewhat inappropriate. Graduates from Creative Arts and

design subjects were nine per cent less likely than average to say that their job was somewhat appropriate and 19 per cent considered it somewhat inappropriate. Conversely, Medicine and Dentistry graduates and Architecture, Building and Planning graduates, both groups with a strong link between their qualifications and jobs were the most likely to be satisfied with their jobs and to consider their jobs appropriate.

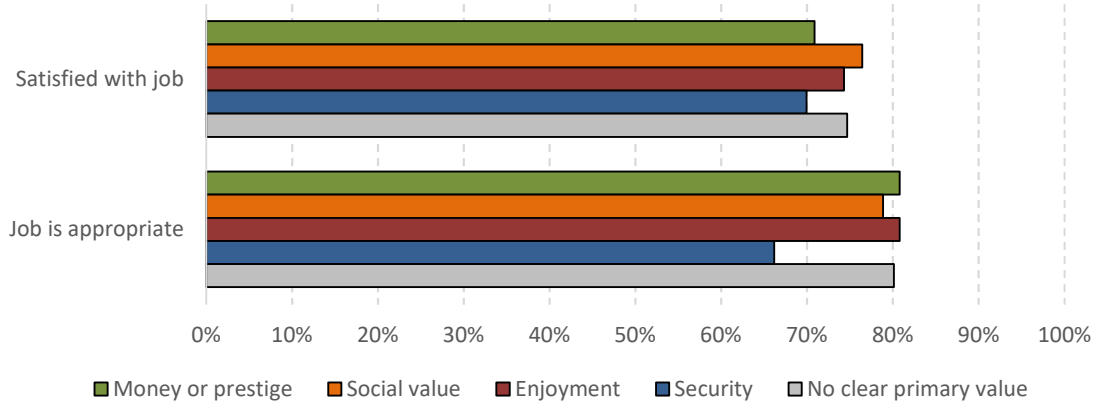
As Figure 3.15 in Chapter 3 showed, the respondents indicated relatively high levels satisfaction with their current job overall and various aspects of it: the opportunity to use their initiative, job security, the work itself, the number of hours worked, their promotion or career development prospects and total pay, in that order although significant proportions were not happy with last three of these. Overall, there was a strong match between the scores participants gave on the seven-point job satisfaction scale and the score they gave the individual components of job satisfaction. For example, participants who scored their satisfaction with their opportunities for career development and promotion as a 2 on the seven-point scale were also more likely to place their overall job satisfaction at a 2 rather than any other number.

However, there were some anomalies. Negative views about pay had a stronger impact on job satisfaction, while satisfaction and dissatisfaction with working hours had a more mixed effect, which is likely to reflect the different value participants put on working hours and work-life balance depending on their personal circumstances.

This highlights the role of personal circumstances and values in graduates' assessments of job satisfaction. Research by Støren and Arnesen (2011) on winners (who achieved what they wanted and were satisfied with their jobs) and losers (who did not achieve what they wanted and were dissatisfied) in the graduate labour market found that winners were more likely to want to achieve things like autonomy and learning, while the losers were more likely to be those who sought higher earnings, good career prospects and social status.

Figure 6.12 shows the proportion of each value orientation group that were at least somewhat satisfied with their job and its appropriateness.

Figure 6.12 Job satisfaction and job appropriateness by value orientation



Source: Futuretrack Stage 5 survey, all full and part time employees (n=4,568)

As the Figure shows, the two groups with stronger extrinsic or objectively measured value orientations (those with a strong money or prestige value orientation and those with a strong security orientation) were somewhat less likely than average to say they were at least somewhat satisfied with their current job (71 per cent and 70 per cent respectively, compared to an average of 74 per cent, although the small base sizes must be considered here). This

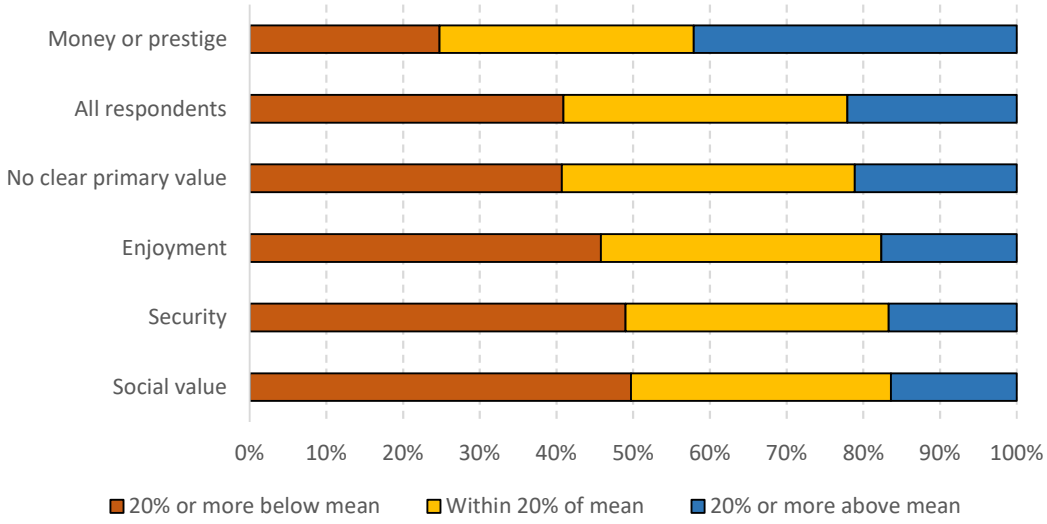
suggests to a certain extent that participants who strongly value objective job features are less satisfied with their current job than those who value more subjective features. However, when considering the appropriateness of participants jobs, those who strongly valued job security were much less likely than average to consider their job appropriate with only two thirds doing so, compared to an average of 80 per cent.

This repeats the pattern illustrated in previous sections of participants who strongly valued job security making higher levels of compromise in their search for secure work. Across all components of job satisfaction, except for hours worked and job security, this group was the least satisfied. However, 78 per cent were at least somewhat satisfied with their job security compared to an average of 75 per cent.

Taking a similar approach to examine whether those with a strong value orientation achieved their objectives shows a mixed picture. Participants with a strong enjoyment orientation showed little variation from the average when considering their satisfaction with the actual work they did (the closest variable to enjoying their job).

Participants with a strong money or prestige orientation present an interesting case. Overall, they are a group that has valued money or prestige, sought jobs that provide these things and objectively appear to have achieved them. Their earnings as a group are quite considerably higher than average (see Figure 6.13) and they appear to be more likely to work in more prestigious jobs (see Table 6.2), suggesting that objectively they have achieved what they wanted. However, they are subjectively not particularly more satisfied than average with these achievements. Two thirds (66 per cent) of participants with a strong money or prestige orientation said that they were at least somewhat satisfied with their total pay, compared to an average of 61 per cent and 63 per cent who said that they were somewhat satisfied with their opportunities for promotion or career development, again compared to an average of 61 per cent. They also, as has been noted, show lower levels of overall job satisfaction despite having objectively achieved their goals relative to the graduate cohort.

Figure 6.13 Earnings by value orientation



Source: Futuretrack Stage 5 survey, all full and part time employees (n=4568) adjusted by gender

6.6 The non-economic benefits of higher education

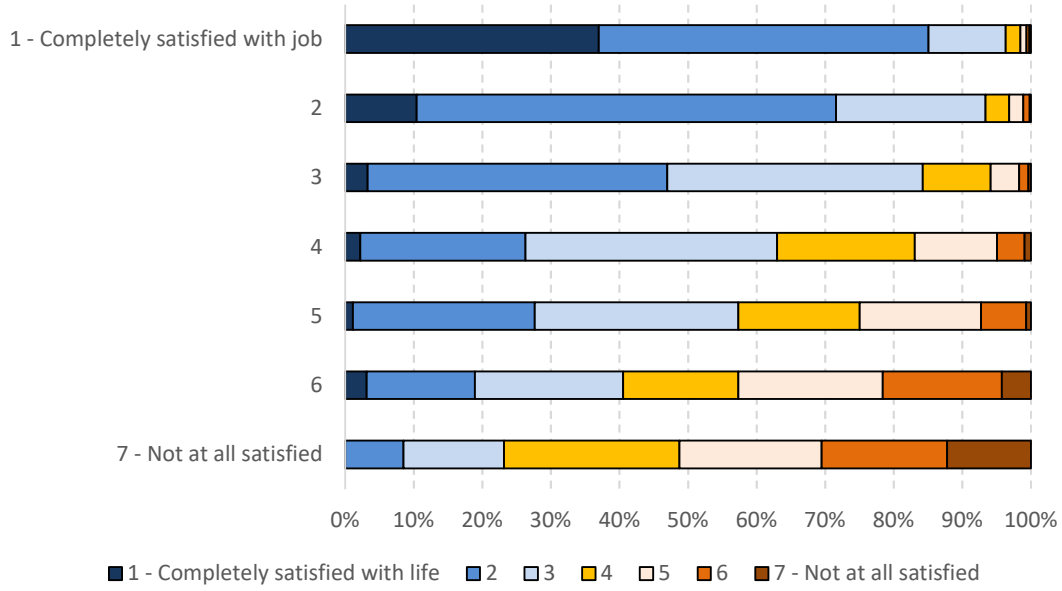
The previous section looked at the extent to which having a job that satisfied an individual's personal values resulted in higher levels of job satisfaction and highlighted the differences between objective and subjective evaluations of satisfaction and success. This section looks

at the relationship between motivations, personal wellbeing, and the impact of graduates on wider society.

The relationship between education level and personal wellbeing is somewhat contested. Easterbrook *et al*.'s 2016 analysis of the British Household Panel Survey (BHPS) and the International Social Survey Programme (ISSP) suggested that while happiness and wellbeing tended to increase with education level there was no evidence of causality.

Figure 6.14 shows the relationship between job satisfaction and wellbeing (as measured by overall satisfaction with life). As can be seen, participants who were more satisfied with their job were also more likely to be satisfied with their lives overall. As the previous section noted, the reflection of personal values and motivations, particularly when these motivations concern subjective values and measures of success, in an individual's job has an impact on their overall job satisfaction. The relationship between job satisfaction and satisfaction with life suggests that satisfying personal values not only has a direct effect on happiness and wellbeing, but also an indirect effect achieved through happiness in work.

Figure 6.14 Satisfaction with life by job satisfaction



Source: Futuretrack Stage 5 survey, all participants in employment (n=5518)

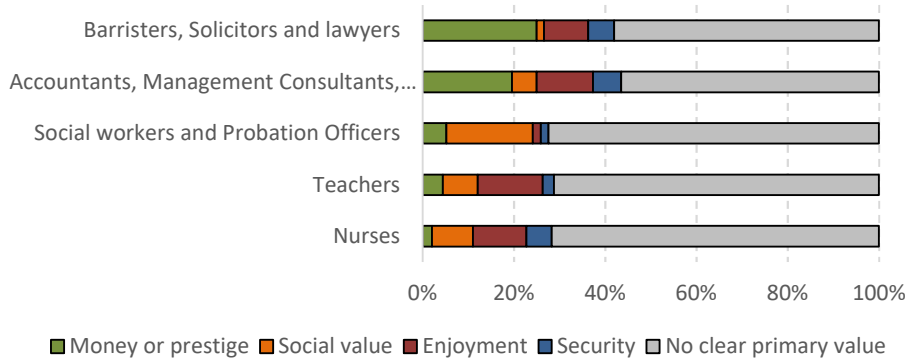
Overall, 82 per cent of participants said that they were satisfied with their life to at least some extent (selecting options 1 to 3 on a 7-point scale). This is slightly higher than the proportion of participants who said that they were satisfied with their job (74 per cent). When looking at the influence of personal characteristics on satisfaction with life, a similar pattern emerges to that seen when looking at job satisfaction. Participants from BAME groups were less likely to be at least somewhat satisfied with their lives, and this figure was particularly low for the small group of black participants (55 per cent). Similarly graduates of lower tariff HEIs were less likely to say that they were at least somewhat satisfied with their lives (75 per cent). Graduates of Mass Communication and documentation subjects were again less likely to say that they were satisfied, with 71 per cent doing so, and Medicine and dentistry graduates were the most likely to be satisfied with their lives (93 per cent). The relationship between values and satisfaction with life is less clear. Except for the participants who strongly valued security, levels of life satisfaction are consistent across all groups. The participants who strongly valued security had somewhat lower levels of life satisfaction, with 75 per cent saying that they were

somewhat satisfied. A more important consideration appears to be whether participants had achievements that matched their motivations rather than what their actual motivations were.

While individual personal happiness has an aggregate benefit in producing a happier society, the benefits of HE extend beyond the individual to society as a whole. While the Futuretrack survey largely focusses on individual benefits, the types of work graduates do can be seen to have wider benefits that are not accounted for in traditional measures of graduate outcomes. This lack of focus on wider benefits can result in some jobs being regarded as lower value because they are lower paid, despite delivering benefits to both individuals and society. This is particularly important when considering the impact values and finding work that accords with these values has on job and life satisfaction. It means, for example, that the broad happiness enjoyed by those who place a high emphasis on achieving social value and little to no emphasis on achieving high financial returns becomes an irrelevant or, at best, secondary consideration in assessing the value of HE. Furthermore, because the sorting effect of personal values frequently leads these participants into lower paid work in the public sector, they can be seen as losers in the graduate labour market, despite making the contribution to society that they desired and achieving everything that they wanted from HE.

Figure 6.15 provides an indicative picture of how personal values lead participants into jobs with greater or lesser financial and social value. It is indicative because the numbers involved are low. In the qualitative research, several jobs were mentioned by participants as being high in social value but low in pay (social workers and associated professions, teachers, and nurses[24]), while others were regarded as delivering lower levels of social value while also being highly paid (lawyers and associated professions and management consultants and associated professions[25]).

Figure 6.15 Selected jobs by value orientation



As Figure 6.15 shows, those who have a strong money or prestige value orientation make up a larger proportion of those working as Barristers, Solicitors and lawyers and those working as Accountants, Management Consultants and Actuaries, economists and statisticians. The proportions of workers in these jobs who earn at least 20 per cent more than the Futuretrack average are 67 per cent and 52 per cent respectively. Put simply, people who strongly value money and prestige seek jobs that offer higher levels of money and prestige as this enables them to achieve what they want. Conversely, participants who have a strong social value orientation are more likely to become Social workers and Probation Officers, just seven percent of whom earn at least 20 per cent more than the Futuretrack average (and 22 per cent

[24] Social workers and probation officers identified as SOC groups 2461 and 2462. Teachers 2313, 2314, 2315, 2316 and 2321 (Head Teachers). Nurses 2231, 2232, 2233, 2245, 2235, 2236, 2237.

[25] SOC groups 2411 (Barristers) and 2412 (Solicitors and lawyers). SOC groups 2421, 2422, 2423 (Accountants), 2431 (Management consultants), 2433 (Actuaries, economists and statisticians)

earn at least 20 per cent less than the Futuretrack average. Yet despite the disparity in their pay levels, this group has also sought employment that enables them to achieve what they value. Nurses as a group are relatively low paid, with 54 per cent earning at least 20 per cent less than the Futuretrack average but, as Figure 6.15 demonstrates, they are unlikely to be strongly motivated by high financial reward or promotion opportunities, so while many would like to earn more money, the fact that they have achieved what they wanted from participation in HE, means that they are, on their own terms, winners.

> *"I see lots of people do go into jobs that they don't really enjoy. It's all about the grind and they've got to make the money and buy their own house as quickly as possible. Getting a Mercedes, this and that. I'm not bothered. I just bought a car, but it's 10 years old and it works so that's fine. If there was a choice between buying that car and getting a job which I didn't like, but paid £10,000 a year more and I could afford a lease on a BMW... I would like one day. But if that was the choice, between a job I didn't like to have the better car and a fancier tv or whatever, not interested. I'm fine with what I've got, and I enjoy my work"*
> [Bus Driver, studied Social Studies at a Highest tariff HEI. Male, from a Routine and Manual background, earning £18,000-£20,999]

6.7 Summary

Chapter 4 demonstrated how HE participation had a differential impact on graduates' earnings and the factors associated with this different impact. This chapter has argued that while there are good reasons for considering the financial return individuals make on their investment in HE, there are other benefits of HE that are often neglected. Key amongst these benefits is the extent to which HE participation enables individuals to achieve what they value in employment and in life. In some cases, what they value will indeed be high financial reward, and these people may seek the highest paying job they can. However, for the majority of Futuretrack participants, other personal values came into play when they were considering what jobs they would take and how satisfied they were with their jobs and their HE experience. Around a quarter of participants had a strong non-financial value focus in which measures of pay and progression played only a minor role.

Participants with a particularly strong value orientation appear to have been more likely to select degree subjects that could lead to high financial returns, and this type of selection is also evident when looking at the type of jobs graduates went into.

Graduates who strongly valued money or prestige were shown to seek jobs that met these requirements and, on the whole, they achieve these ambitions, being more likely to be in higher paid, higher status jobs. However, despite these objective achievements, this did not generate very high levels of subjective satisfaction with their pay and progression; they wanted more. In this respect, they can be considered 'winners' from HE because they have achieved objective success as measured by income and status, but they are less clearly winners when measuring the value of HE by whether it enabled them to achieve their personal objectives.

Graduates who put a strong emphasis on social values present the opposite picture. As a group, their salaries are relatively low and certainly lower on average than those who strongly valued money or prestige and in this respect, they would not be considered winners based on traditional extrinsic and objective measures of success such as earnings. However, they achieved employment outcomes that generated social value and in doing this, achieved success on their own terms.

Graduates who strongly valued job security found themselves in a much more difficult position graduating as they did into a changing labour market in the grip of a recession. This group demonstrates that the achievement of personal needs is not always enough if it comes with a high level of sacrifice. In seeking and finding jobs that offered security above anything else,

this group had needed to sacrifice other factors to such an extent that they were less satisfied with their employment outcomes overall. It must be noted that this group did not only seek job security, but also security and stability in their personal lives, which had limited the extent to which they were able to seek employment that offered both job security and other rewards.

Measuring subjective motivations and happiness with graduate outcomes is considerably more difficult than simply asking people what they earn. However, in assessing the benefit of HE, and providing information on individual courses and institutions to prospective students, policy makers and society, these are important things to consider. Ultimately, getting what you want out of HE should be considered of equal, if not of more value, than getting what other people think you should want.

7 Postgraduate study

Participation in postgraduate education in the UK has expanded over the last few decades, with postgraduate numbers quadrupling in the 1990s and continuing to grow in the 2000s (BIS, 2014). The postgraduate initial participation rate grew from 8.7 per cent in 2006/07 to 9.7 per cent in 2009/10 before falling to 8.3 per cent in 2012/13. Since 2013/14 the rate has been growing again, reaching 11.0 per cent in 2017/18 (Department for Education, 2020).

Much of the research on the impact and value of postgraduate education in the UK focuses on postgraduate earnings and the 'postgraduate premium'. This chapter aims to contribute to the existing body of research by exploring the wider long-term impact of further study and postgraduate qualifications, primarily drawing on the Futuretrack Stage 5 survey data related to respondents' perceptions of their postgraduate experience and careers, personal values and attitudes. The qualitative interview data also provides insights into respondents' decision making and their perceptions of the impact that postgraduate study and qualifications have had on their careers.

The chapter starts with a summary of the most relevant studies on postgraduate qualifications and further study in the UK. In the second section, the profile of graduates who had undertaken further study is described and compared to the profile of the group who had not undertaken further study. We also compare the extent to which men and women and groups of participants from different socio-economic backgrounds had completed further and/or postgraduate qualifications. In section three, we explore how Futuretrack graduates described and made sense of their decisions about engaging in postgraduate study, drawing on data from qualitative interviews. Section four presents an analysis of the relationship between further qualifications and the careers of Futuretrack graduates at Stage 5 through a comparison of four groups of graduates according to the match between the qualifications they have and the requirements of their jobs. Finally, we examine the profile of Futuretrack graduates who were currently studying or planning further study and explore how this relates to their career motivations.

7.1 Summary of existing research on the benefits of postgraduate education

There is no single definition of the term 'postgraduate' although it is often used to describe further study undertaken by those who already have an undergraduate degree. It is frequently used to refer to master's or doctoral studies, however, it also includes certificates and diplomas. Postgraduate may refer to a distinction between courses which are postgraduate in level: that is, they are more advanced than undergraduate courses with similar subject matter, and courses which are postgraduate only in the sense that they are studied by people who already have degrees. Postgraduate education is also the entry route into many professional areas of employment, defined within Major Groups 1 – 3 of the Standard Occupational Classification (Managers, directors and senior officials; professional occupations; and associate professional and technical occupations).

A study by House (2020) found that the number of postgraduate starters continued to grow between 2008/09 and 2017/18 and there was a peak in postgraduate starts in 2009/10 and 2010/11, immediately after the financial and economic crisis (House, 2020, Figure 3.1. p 64), the time when Futuretrack participants completed their first degrees. Discussions on the benefits of postgraduate education focus on the higher salary that postgraduates in general earn (the 'postgraduate premium'), the higher level 'employability' of postgraduates compared to those with an undergraduate degree, and postgraduates' better access to the professions.

Chapter 4 of this report, which focuses on the earnings of Futuretrack graduates, indicated that postgraduate qualifications do not always have a positive effect on earnings, rather, a

Postgraduate Teaching Certificate in Education was associated with an 8 per cent reduction in earnings, while a PhD associates with a 7 per cent reduction, though there is evidence that PhD graduates working in the private sector may command a postgraduate premium. Analysing data collected by the Department for Education (DfE, 2019), House (2020) found that those with postgraduate degrees in the UK were more likely to be in employment than those with undergraduate degrees in most of the period covered by her study (2008/09 to 2017/18). However, this employability advantage is declining and by 2017 and 2018 it was small or non-existent.

Postgraduate qualifications are seen as a route to the best professional occupations: many careers, such as those in Medicine and Law, require postgraduate qualifications. The value of these specialist qualifications is not questioned; however, the picture is less clear for non-specialist qualifications (House, 2020). Analysing data from the Destination of Leavers from Higher Education (DLHE) data from 2012/13 House (2020) found that six months after graduating, a greater proportion of postgraduates worked in professional-level jobs compared to those with undergraduate degrees. However, by 2016/17, three years later, the gap in professional level employment had narrowed, suggesting that a growing proportion of those with undergraduate degrees had also entered professional roles.

A study by Conlon and Patrignani (2011) found differences between master's and doctoral graduates in employment outcomes, however, a study by Wakeling and Laurison (2017), which used data from the Labour Force Survey, is unable to distinguish between these two groups of postgraduates. The Futuretrack study allows us to focus on longer term employment outcomes and to distinguish between labour market outcomes for those with different types of postgraduate qualifications. It also draws on rich data from the qualitative interviews conducted as part of this stage of the study.

At the time of the Futuretrack Stage 4 survey, 14 per cent of UK respondents had completed a postgraduate course and a further 13 per cent are currently postgraduate students (Purcell *et al* 2013:6). This constituted a significant increase in postgraduate participation in comparison to earlier cohorts *(ibid*: 30) and a further substantial minority of respondents reported frustration that their aspirations to go on to postgraduate work had been curtailed by debt and lack of financial support, as discussed in Chapter 5. Having graduated into the tight labour market at the end of the first decade of the 21st century, those who had completed postgraduate qualifications had spent less time in the labour market than those who had not gone on to further study and were more likely to be unemployed, but those in employment were considerably are more likely to be in a job done solely or mainly by graduates and to be more confident about their longer-term career prospects (*ibid*: 8).

The following section focusses on all the Stage 5 Futuretrack participants who have completed further study since graduation.

7.2 Futuretrack graduates who have undertaken further study

Just under half of all Stage 5 participants (49 per cent, N=2,925) had gained a further formal qualification following their undergraduate studies. Most of the group are women (65 per cent). Almost two thirds (64 per cent) were from managerial-professional socioeconomic background, 18 per cent from Intermediate occupations, and 18 per cent from routine-manual backgrounds. Almost half (46 per cent) of the group had graduated from a highest tariff university, 27 per cent from a high tariff university, 18 per cent from a medium and 6 per cent from a lower tariff university. Only 3 per cent of those who had a further qualification completed their undergraduate degree at a general or specialist Higher Education (HE) college.

The group of Futuretrack graduates who had not completed further study leading to formal qualifications since graduation can be characterised as follows: The proportion of women is slightly lower in this group: 59 per cent women and 41 per cent men. A slightly higher proportion of graduates in this group came from a routine-manual background (21 per cent) and a slightly lower proportion from managerial-professional background (61 per cent), while the proportion of those from Intermediate background is the same in both groups (18 per cent). Compared to those who had completed a further qualification, a smaller proportion (37 per cent) had graduated from highest tariff universities, and slightly higher proportions, 24 per cent and 8 per cent respectively had graduated from medium and lower tariff universities. The proportion of those who had graduated from high tariff universities in the two groups is identical, at 27 per cent. Finally, 4 per cent graduated from a general or specialist HE college, almost the same proportion as in the first group.

We also examined the differences between the two groups by age, ethnicity, and broad subject area of first degree, but did not find significant differences.

Looking at the types of further qualifications that Futuretrack graduates had completed since graduation, we found that 32 per cent had completed a taught master's degree and 16 per cent had completed a PhD or other research degree. Others held vocational or professional qualifications: for example, a postgraduate teaching qualification (10 per cent), professional qualifications or diploma, such as accountancy qualifications or a diploma in primary health care management (21 per cent) or another postgraduate diploma, for example, 9 per cent had a diploma in coaching and mentoring. Finally, 5 per cent of those who completed a further qualification had studied for a second undergraduate degree or a foundation degree, and 7 per cent had completed an apprenticeship or other type of formal qualifications (e.g., teaching English as a foreign language or translation).

In the next phase of the analysis, we explored to what extent different groups of graduates by gender, socio-economic background and the institution of undergraduate study had completed postgraduate qualifications. We found that 45 per cent of male Futuretrack graduates had completed a further qualification since graduation, compared to 52 per cent of women. Looking at the types of further qualifications men and women had completed, we found that the proportions of men and women who had completed taught master's degrees, other vocational/professional qualifications and another undergraduate qualification were very similar. However, the proportion of women who had chosen initial teacher training as a postgraduate route was 12 per cent, compared to only 7 per cent of men and almost a quarter (23 per cent) of men who had completed a postgraduate qualification have a PhD degree, compared to only 12 per cent of women.

The socioeconomic background of graduates was also associated with their further study. Table 7.1 shows that, among these respondents, there were small differences in the level of participation in further study: half of those from managerial-professional and intermediate occupations backgrounds) and a slightly smaller proportion of those from routine-manual backgrounds had done further study that led to formal qualifications. The main differences were in the types of further study graduates from different occupational classes had pursued: as shown in Table 7.1, a third (34 per cent) of those from managerial-professional backgrounds had completed a taught master's degree, in contrast to 28 per cent of the two other groups. Of those from intermediate and routine/manual backgrounds, larger proportions (44 per cent and 40 per cent) had completed professional/vocational qualifications, compared with 34 per cent of those from managerial-professional backgrounds. In addition to these differences, similar proportions of graduates from the three socioeconomic categories had completed another undergraduate qualification or foundation degree, a postgraduate teaching qualification and a PhD or other research degree.

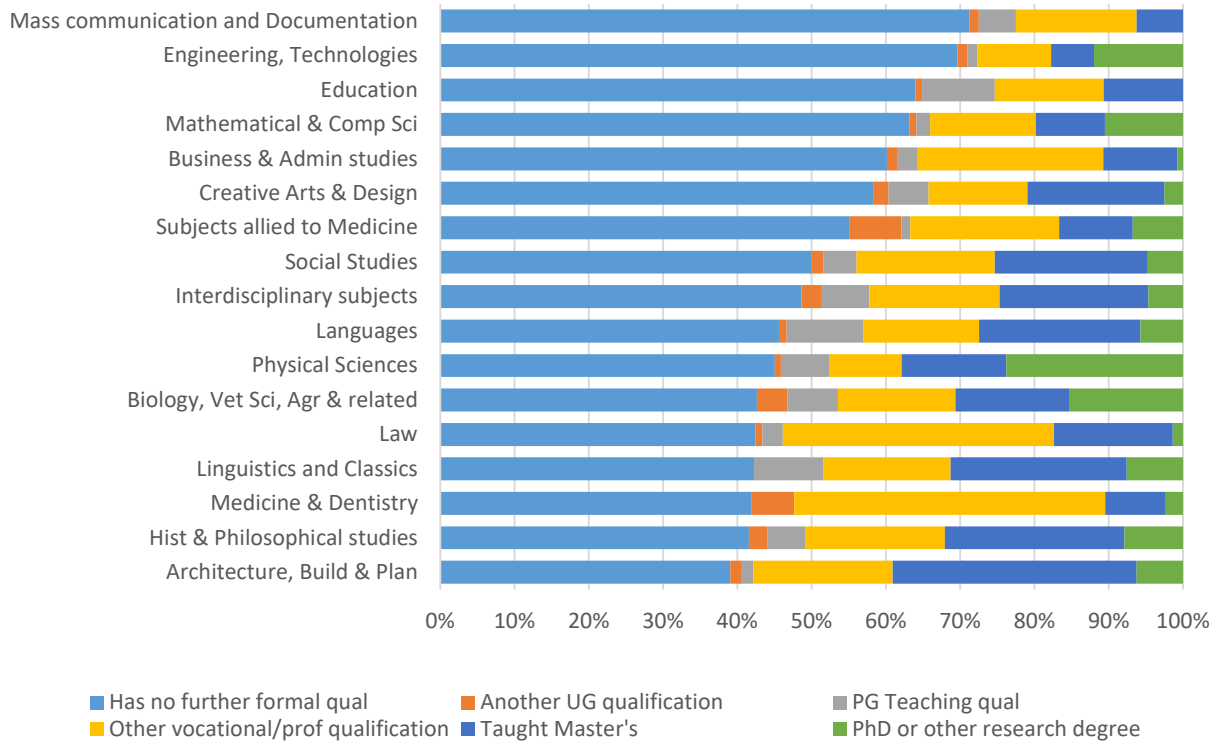
Table 7.1 The type of further qualifications completed by graduates by socio-economic background

	Broad socio-economic groups		
	Managerial-Professional (N=1,747)	Intermediate occupations (N=488)	Routine-Manual (N=507)
Another undergraduate qualification or foundation degree	5%	4%	5%
Postgraduate teaching qualification	9%	11%	11%
Other vocational/professional qualification	34%	44%	40%
Taught master's degree	34%	28%	28%
PhD or other research degree	18%	13%	16%
Total	100%	100%	100%

Source: Futuretrack Stage 5 survey, participants with further qualifications (n = 2,925)

There are also differences in propensity to undertake further study by subject of undergraduate study, as shown in Figure 7.1. Participants with a first degree in Mass communication and documentation were the least likely to obtain a further qualification, with 29 per cent completing a further qualification. At the other end of the scale are those with a first degree in Architecture, building and planning, with 61 per cent completing further studies.

Figure 7.1 Further qualifications by subject area



Source: Futuretrack Stage 5 survey, all participants (n = 6,040).

7.3 Motivation to engage in further study

We were interested in learning more about how Futuretrack graduates had decided to engage in further study and complete postgraduate qualifications. The following selected comments provide some insights into their motivation. Analysis of the interview data relating to the relevant questions revealed three main categories of motivation: professional development, strategic career development in the light of future plans, and a realisation that an undergraduate degree might not be enough to get the kind of job they aspired to, particularly in the light of the recession that they faced on graduation or subsequent failure to access satisfactory employment.

Those in the first category, as in the case that follows, tended to have very well-focussed career plans:

> *"The undergraduate course probably woefully ill-equips you to be a physio, to be honest.* […] *I was very fortunate to be in a very good post-graduate teaching hospital* […], *but I still knew there is so much that we still didn't know and so much that still needed to be questioned and so much more information to be a good physio, so that's why I went back and did the master's. I'd say that is when I truly felt like I was a good-quality physio in many respects, after the master's, because they really challenge everything that you're thinking, and they're challenging the research."*
> [Self-employed physiotherapist, other public services, female, studied subjects allied to medicine + MSc, highest tariff HEI, , from Managerial & Professional background, earning £24,000-£26,999]

Other respondents with clear plans and professional identities had also chosen a postgraduate course to further develop their knowledge and enhance their employment prospects, but also mentioned objectives related to explicit career ambitions. A Computer Science graduate had completed a master's degree in the USA to help him find a job there, where he could earn a higher salary than in the UK. As he explained:

"The greater network effect was from meeting peers outside of my programme, and professors. [This university] *helped a lot with recruiting* […]. *Most American employers don't recognise European universities in the same way, so* [this University], *being local to the* […] *area, was a great icebreaker."*

[Engineering Manager, Information and Communications Services, male, studied Computer Science, highest tariff HEI, from managerial-professional background, earning £120,000 or more]

Another interviewee described being in a similar position of having clear medium-to-longer-term aspirations. In autumn 2019 when she was interviewed, she was doing a course funded by her employer. She explained that although it was taking up a lot of time, she was highly motivated, was finding the course interesting and she hoped to use the information when she sets up her own business:

"I'm doing the course at the moment. My normal hours would be around half nine to six. But because the course I'm doing is two days a week, for four weeks in October, I just work to accommodate that."

[Interviewer: Do you have to make up for the time that you take off work for training?]

"Yes and no. It's just because the training that I'm doing is not really related specifically to my job. I see the time off more as holiday, because it's actually a young entrepreneurs' course. That's the reason why it's a little bit of an unusual situation."

[People Operations Co-ordinator, Entertainment, female, studied Languages+ DipHE, medium tariff HEI, from intermediate background, earning £40,000-£44,999]

Another participant felt that her undergraduate degree had not equipped her for employment. She was disappointed that the University where she had completed her undergraduate studies had not supported her in recognising her skills and aptitudes and developing her approach to job applications. After graduation she obtained a number of overseas internships and then returned to the UK to do a master's degree, believing that she required more marketable skills to develop her career in the way that she wished to. Discussing her choice of postgraduate study, she said:

"Having time out meant that I chose my next course carefully, and made a wise choice. I picked a course very carefully to equip myself for the job market."

[Evaluation Manager, Other Public Services, female, studied History + MSc in Research Methods, highest tariff HEI, from managerial and professional background, earning £50,000-£54,999]

Avoiding the effect of the 2008 financial and economic crisis was mentioned by a significant proportion of interviewees as a motivation to go on to postgraduate study, thus deferring labour market entry to improve their career opportunities and also wait until the labour market improved.

"I think also, yes, I did apply for jobs all over, so [I didn't] limit myself to the north east originally. It's just, I think there was a timing factor involved where I came out when […] the first recession had hit, from my undergrad. And that is why I decided to do a master's, and then things hadn't really recovered. So I think there is a reduction in jobs and that, going forward."

[Assistant Project Manager, Construction, female, studied Physical Sciences + MSc, highest tariff HEI, no information on socio-economic background, earning £27,000-£29,999]

Student debt accrued by participants had shaped their decisions about further study. While commercial career loans were available, there was very little public support available to graduates to undertake postgraduate study. Undergraduates could access loans designed to cover tuition fees and living costs, but some three-quarters of taught postgraduates and one-third of research students at the time were self-funding (Wakeling and Laurison, 2017). Already at Stage 3 of the Futuretrack study, survey participants were concerned about the

cost of further study, and a large group of them agreed with the statement *"I would like to do a postgraduate course, but I don't want to add to my debts"*.

Two thirds (66 per cent) of those with a further formal qualification said they had also done paid work while studying for their further qualifications, suggesting high commitment in the context of balancing full-time studies and employment. Several interviewees have told us of the stresses and exhaustion of working, studying and in some sectors, also needing to do unpaid internships at the same time:

> *"I started off my master's as a full-time course but then I had to switch to part-time because I couldn't afford to pay for everything. So I carried on doing my zero hours contract jobs which is mostly working front of house in theatres. Then yes, during my masters and also for a bit afterwards I worked unpaid doing unpaid internships in a couple of theatres to try and get some arts administration experience."*
> [Operations Manager (Railway), Transport services, female, studied Creative Arts + MA, highest tariff HEI, from intermediate background, earning £50,000-£54,999]

Another interviewee described a very different experience. She was employed as a social worker and the fees of her master's programme in Education were paid by her employer:

> *"It was interesting, it helped develop my career. I was able to get my qualification to be a practice educator."*
> [Interviewer: At the time you were already in work, weren't you?]
> *"Yes. I did it through work, my employer paid for it."*
> [Social worker, other public services, female, studied social studies, lower tariff HEI, from routine-manual background, earning £36,000-£39,999]

Having discussed the profile of Futuretrack postgraduates and showing examples of their decision making about further study, the next section shows how postgraduate study has shaped the careers of participants.

7.4 The relationship between postgraduate study and graduate careers

The survey data allow us to explore participants' plans related to further qualifications and career. In the first step of the analysis, we have identified four groups:

1. **Group One** includes those participants who have a further qualification and worked in a job that required such a qualification (N=1,404, 25 per cent of participants). We hypothesise that graduates in this group were mainly planners who had completed further qualifications in order to access specific occupations.

2. **Group Two** includes those participants who had a further qualification but worked in a job that does not require one (N= 1,235, 22 per cent of participants). They appear to have been 'overqualified' for their current jobs - our hypothesis is that they have not succeeded in entering the type of occupations they had hoped would be accessible to them with their further qualifications. There are other possibilities of course, for example, they may have completed a qualification for other than career-related reasons, they may have changed their career plans, or have 'downgraded' their jobs to be able to provide care in the family or in the light of other values. It is also possible, that these participants work in jobs where a postgraduate qualification was not a requirement for the job but had provided an advantage at the recruitment stage.

3. Participants in **Group Three** did not have a further qualification but work in a job that requires one (N=663, 12 per cent of participants). They seem 'underqualified'

for their current jobs. The analysis presented in the next section of this chapter focuses on the impact of further qualifications, therefore this group is not included in the analysis.

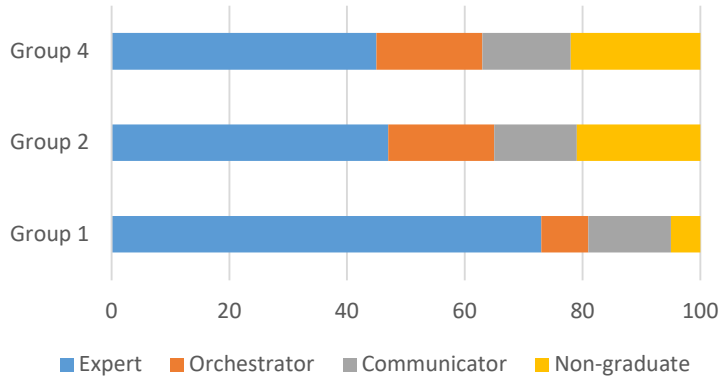
4. **Group Four** is the largest one (N=2,324, 41 per cent of participants) – these participants did not have a further qualification and they were working in jobs that did not require one. This group included graduates who had completed a further undergraduate or foundation degree since graduation (N=151).

The discussion that follows refers to Groups One, Two and Four.

When comparing the profiles of Groups One, Two and Four, no patterns of differences in gender, age, ethnicity or socioeconomic background emerged. However, comparing the types of higher education institutions where participants have completed their first degree, we found that 50 per cent of those in Group One had graduated from highest tariff universities, compared to 44 per cent in Group Two and 36 per cent in Group Four. The proportions of those graduating with first degrees from medium tariff universities were 16 per cent in Group One, 20 per cent in Group Two and 26 per cent in Group Four. These findings reinforce the finding in earlier chapters of this report which suggest that postgraduates with first degrees from highly selective universities had been more likely to have secured postgraduate-level jobs than those with undergraduate degree from other institutions.

Figure 7.2 shows the types of occupations graduates in the three groups held. Almost three quarters (73 per cent) of those in Group One worked in SOC(HE)2020 Expert occupations, compared to 47 per cent and 44 per cent in the other groups. These findings reinforce the argument presented in Chapter 3, that Expert jobs often required a postgraduate qualification. Postgraduate qualifications cover a wide range of areas of knowledge and skill, however, and having a further qualification does not simply 'channel' graduates into Expert occupations, but the remarkably similar distribution of the graduates in Groups Two and Four requires further exploration.

Figure 7.2 SOC(HE)2020 occupations held by participants by group of further qualification and job requirement (%)



Source: Futuretrack Stage 5 survey (n = 5,507)

Table 7.2 summarises and compares some of the key characteristics of the three groups. We found that just under half of the participants in Group One worked in the public sector compared to nearly a third of those in Group Two and around quarter of those in Group Four. A fifth of those in Groups One and Two worked in the Not-for-profit sector, compared to a tenth of those in Group Four. Those who had further qualifications, but for whom this was not a requirement in their current job, were concentrated in the private sector, and those without further qualifications are even more so.

Table 7.2 Key characteristics of the groups of further qualification and job requirement

	Group One (n = 1,404)	**Group Two** (n = 1,235)	**Group Four** (n = 2,324)
Employed in public sector	48%	32%	27%
Employed in not-for-profit sector	18%	20%	12%
Main industries	Education (42%) Other Public Services (30%)	Other Public Services (38%) Education (16%) Business Services (11%)	Other Public Services (32%) ICT (13%) Education (10%) Business Services (11%)
Job done only by graduates	68%	33%	29%
Employed on fixed-term contract	19%	8%	7%

Source: Futuretrack Stage 5 Survey, respondents with postgraduate degrees in 2019

This sectoral pattern is to a large extent explained by the fact that most of those in Group One worked in Education and Other Public Services (which includes the health service and national and local government). Participants in Group Two worked in a wider range of industries: some of them in Other Public Services, Education and in Business Services, but also in ICT and in Banking, Finance & Insurance. Those in Group Four were less concentrated in predominantly public industries.

Focusing on the jobs held by graduates in the three groups, we found that 68 per cent of those in Group One (postgraduates in jobs for which a postgraduate qualification had been required) worked in a job that was done only by graduates in their organisations. Of those in Group Two, only 33 per cent had jobs only done by graduates in their organisation, although a further 31 per cent of them worked in a job that was mainly done by graduates. Again, the pattern in Group Four was very similar to that in Group Two.

Another characteristic of jobs where those held by graduates in these three groups differed was the contractual basis of employment, whether fixed term or open ended (permanent), with the latter generally providing a higher level of job security and potentially better terms of employment. In Group One, a fifth (19 per cent) of participants were on fixed-term contracts, a significantly higher proportion than those of Group Two and Group Four (8 and 7 per cent respectively). This pattern cannot be explained by the fact that those in Group One entered the labour market more recently, having completed a postgraduate qualification, because those in Group Two had also completed postgraduate qualifications. The majority of those on fixed-term contracts were concentrated in education (not-for-profit and the public sector) and

in the other public services industry (public sector), echoing the overall findings for the sample discussed in Chapter 3.

A Futuretrack graduate who had given up her first career as a museum professional and started a new career path in the private sector explained that her decision was to a large extent motivated by the insecurity and low pay in the heritage industry:

> *"These museum sector jobs don't usually pay that well, usually they're temporary contracts, part-time work. Unless you manage to successfully get a full-time job, a lot of people do other jobs on the side to subsidise it, to keep things going.* […] *Which, again, it feels a bit like you've gone through this whole training programme and you're very confident, and you've done lots of work experience, had lots of internships, and you're still not getting the level of work that you would hope to by that point."*
> [Assistant Project Manager, Construction, female, studied Physical Sciences + MSc, highest tariff HEI, no information on socio-economic background, earning £27,000-£29,999]

Exploring how Futuretrack graduates perceived their jobs and careers, the analysis reveals that those in Group One were most likely to regard their jobs as being appropriate for them, given their qualifications and experience. On the scale of 1-7 where 1 was 'ideal' and 7 was 'completely inappropriate', 43 per cent rated their job as 'ideal' for them and another 35 rated it 2; so 'almost ideal'. A much smaller proportion of those in Group Two rated their jobs as ideal (23 per cent) or almost ideal (28 per cent). The findings for Group Four were again very similar to those for Group Two: 28 per cent rating their jobs as 'ideal' and 27 per cent as 'almost ideal'.

Comparing the importance of personal values of graduates across the three groups according to a series of similar scales, we found that 87 per cent in Group One rated their career progression as 1 or 2: very important to them. In Groups Two and Four the proportions are similar and somewhat smaller: 82 per cent and 80 per cent, respectively.

There was also a patterned difference in the clarity of their future career aspirations. In Group One, 60 per cent completely or mostly agreed with the statement "*I have a clear idea of the occupation I hope to have in 5 years' time."* The proportions agreeing with this statement were significantly lower in Groups Two (45 per cent) and Four (43 per cent). In addition, those in Group One were somewhat more optimistic about their career progression than graduates in Groups Two and Four. In Group One, 62 per cent completely or mostly agreed with the statement: *"I am optimistic about my long-term career prospects",* compared to 56 per cent in Group Two and 51 per cent in Group Four.

Looking at the third aspect of their perceptions of their career progression, 74 per cent of (post)graduates in Group One completely or mostly agree with the statement *"I have the skills employers are likely to be looking for when recruiting for the kind of jobs I want,"* compared to 65 per cent in Group Two – and 62 per cent of Group Four.

We also identified a pattern of difference in how important it was for graduates in the three groups to do socially useful work: 78 per cent in Group One and 71 per cent in Group Two rated this as very important or important, compared to Group Four where the comparable, but still high proportion was 62 per cent. We did not identify any patterns of difference and similarity in other aspects of job satisfaction and personal values related to work and careers.

The final section of this chapter is focused on participants who were currently studying for a further qualification or they were considering engaging in further study.

7.5 Futuretrack graduates who were currently studying

This final section of this chapter is focused on participants who were currently studying for a further qualification or were considering engaging in further study. At the Stage 5 survey, 6 per cent of respondents (N=371) were studying for a formal qualification, full time or part time. The profile of this group can be described as follows:

69 per cent of them were women; 67 per cent were from a managerial or professional background, 17 per cent from intermediate social backgrounds and 16 per cent from routine/ manual backgrounds. 41 per cent had graduated from highest tariff universities, 30 per cent from high tariff universities, 21 per cent from medium and 5 per cent from a lower tariff institutions. Almost half (47 per cent), were employed in the public sector, 27 per cent in the private sector and 22 per cent in the not-for-profit sector. The majority worked in Education (28 per cent) and in Other Public Services (35 per cent). However, some were employed in the private sector, in Banking, Finance & Insurance (7 per cent) or Business Services (7 per cent). A large proportion (59 per cent) had experienced unemployment, including 6 per cent who had been unemployed for over a year.

Over half (56 per cent) of the 371 respondents studying at Stage 5 had already completed a further qualification. Most members of this group had a taught master's degree or a professional/vocational qualification, but 8 per cent had a doctorate.

Looking at their current studies, almost a third (29 per cent) were working towards a taught master's degree, a quarter (24 per cent) towards a PhD, 21 per cent towards another vocational/professional qualification, and just under a tenth (9 per cent) were studying towards another undergraduate degree and 8 per cent towards a postgraduate diploma.

An interviewee employed in the Business Services sector was doing a master's degree in counselling and psychotherapy and she had plans to start a new career with this qualification:

> *"In November I'll graduate with my master's in counselling and psychotherapy. From there* […] *I'd like to continue my volunteering work to build up my hours to become accredited with the BACP* [British Association for Counselling and Psychotherapy] *but then also to take on clients or get a job."*
> [Legal Counsel, Business Services, female, studied Interdisciplinary Subjects + professional qualification, highest tariff HEI, managerial-professional, earning £24,000-£26,999]

Many of these graduates were paying their student fees themselves (44 per cent), although a minority had postgraduate awards or bursaries (21 per cent) or loans from a student loan company (15 per cent). In almost a third of cases, their employer had paid their fees (31 per cent), while 14 per cent paid their fees from their earnings (14 per cent). Only a very small group (1 per cent) had taken out a commercial career development loan.

Finally, some Futuretrack participants were planning to do postgraduate study in the future. The interviewee quoted here was motivated by the career development aspect of further study and qualifications and was also interested in learning something new, although faced by various challenges, despite his employer being prepared to pay the course fees, as the following quote illustrates:

> *"In the future I possibly would consider further education again, in terms of master's related degrees.* […] *If I were to go back and start a master's degree, I wouldn't go back and do it full time, obviously. I would try and do it around work commitments. Which is probably why I haven't done it so far. It's that, can I manage that on top of a full time job?"*
> [Head of Technical, Construction, male, studied Architecture, Building and Planning, medium tariff HEI, routine-manual background, earning £80,000-£89,999.]

For the software engineering manager, quoted earlier, the cost of doctoral study was the main barrier:

> *"A lot of the jobs I'm interested in require a PhD. I'm pretty happy with my career so far, but some of the more interesting technical jobs, accessibility around robotics and AI and that sort of thing, particularly when I was graduating, really required graduate level coursework in those subjects."*
> [Interviewer: Have you considered doing a PhD?]
> *"Yes. I think I didn't have the grades for it when I was earlier in my career. To start that would have been an uphill battle. And at this point in my life it's expensive, the opportunity cost is quite high."*
> [Engineering Manager, Information and Communications Services, male, studied Computer Science, highest tariff HEI, from managerial-professional background, earning £120,000 or more.]

7.6 Summary

At a time when participation in postgraduate education in the UK is expanding, the Futuretrack study contributes to research on postgraduates and their careers by exploring the long-term impact of further study and postgraduate qualifications. In this chapter, we have examined the extent to which Futuretrack participants had engaged in further study leading to formal qualifications since graduation, why they had done so, and how far it had provided access to career development and opportunities. When addressing these questions, we explore how structural inequalities relating to gender and socio-economic background may have affected postgraduate participation and subsequent employment outcomes.

Focusing on participation in further study and the types of qualifications Futuretrack graduates have completed, we found that half of all respondents had gained a further formal qualification since graduation. The majority were women (65 per cent), came from a managerial-professional socioeconomic background (64 per cent) and had completed their first degrees at one of the highest tariff universities (46 per cent).

Looking at the types of further qualifications that Stage 5 respondents have completed since graduation, half of them had completed an 'academic' qualification (a taught master's degree, a PhD or other research degree), while most of the rest had acquired vocational or professional qualifications (40 per cent), including postgraduate teaching qualifications. Just over 10 per cent had completed a second undergraduate degree or an apprenticeship, which may reflect lack of guidance or a clear sense of direction when they made their original study decisions but, in some cases, clearly also reflected changing values.

In this sample, there was a small gender gap in postgraduate participation: 52 per cent of women and 45 per cent of men had completed further qualifications since graduation. Looking at the types of further qualifications they completed, we found that equal proportions of men and women completed taught master's degrees and other professional/vocational qualifications. As in the population more widely and following established traditions, a larger proportion of women had taken postgraduate teaching qualifications and men had more frequently acquired doctorates.

As expected, the socioeconomic background of graduates was associated with participation in further study. While differences in the level of participation by graduates from different backgrounds was negligible, there was a distinct difference in types of further qualifications taken according to socioeconomic background. More than half of those from managerial-professional backgrounds had followed an 'academic' postgraduate route and completed a taught master's or a doctoral or other research degree, compared to 41 per cent of the graduates from intermediate and 44 from routine-manual backgrounds.

Analysing interview data on the motivation to engage in further study, we identified professional development and strategic career building as the two main factors. Avoiding the effect of the 2008 financial and economic crisis was also an important motivation to enter postgraduate education, despite the scarcity of funding available to postgraduate students.

The relationship between postgraduate study and graduate careers was examined by comparing the types of occupations, sectors and industries in which postgraduates worked as well as the types of employment contracts they had.

Three groups of participants were compared: those who had a further qualification and worked in a job that required it (a postgraduate profession); those who had a postgraduate qualification but were working in a job that did not require it; and those who did not have a postgraduate qualification and worked in a job that did not require one.

When comparing the demographic profiles of these three groups, no patterns of differences in gender, age, ethnicity, or socio-economic background emerged. However, comparing the types of higher education institutions where participants have completed their first degree, we found that a slightly higher proportion (50 per cent) of those working in postgraduate jobs had graduated from highest tariff universities, compared to the other two groups (44 per cent and 36 per cent).

Exploring the types of occupations graduates held by in the three groups [using the categories of the SOC(HE)2020 classification], we found that those working in jobs requiring postgraduate qualifications were concentrated in Expert occupations, to a greater extent than the graduates in the two other groups. A fraction (5 per cent) of those working in a job where a postgraduate qualification was required were in Non-graduate occupations, compared to a fifth of graduates in the other two groups.

The majority of those working in jobs that required postgraduate qualifications ('postgraduate jobs') were employed in Education and Other Public Services, while those who had a further qualification that was not required in their job were employed in a wider range of industries; in particular, ICT and Banking, Finance & Insurance. In summary, almost half of those working in 'postgraduate jobs' were employed in the public sector, compared to a third of those who had a postgraduate qualification but did not work in a postgraduate job and a quarter of those without further qualifications.

A relatively large group, one fifth of those graduates who worked in postgraduate jobs were employed on fixed-term contracts, compared to under 10 per cent in the other two groups. Despite this relative job insecurity, three quarters of this group rated their jobs as ideal or almost ideal for someone with their qualifications, compared to a half of graduates in the other two groups. In addition, a higher proportion of those in postgraduate jobs had clear career plans for the next five years, were more optimistic about their career progression and more confident that they have the skills employers are looking for, compared to graduates in the other two groups.

8 Social and occupational mobility of Futuretrack graduates

8.1 Introduction

Social mobility has been an important political issue for decades. Most recently, there has been particular interest in how people gain access to the highest status professions (see, for example, Social Mobility and Child Poverty Commission, 2009; 2012; 2014). There are various ways in which to define social mobility, but broadly, it can be regarded as a move upwards (or downwards) of at least one social class, so, for example, people from a routine and manual background moving into a job that classifies them as being in the intermediate group based on either their earnings or occupation. This chapter will use occupation to define social class and use mobility between occupational groups as a proxy for social mobility, while recognising that this is just one feature of social class.

There are three key issues at the heart of the debate about the relationship between HE and social mobility. Firstly, whether HE experience results in social mobility for participants and whether some people benefit more (or less) from the experience. Secondly, there is the issue of downwards mobility, that is people who find themselves in a lower social or occupational class than their parents. Thirdly there is the issue of mobility within a graduate's career and within occupations and whether some graduates may enter higher status professions but not progress – they can get in but that cannot get on.

Although HE has traditionally been regarded as a route for social mobility, the precise relationship between HE and social mobility is not as straightforward as that assumption might suggest. There have been various reasons suggested for this. Some focus on supply-side factors which include the confidence and aspirations of those from different social backgrounds which means they take lower status jobs and are less likely to seek progression within these jobs. Others focus more on the demand-side, looking at social and cultural capital deficits, discrimination, and a tendency for people to recruit and promote in their own image (Daenekindt and Roose, 2011; Friedman, 2012). Macmillan and Vignoles (2013) examined whether the social class of 2006-7 graduates was linked to their likelihood of entering the highest status occupations and concluded that when other factors, such as HE and degree subject and class, are controlled for, there is no link when looking at destinations six months after graduation.

It must also be borne in mind that the definitions of occupational groups have changed over the years and occupations may have different definitions or entry criteria than in the past.

A second issue concerns downward mobility, and the extent to which social class and HE 'shields' graduates from dropping into a lower social class than their parents. When the professions were expanding, this was not considered a particularly important issue, but as this expansion slows, there are questions about whether the social background of certain graduates gives them access to the resources and networks necessary to prevent downward social mobility (Goldthorpe, 2013; McKnight, 2015). A further issue relates to how other personal characteristics affect these broad patterns. The Social Mobility and Child Poverty Commission (2020) found that women, and in particular women with children, were disproportionately likely to experience downwards social mobility, as were some BAME groups (although predominantly those who were born outside the UK).

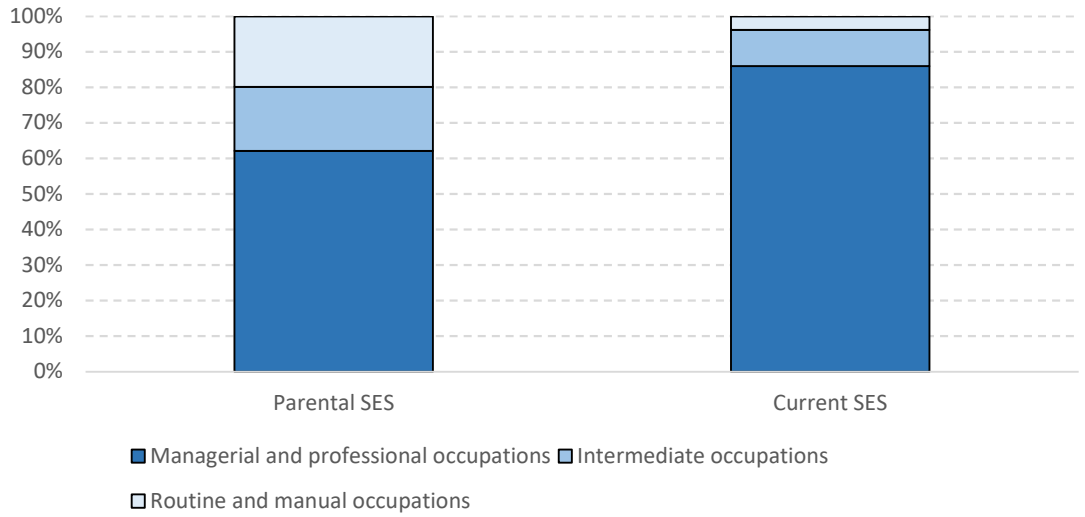
Finally, there is the question of progression. There is some evidence that while people from lower socio-economic status (SES) groups may enter higher status professions, they do not progress in those jobs at the same rate as those from higher SES groups (Ashley *et al*., 2015; Laurison and Friedman, 2015).

8.2 Social and occupational mobility

In previous chapters and in the appendix to this report it has been noted that the Futuretrack sample shows considerable bias towards more successful graduates and that participants from routine and manual backgrounds appear to experience little to no disadvantage in the labour market when their HEI type, subject of study and degree classification are controlled for (Chapters 2 and 4). It appears also that while social class has had a clear impact on the 'building blocks' associated with getting a good career, including HEI type, subject studied and degree class, it is these 'building blocks' that now affect graduate careers, rather than social class as a factor in itself.

The 'success bias' of the Futuretrack cohort can clearly be seen when looking at the SES groups of the Futuretrack cohort as measured by their occupational group. As Figure 8.1 shows, there has been what would appear to be a remarkable level of social mobility within the Futuretrack cohort. While 62 per cent come from a managerial and professional background, and twenty per cent from a routine and manual background, based on their current job, 86 per cent of the cohort are now in managerial and professional occupations and just four per cent are in routine and manual work.

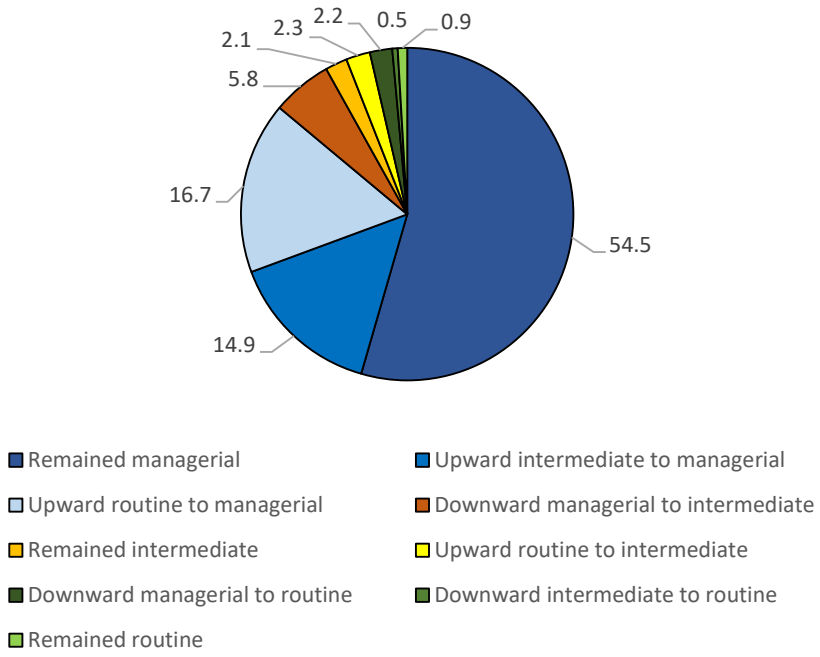
Figure 8.1 Parental and current SES



Source: Futuretrack Stage 5 survey, all participants in employment whose parental occupation is known (n=5,098)

When looking at movement between groups, as Figure 8.2, demonstrates, a large proportion of participants from both intermediate and routine and manual backgrounds had moved upwards into the managerial and professional group.

Figure 8.2 Movement between occupational groups



Source: Futuretrack Stage 5 survey, all participants in employment whose parental occupation is known (n=5,098)

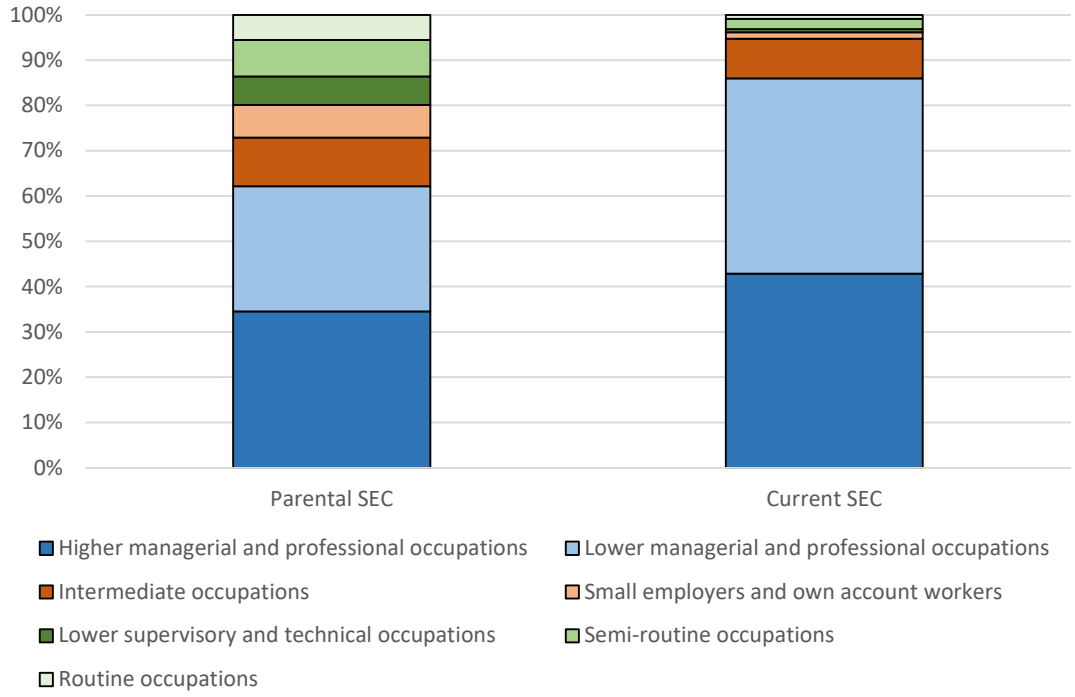
Overall, 85 per cent of participants from an intermediate background were now in the managerial and professional group, as were 84 per cent of those from a routine and manual background. A further 12 per cent of participants from a routine and manual background had moved into the intermediate group. Downward mobility, as will be discussed later in this chapter, was less common. Nine per cent of those with a managerial and professional background had moved down into the intermediate group and four per cent had moved into the routine and manual group. Three per cent of those from an intermediate background had also moved into the routine and manual group.

These findings seem to suggest that, for the Futuretrack cohort, HE experience had resulted in high levels of social mobility.

When taking a more fine-grained approach using NS-SEC groups[26], a similar pattern emerges, but it is more nuanced. Firstly, as the Figure shows, when comparing parental and current NS-SEC groups, the group that has shown the largest growth is the lower managerial and professional occupations (NS-SEC 2). The proportion of Futuretrack graduates with a lower managerial and professional background was 28 per cent, but 43 per cent are in this group when looking at their current occupation.

[26] For the definition of the National Statistics Socio-economic classification, see https://www.ons.gov.uk/methodology/classificationsandstandards/otherclassifications/thenationalstatisticssocioeconomicclassificationnssecrebasedonsoc2010

Figure 8.3 Parental and current NS-SEC group



Source: Futuretrack Stage 5 survey, all participants in employment whose parental occupation is known (n=5,098)

The range of possible moves between NS-SEC groups is very large (Figure 8.3), and the following discussion focusses only on the most significant of these. There is evidence of some degree of status maintenance, particularly in the managerial and professional occupational groups. However, there is also evidence of downward mobility from the higher managerial and professional group in particular. Overall, 49 per cent of people whose parents were in a higher managerial and professional occupation (NS-SEC 1) were themselves in an occupation in the same group at the time of the survey. Thirty-nine per cent had shown some downward mobility into the lower managerial and professional occupations group (NS-SEC 2) and seven per cent had a job in the intermediate occupations group (NS-SEC 3). Similarly, 43 per cent of those whose parents were in lower managerial and professional occupations were also working in a job in this group, but 42 per cent had experienced upward mobility and were in a higher managerial or professional occupation. Nine per cent of those with parents who had lower managerial and professional occupations were working in an intermediate occupation.

Looking at moves into the higher and lower managerial and professional occupational groups by those from lower NS-SEC groups, there is some evidence that those from the lowest three NS-SEC groups experience some disadvantage in accessing the highest status, most elite occupations. Amongst those whose parents were in intermediate occupations (NS-SEC 3), 41 per cent were employed in a higher managerial or professional occupation, and 43 per cent in a lower managerial or professional occupation. The small group whose parents were small employers or own account workers (NS-SEC 4) show a slightly greater propensity to have moved into the higher managerial or professional group based on their current occupation, with 44 per cent now being in a higher managerial or professional occupation and 42 per cent in a lower managerial or professional occupation. In contrast, participants whose parents were employed in lower supervisory and technical occupations (NS-SEC 5), semi-routine occupations (NS-SEC 6) and routine occupations (NS-SEC 7) are all more likely to now have an occupation in the lower managerial and professional group than the higher managerial and professional group. Amongst those whose parents were employed in lower supervisory and technical occupations, 39 per cent were now employed in higher managerial and professional

occupations but 47 per cent were in lower managerial and professional ones. The figures for the semi-routine group are 33 per cent and 50 per cent respectively and for those whose parents were in routine occupations, 34 per cent were now employed in higher managerial and professional occupations and 48 per cent in lower managerial and professional ones.

Despite these positive findings overall, graduates who were interviewed highlighted various ways in which they thought their social class had been a benefit or a barrier in their social and occupational mobility.

Several interviewees who were the first in their family to go into HE commented that just by going to university, they had exceeded the achievements and experiences of all their family members, and they did not know what to aspire to next. This had encouraged them to see going to university as an end in itself and they struggled when trying to work out what their next steps should be. They found it difficult to envisage the type of career they might have, the jobs that were open to them as graduates or how they might access graduate employment, and they lacked the role models, information or, in some cases, the ambition that might have offered them the impetus and support to move forward.

Other graduates discussed the ways in which being from a more privileged background had facilitated their careers. While many graduates from routine and manual backgrounds found that completing a degree, an unexpected and sometimes hard-won achievement, increased their self-confidence, as in the case of social networking, the prior experiences of graduates from higher social classes were seen as giving them a head start.

> *"The older I get, the more I realise that I come from a privileged background. I guess because my parents being middle class helped a lot. I was not always in private education at private schools, but I did spend part of my education in private schools. And to be honest, I think one of the most important things that all of that gave me was beyond proper critical thinking skills is the confidence"*
> [Managing Director in Business Services, studied Interdisciplinary subjects at a Highest tariff HEI. Male, from a Managerial and Professional background, earning £40,000-£44,999.]

> *"I suppose I'm quite aware of the fact that in some of these industries there's quite a lot of bias. Which actually worked in my favour, I'm ashamed to say it in a sense. As an example, when I was interviewing for different roles, one of the key openers was 'you play rugby' and talk about the next 30 minutes with the hiring partner about rugby. Which is great because, 'oh brilliant I've got a great rapport with him and that kind of stuff'. Coming from a background where rugby was the primary sport at school, and you go to a university where there's lots of opportunities and things like that. You realise that there's going to be those kind of bias in the system and I have probably benefited from that slightly. I don't think there have been any experiences where I haven't and like I said you feel a bit of guilt in that respect because I don't think that should be the way that things are"*
> [Solicitor, studied Law at a Highest tariff HEI. Male, from a Managerial and Professional background, earning £120,000 or more.]

Unlike in the cases of gender and ethnicity, very few graduates could identify benefits related to being from a less privileged background. One law graduate commented that his accent and routine and manual background could be beneficial in some circumstances, but many more interviewees commented on the social benefits of being easily identifiable as middle or upper class or at least being able to convincingly appear so, and "sounding posh" was one aspect of this.

> *"I think firstly, being from Liverpool, my accent is sometimes… I don't think it's common, but I think in some instances, people would not look at me favourably because of where I'm from. I feel like in another breath, where I'm from is actually a benefit because people like to talk*

about football and the city, and they're interested in the place, and I think it generally helps me build relationships with certain people. Especially at the moment. I work in property so I deal with tradesmen, people like that, and I think I can just be one of them. So, they feel like I'm just one of them, which is a strength for me because I can speak to people at a board level, but then I can speak to the guy on the ground as well. Whereas I think, certain people from certain backgrounds get bewildered speaking with the guy on the ground and engaging with them. It's actually a strength, not a weakness, in terms of the way I look at it"

[Category leader in the Business Service Sector, studied Law at a Medium tariff HEI. Male, from a Routine and Manual background earning £65,000-£69,999.]

Access to social networks was a way in which participants thought that social class had impacted on their careers and social class has consistently been seen to have an effect on the networks graduates have access to (along with other factors such as HEI attended). Graduates talked about how this was particularly true of some of the more traditional occupations, such as law, and for jobs where being able to demonstrate previous experience while in HE was important.

The important role played by HE in facilitating networking for graduates generally was one of the most frequently cited benefits of HE. HE experience was seen as increasing and diversifying social networks, enabling participants to meet and understand people from different backgrounds and with different experiences. It was also seen to make people more skilled at networking and more aware of the value of networking in career development. As the quote below illustrates, this was regarded by participants as a long-lasting benefit, in contrast to having a degree which was seen as essential at the start of participants' careers, but which had a declining value as experience became more important.

"The obvious benefit would be getting the academic qualifications, but I think the benefit of that fades away after a few years. And it's only because you learn the skills of how to tackle topics and that sort of stuff. The key benefit that's always lasting is that social asset, that networking aspect. […] That ability to just be able to walk into a room, immediately strike up conversations with anyone. Have enough talking points that you're never going to be at a loss with what to say. I think that's the real benefit"

[Solicitor, studied Law at a Highest tariff HEI. Male, from a Managerial and Professional background, earning £120,000 or more.]

Having family members who could provide access to opportunities or even just advise on potential career routes was regarded as being particularly beneficial.

"Well I think anyone who, at least when I was starting out, in looking for work, anyone who has connections always does better ultimately. And anybody who is prepared to network, does better. So, I know, or my family might have known, certain people that are lawyers in the legal profession. They would have suggested maybe consider contacting this person and asking them if they've got a slot that you can do some work experience in. Then that's obviously helped"

[Solicitor, studied Interdisciplinary subjects at a High tariff HEI. Male, from a Managerial and Professional background, earning £45,000-£49,999.]

Social class was also found to have an impact on geographical mobility, and limited geographical mobility was a barrier for some participants in realising their aspirations. This contributes to the finding that graduates from lower social class backgrounds tended to earn less when all other factors were held constant. Graduates from lower SES groups were more likely to be unable or unwilling to relocate to find more highly paid or prestigious employment. While settling down, buying property, having a partner's career to consider, and having children all potentially acted as brakes on geographical mobility as participants' lives progressed, some participants had experienced very limited geographical mobility throughout

the course of their education and subsequent careers. Previous Futuretrack reports have shown that participants who lived at home while they were studying, with the exception of those living in London, were disproportionately from lower social class backgrounds and they were also more likely to attend HEIs of a lower tariff than their prior educational achievements would suggest they should be able to access. This lack of early geographical mobility was replicated in their post-graduation careers and they remained embedded in social networks and economic settings that did not provide them with the resources they required to develop graduate careers. The following participant, who was not from a routine and manual background, but who, nonetheless had lived at home for part of her HE career and remained there to care for elderly parents commented that the issue was not that she was stuck in one place, it was that she was stuck somewhere with limited opportunities.

> *"You know and I think am I being too hard on myself because what more could I have done? I'm living in an area where there are very few opportunities, I'm in a rural area, I'm not in a big city. There aren't lots of firms, there's not lots of money. What more could I have done? I'm not in a position to move to one of those areas. So then I remind myself I've made the best of what I could do and looking around me I can't see anyone in my peer group who's done a better job of it than me, in my circumstances. […] So sometimes I do look at other peoples' lives particularly friends who are able to go to big cities and think' would it have been different?' and you always tend to look and wonder if the grass would be greener, don't you? But then when I look at what I've actually got in my life the grass is pretty green here really"*
> [NHS Manager, studied Linguistics and Classics at a Medium tariff HEI. Female, from a Managerial and Professional background, earning £21,000-£23,999.]

While some degree of care must be taken over the relatively small numbers in these groups, these findings do suggest that that there may be some form of 'class ceiling' in existence for people from more disadvantaged backgrounds. This will be explored further later in this chapter when looking at career progression.

8.3 Downward mobility

As the previous sections suggest, there has been relatively little downward social mobility amongst members of the Futuretrack cohort. Where such movements have occurred, they have largely been out of the managerial and professional occupational group. Thirteen per cent of participants from a managerial and professional background had experienced downward mobility into either the intermediate or routine and manual groups. Just three per cent of those from an intermediate background had moved downwards into the routine and manual group, and the absolute numbers involved here are small.

Looking at the characteristics of the thirteen percent of participants who had experienced downwards social mobility from the managerial and professional group, no clear pattern emerges. Women are slightly over-represented, as are participants who studied at a medium tariff HEI, and BAME groups slightly under-represented, but these differences are not significant.

When looking at downward occupational mobility by NS-SEC group clearer patterns emerge, in part due to the larger number of participants involved in these moves. As has been noted, the most significant downward move is of participants whose parents worked in higher managerial and professional occupations but who are themselves working in lower managerial and professional occupations. There are various reasons to treat this data with caution. Firstly, as will be discussed later, the majority of the Futuretrack cohort graduated approximately 10 years before they took part in the survey, while parental occupation when the participant was 14 is used for parental class and occupation. This puts the Futuretrack cohort at a slightly earlier career stage and they might be anticipated to progress further in the

future, although this is not a certainty, as is discussed later in this chapter. Secondly, as has been previously noted, the status of different jobs, and entry requirements, varies over time, and managerial jobs are particularly prone to this and difficult to classify. Finally, the Futuretrack cohort graduated into a recession, which was seen by participants to have a stalling effect on their careers.

> *"The recession really bit around about then just before I graduated and they put on a hiring freeze and said we can't hire any of you guys. So I scrambled to get a job, I made so many applications. I basically got two offers, both of them crap, both of them in places I really didn't want to be. And I just took the least worst option. So yes, I think the recession completely threw off my life and career plan. And then after it kind of pulled the rug out from under me it meant that I ended up in a job that I didn't want to be in at a place I didn't want to be in. So I've got to be grateful right now that I have a job and nothing that bad has ever happened to me out of the worst things happening in world. But yes, it really had a profound effect on my whole life and my career and everything else"*
> [Engineer in the Transport and Tourist Services sector, studied Engineering at a Highest tariff HEI. Male, from a Managerial and Professional background, earning £60,000-£64,999.]

Graduating into a recession had not only had a direct impact in limiting the jobs available to the Futuretrack cohort, it has also had a longer-term scarring effect on some participants, making them cautious, unwilling to plan and with feelings of disappointment and bitterness when they considered their careers to date and possible futures.

> *"I feel like the 2008 recession massively knocked my career when I was starting out. And now I feel like Brexit is going to do the same. I feel like our couple of years of my age group are completely and utterly screwed, because we were just getting back to where we should be, and now Brexit is going to happen. And everything is going to fall apart again, and so like… All the opportunities that our parents' generation had we're just not getting. And I guess, I'm really bitter about that"*
> [Content Editor in Public Services, studied Historical and Philosophical Studies at a High tariff HEI. Female, from an Intermediate background, earning £15,000-£17,999.]

> *"There is lots of volunteering, lots of intern, lots of working for free, lots of trying to prove yourself. Lots and lots of applying for different roles and getting nowhere. And it's been a really long, hard slog to try and get to where I am now. And I don't feel that I am where I should be or society perception of where one should be at a specific age or time in your life"*
> [Photographic Studio Co-ordinator, studied Creative Arts and Design at a Specialist HE College. Male, from an Intermediate background, earning £18,000-£20,999.]

As has been noted, 39 per cent of participants whose parents had a higher managerial or professional occupation were working in a job in the lower managerial or professional occupational group. While the gender split amongst those currently working in a high managerial or professional occupation is approximately 50:50, women account for 61 per cent of those who had experienced downward movement and were employed in occupations in the lower managerial and professional group. They are also over-represented when looking at those with intermediate occupations or routine occupations who had parents who had a higher managerial or professional occupation, but these numbers are small. There was no significant relationship when looking at factors such as HEI type, class of degree or ethnicity. The impact of gender on graduate social and occupational mobility is discussed later in this chapter.

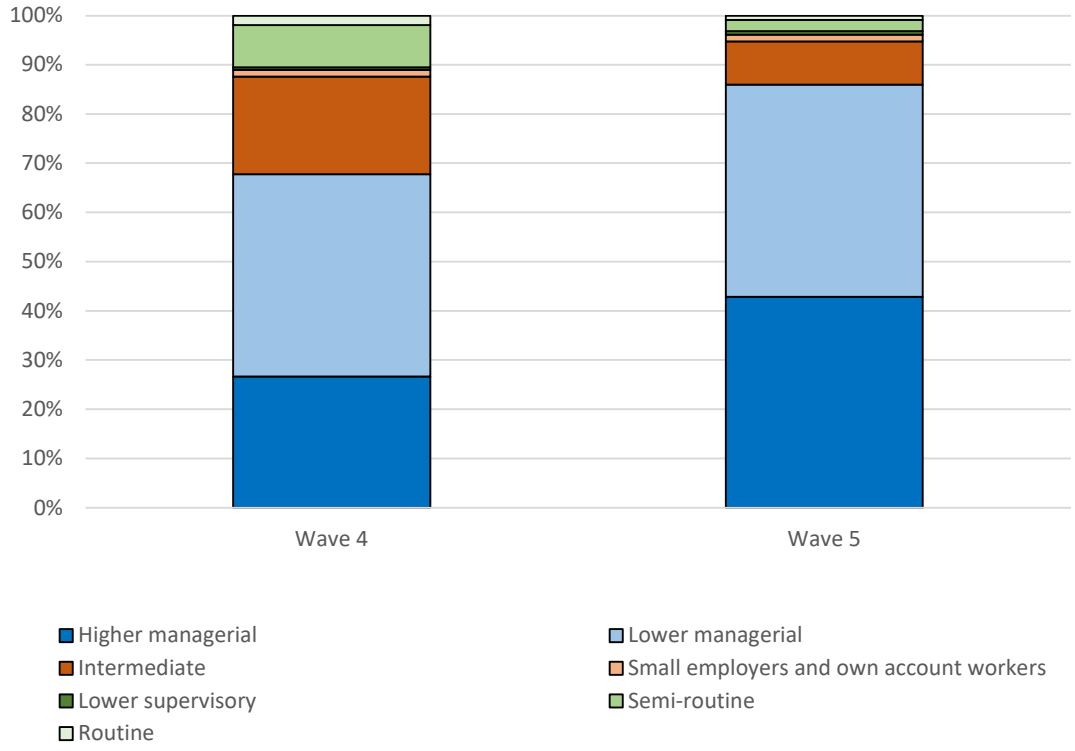
8.4 Career progression and social and occupational mobility

Previously in this chapter, it has been noted that although participants from routine and manual backgrounds have experienced a high degree of social mobility, they appear less likely than those from other backgrounds to reach the highest echelons and to be working in the most

elite, higher managerial and professional jobs. It has been suggested that this indicates that there is a 'class ceiling' beyond which some groups fail to progress. The literature also suggests that even when graduates do achieve social mobility in terms of occupation, they do not see the same benefit in terms of salary. The analysis in Chapter 4 also indicates that social background influences earnings. This section looks at how graduates' careers have progressed to date, to assess whether some groups' career progression appears to have stalled at a point below the highest group, in other words, whether there are participants who have achieved entry to higher occupational groups than their parents, but who progress relatively less than their more advantaged peers.

Figure 8.4 shows the distribution of the Futuretrack cohort by NS-SEC group at Stage 4 and Stage 5. It shows that the proportion of participants in the higher managerial and professional groups and the lower managerial and professional groups has grown between these two stages as the Futuretrack cohort have progressed in their careers. Overall, 13 per cent of the Futuretrack cohort progressed from lower managerial to higher managerial jobs between Stages 4 and 5, while a quarter remained in lower managerial jobs.

Figure 8.4 NS-SEC groups at Stage 4 and Stage 5



Source: Futuretrack Stage 5 survey, all participants in employment whose occupation at Stage 4 is known (n=3,005)

Overall, participants whose parents were from a higher managerial or professional background were slightly more likely than those from other backgrounds to progress from jobs in the lower managerial and professional occupational group to ones in the higher managerial and professional group, but the difference was not significant.

A more significant difference can be seen when looking at other personal characteristics of those who have or have not progressed, as the following sections discuss.

8.5 Gender and social and occupational mobility

Male graduates who were in jobs in the lower managerial and professional group were more likely than their female counterparts to have progressed into higher managerial roles, and female graduates were significantly more likely to have been in a lower managerial role and to have remained in the same occupational group between these two stages of the Futuretrack study.

This raises the question of why female graduates appear to experience barriers to occupational mobility and, as Chapter 4 demonstrated, there remains a persistent gender pay gap throughout graduates' early careers.

Participants in the qualitative interviews pointed to the prevalence of stereotypical attitudes and gendered perceptions of appropriate behaviour in certain prestigious professions and referenced the idea that women should know their place and not push for career advancement in the same way that men might.

> *"I would say that the things that people always mention about girls being bossy, not the boss, and that sort of stuff. I think that has always kind of been in people's minds when they work with me. Do you know what I mean? I've always had those, oh, you're really a stickler for detail, but it's always in a negative way, and I can definitely see that if I wasn't female, then those things probably wouldn't be said about me"*
> [Self-employed artist, studied Creative Arts and Design at a High tariff HEI. Female, from a Managerial and Professional background, earning less than £9,999.]

It must be noted that some male participants in these professions also commented on how they were dissuaded from trying to achieve career progression and that this was related to the existence of very hierarchical structures with promotion based on time-served rather than skills. Several particularly noted the impact that this had on younger women, who were seen as less authoritative due to a combination of their age and gender.

As well as issues in very traditional, hierarchical professions, some participants mentioned difficulties faced by women in male-dominated professions. This was something that could have either a positive or negative impact on women's careers, and in some cases, participants were keen to stress that it had no impact at all. Female participants discussed times when they had felt excluded from the kinds of informal information sharing networks that were built around things like a shared participation in sports or availability to attend social events due to lack of childcare responsibilities.

> *"I think it's been a bit frustrating. Our business is, how to say, jobs for the boys, a little bit. Which can be annoying and they're trying, not very well to be fair. But there's jobs that will come up that people will be moved into and you're like, oh I didn't even realise that was an opportunity"*
> [Tax Associate, studied Mathematical and Computational Sciences at a Highest tariff HEI. Female, from a Routine and Manual background, earning £21,000-£23,999.]

However, some participants in very male dominated professions noted the ways in which they had benefited from positive discrimination as these employers sought to attract more women. This idea that women, and, as will be seen later BAME groups, might benefit from drives for equality and equity, was mentioned by several participants, who noted a growing commitment to ensure that initiatives to improve the recruitment and progression opportunities for under-represented groups were not simply token gestures.

> *"It goes back to being the only woman. The only woman in a man's world, in which the company are desperate to get more women in, they're desperate to keep women, they're*

desperate to be seen as a good standing employer. Yes, I've experienced a lot of positive discrimination"
[Project Co-ordinator in the Electricity, Gas and Water Supply sector, studied Physical Sciences at a High tariff HEI. Female, from a Routine and Manual background, earning £33,000-£35,999]

As the majority of the cohort enter their 30s, an additional issue emerges: the impact of family-building on career progression. At the time of the survey, a quarter of participants had at least one child. Family-building was seen by participants to have a greater impact on women, as they were more likely to take time away from the labour market for maternity leave, although there was evidence of male participants taking paternity leave and shared parental leave.

"When I came back after my first maternity I felt like it basically reset my progress. And people saw me as junior level of the role I was in where I was actually one of the more senior ones in the office, which was a bit frustrating"
[Actuary, studied Mathematical and Computational Sciences at a Highest tariff HEI. Female, from a Managerial and Professional background, earning £30,000-£32,999 working part time.]

"I was a very much aware of it when I had told my manager that I wanted to take shared parental leave and after telling them that I was also asked if I would be interested in going on a special project for six months. When the senior manager realised I was going to be taking some of that time as shared parental leave, the option to do it was taken away. I'm pretty sure it is not the done thing, legal, whatever. I didn't have any of it in writing. I hoped that I would also be able to build up a better relationship with my senior manager by not kicking up a fuss"
[Product Manager in the Electricity, Gas and Water supply sector. Studied Mass Communication and Documentation at a Medium tariff HEI. Male, from a Managerial and Professional background, earning £36,000-£39,999.]

When discussing how their careers might change in the future, the impact of having a child and how parental responsibilities might be negotiated in a relationship was one of the most common issues raised by participants. Female participants were also more likely to be the partner who reduced their working hours or stopped working to accommodate childcare, although again, there was evidence of both male and female participants doing this. The decision-making around this was in some ways very pragmatic, but in others very personal. Participants reflected that the female partner was often the lower earner, was not so career focussed and/or was the partner who very strongly felt that they wanted to stay at home with their children.

8.6 Ethnicity and social and occupational mobility

The relationship between ethnicity and graduate outcomes has consistently been mixed, and this is also the case when looking at their social and occupational mobility. The relatively small number of non-white participants means that any findings about the progression of BAME graduates must be treated extremely cautiously. Overall, it appears that participants from an Asian background progress into the highest groups at a somewhat faster rate than the white majority. The proportion of Asian graduates who either remained in, or moved into the higher managerial and professional group was higher than the proportion of white graduates who did so (52 per cent of Asian graduates were working in an occupation in the higher managerial or professional group by Stage 5, compared to 43 per cent of white graduates). Black graduates do not appear to have enjoyed a similar level of social or occupational mobility, with just 28 per cent being employed in a higher managerial or professional job. However, the numbers of black graduates in the Futuretrack cohort is too small to draw firm conclusions.

When BAME participants discussed the effect their ethnicity had on their career development, they often viewed it as having both a positive and a negative impact, reflecting the diversity of experiences and outcomes for BAME graduates. As in the case of gender, some BAME

participants thought that various assumptions were made about them because of their ethnic background and many of these were negative. There was an assumption that they would not speak English well or, in the case of one female participant from an Asian background, that she would only want a brief career before marrying and having children. The intersectionality of ethnicity and social class was often mentioned by participants, citing their parents' careers and lack of role models.

However, as in the case of some of the participants who talked about gender, some of the participants from BAME backgrounds were positive about the steps employers were taking to increase opportunities for BAME employees and, in particular, to provide them with the kind of networks that would give them access to role models they might not otherwise have.

> *"With my organisation with the mentoring programme, they deliberately pair people of black and minority ethnic backgrounds with somebody senior in the organisation, so the CEO or one of the people next level down which are the executive directors and things. So, I've had the opportunity to be mentored by an executive director. So, in some ways, it opens doors as well and my organisation are really pushing to have more BAME staff in management positions. […] I mean I've been really lucky in almost every role for the organisation I've gone to there's been somebody just want to take me under their wing. Somebody quite senior who just want to help me to succeed. I don't really know why that is. But actually, now that I think of it, they've always been on the BAME background and I think it's just luck. I've just been lucky. They've seen something and they've wanted to help nurture it and they have"*
> [Deputy Manager in the voluntary sector, studied Social Studies at a High tariff HEI. Female, from an Intermediate background, earning £33,000-£35,999.]

8.7 Summary

This chapter has shown that HE experience appears to have resulted in a high level of social mobility for the, admittedly advantaged, Futuretrack cohort. However, when the data is looked at more closely, there is evidence of more mixed outcomes within this broadly positive overview. Previous chapters have shown that it is difficult to disentangle social background as a factor in itself from the 'building blocks' or 'positional goods' that being from a higher social class has given graduates access to. Now 10 years and more into their careers, it is factors such as HEI type, subject studied and class of degree that have the most obvious relationship to graduate outcomes and social mobility, but it is social class that has consistently been shown to underpin these experiences and achievements.

Relative to their parents, the proportion of the Futuretrack cohort working in higher and lower managerial and professional jobs is considerably higher, with this expansion being seen especially in the lower managerial and professional occupations. However, when looking at these groups, some areas of concern start to emerge. There is some evidence that while graduates from a routine and manual background are very likely to experience mobility into the managerial and professional group (based on their current occupation), they do not appear to achieve the most prestigious jobs at the same rate as those whose parents were also from a managerial or professional background or to earn as much. Instead, they are disproportionately likely to have lower managerial or professional jobs (those in NS-SEC group 2), rather than higher managerial or professional jobs (in NS-SEC group 1). They are also somewhat less likely to have progressed from lower to higher managerial roles, but this difference is not significant.

There is evidence of downward occupational mobility, but this largely occurs within the managerial and professional group (as the group that has the most potential to move downwards while remaining broadly within the kinds of occupations that graduates are found in), with the children of parents with higher managerial and professional jobs finding themselves employed in lower managerial and professional occupations, at least temporarily.

Women are more likely to experience downward occupational mobility and to see their careers stall at the point where they are in lower managerial and professional jobs and intermediate jobs. Participants also raised concerns about their future progress, particularly once they started having children.

As in previous chapters, the impact of ethnicity on social and occupational mobility is mixed, and the benefits individuals derive, and the barriers they face appear to be largely situational and dependent on finding individuals, including colleagues and mentors who will support their personal ambitions.

It must be remembered that the Futuretrack cohort graduated into a labour market that was emerging from a steep recession. Consequently, when comparing their position in the labour market with that of their parents, the ways in which the recession may have impacted variously on different members of the cohort must be borne in mind. Some found that the recession had little impact on their labour market entry and career trajectories, while others consider themselves to still be significantly behind other generations at a similar age.

9 Drawing it all together

9.1 Why this research was necessary

So many things have changed in the relationship between HE and the labour market in the last ten years. The Futuretrack cohort, who had applied to enter UK HE and mainly embarked on undergraduate study in Autumn 2006, entered a challenging graduate labour market three or four years later. In the wake of 'The Great Recession' of 2008 falling profits in the private sector and austerity measures in the public sector were leading employers to reduce their workforces and fill vacant posts with temporary or freelance staff rather than permanent jobs (Coulter 2016, Gregg and Wadsworth 2010). By summer 2009, the already well-entrenched trends towards the pursuit of employment flexibility and greater labour force efficiency had accelerated in the face of these new challenges.

By 2016 there was growing awareness that some of these practices were raising the precariousness of employment and increasing vulnerability among those without secure employment, leading the then Prime Minister Theresa May to commission a review of modern business practices. The *Taylor Report of Modern Working Practices* (Department for Business, Energy & Industrial Strategy, 2017), identified the growing precarity of many areas of employment and made recommendations to employers and government to ensure that morally defensible workplace practices and the interests of employees should be protected, but concluded that increased employment flexibility and 'the gig economy' were irreversible trends.

How had these labour market changes affected the opportunities available to recent graduates? Higher education, although it has increasingly been packaged, sold to aspiring applicants and discussed in policy and media documents as a commodity, is at best a diverse range of commodities and range of varying experiences providing access to different sectors of the labour market and the occupational structure. It is well-established in UK graduate tracking research and analyses of HE statistics, as well as by the successive stages of this longitudinal study, that there are strong relationships between early career transition to the labour market and factors such as educational and socio-economic background, gender, subjects studied, types of university attended, and undergraduate achievement. How had these factors played out in the longer term for graduates in the Classes of 2009/10?

9.2 Aims and Objectives

Our broad aims were twofold. We would provide policy-relevant findings about the variables that facilitate or obstruct graduate labour market integration and early career development, produce better labour market information on graduate labour market experience beyond first destination following the impact of these changes. But we also have another aim – to develop mixed-methods research and innovative analysis on a foundation of existing longitudinal data, thereby advancing the theoretical understanding of the relationship between HE and labour market change and developing new ways of monitoring such change.

Our main objectives have been to assess the relevance to their career trajectories of the knowledge and skills graduates gained on their undergraduate degree programmes, and the way in which demographic and socio-economic variables facilitated or restricted their career development. In addition to the widely used 'hard data' of financial returns to Futuretrack respondents, our mixed-methods approach has allowed us to investigate a considerably greater range of returns to their HE investment: investigating the wider conditions of employment and job quality and their perceptions of their longer-term career prospects, job security and the effect of their work on the quality of their lives. Survey data and interview accounts of their reasons for making career decisions throw considerable light on the diversity of the graduate labour market and the obstacles and advantages that they encountered in their attempts to realise these ambitions. Perhaps most significantly, our findings reveal the

importance of values other than maximising income or career-related objectives in career decision-making.

Where possible, we have assessed how far the experiences and career outcomes of members of the Futuretrack cohort appear to have differed from those of earlier cohorts; in particular, from those of the graduating class of 1995 for which we had broadly comparable post-graduation survey data. Our achievement of these objectives has been outlined in the preceding chapters, each of which has a concluding summary of the findings from the analyses undertaken. In this concluding chapter, we consider the sum of these findings and what they reveal about the relationships between participation in higher education and access to opportunity, and between increased levels of HE participation and the dynamics of labour market change.

9.3 Beyond early careers

At the time of the Stage 5 research, members of the sample had been graduates for around ten years and were mainly aged between 30 and 33 years old. Ten years on is a stage at which, in earlier cohorts, all but a small proportion of graduates had moved well ahead of the insecurities and frequent job-changes of early graduate careers, long since completed postgraduate qualifications if that is what they had elected to do and had accessed secure employment.

Although there has been some convergence in many subject areas, the degree subjects studied by males and females continue to exhibit long-established gendered patterns and our findings reflect that. Their gender distribution in the industry sector and occupational structures were, not unrelated to that, also significantly different, which goes some way towards explaining some of the employment patterns, career choices and outcomes that have been revealed by this research. Biology is certainly not destiny but, particularly at their current life-cycle stage, women and men are faced with different work/life balance options that potentially have profound life-long implications.

In recent years there have been fluctuations in the average age at which graduates began family-building, ranging in England and Wales from 30 in 1996 to nearly 33 in 2016[27], but in the light of recent concerns about falling fecundity among women in their late 30s, there is some evidence that the average age has been falling again. Members in our sample had certainly entered the family-building stage. At the time of the survey, a quarter of respondents already had one or more children and over 60 per cent of them cited 'being or becoming a parent' as a very important value to them. In a significant number of the interviews, respondents reported having had a child, being pregnant or having a pregnant partner, planning to embark on family-building soon or considering how this might affect their career plans or development, as some of the evidence cited in Chapter 8 revealed. Only a few responded by saying that they did not intend to be parents or were ambivalent about bringing children into the world.

In addition, given that these graduates had been among the first to graduate with substantial debts (although considerably less than succeeding cohorts), and had graduated into a difficult labour market, we sought to establish the longer-term impact that these two factors had had on their decision-making, career development and lives more broadly since we had last surveyed them in 2011-12.by comparing comparable members of the 1996 and 2009/10

27 https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/conceptionandfertilityrates/adhocs/008981meanageofmotheratbirthoffirstchildbyhighestachievededucationalqualification1996to2016englandandwales

graduating cohorts, to evaluate how far there has been change in the intervening period in the extent to which HE had enabled them to obtain appropriate employment for people with their knowledge, skills and educational achievement.

9.4 Was there evidence that graduates in this cohort had experienced lasting career setbacks as a result of graduating during a recession, and did student debt restrict their career options?

In 2011-12 when we conducted the Stage 4 survey and interviews, 18-30 months after most members of the sample had graduated, we gained insight into the extent to which a high proportion of them had encountered initial obstacles to realising their aspirations. We had found that a significant proportion of respondents had initially experienced difficulties in obtaining employment that used and rewarded them for their investment in HE, and when members of this Stage 5 sample were interviewed in the second half of 2019, many referred to their difficulties in obtaining appropriate employment in their early years as graduates. Over third of the survey respondents reported having taken jobs unrelated to their career aspirations, agency temp work and other fixed-term or casual work, with more than 10 per cent reporting having experience of working on zero-hours contracts since graduation.

However, by 2019 over three-quarters were in permanent employment, 11 per cent in fixed-term employment, 7 per cent self-employed, around 2 per cent in full-time study, 3 per cent (mainly women) economically inactive, with only 1 per cent unemployed. This is hardly indicative of lack of labour market integration. Although we were surprised to find that more than one in six were working in two or more jobs, well over a quarter of these had opted to work that way because they 'liked the variety'. For a further quarter, one of their reasons had been 'to supplement my income', but only 5 per cent indicated that they were doing so because they had been unable to get appropriate full-time work. A number of the interview accounts suggest that this 'portfolio jobs' approach may be the tip of an iceberg in certain occupations, notably in ICT and media, but it was clearly not currently more widespread at among the 2009/10 graduate cohort.

To discover the impact of the 2008 recession and tight fiscal control that followed, we compared the growth of earnings for this cohort with that of a cohort which had started to enter the labour market in 1995. The average annual rate of growth of nominal earnings for the earlier cohort was lower than for Futuretrack graduates. Given the lower overall rate of inflation prevailing between 2012 and 2019 compared with 1995 to 2002, this suggests that, on average, real earnings have grown more rapidly for graduates in this post recessionary period. However, offsetting this finding we must caution against underestimating the impact of unemployment in the work histories of Futuretrack graduates. Those that experienced a significant spell of unemployment were on a lower growth path for their earnings. While this was the experience of only a small proportion of the graduates in our cohort, this appears to be a causal factor in the distribution of graduate earnings growth rates.

As far as the impact of debt is concerned, a significant minority of graduates had reported at Stage 4 that their options after graduating had been limited by debt, and we found some evidence that fear of adding to their debts had led some to postpone postgraduate study, and that those who had reported their options being restricted by debt had, on average, lower earnings that those who had not, particularly for men. However, more detailed analysis of this relationship indicates that the earnings difference associated with their subjective views on debt and its limiting impact on their perceived options disappears when account is taken of the subject they studied and the type of institution they attended. Graduates who were interviewed gave accounts of having found initial labour market entry difficult and reported the experience of peers who had continued to fail to access appropriate graduate-level employment, so it may be that our relatively advantaged sample underestimates the extent of longer-term impacts. On the other hand, those who had reported no debt or very low debts

were a smaller proportion of the participating sample in 2019 than of the 2011 respondents. The relationships among the variables that contribute to graduates' opportunities and their capacity to recognise and take advantage of them are complex, but for this sample there appeared to be acceptance by those who had incurred debts that it was an inevitable cost of having participated in HE. It needs to be remembered that this cohort had considerably lower levels of debt than subsequent ones and further research on these may yield different results.

As far as the values that informed graduate career decision-making were concerned, it seemed that most had achieved their objectives. For this cohort, job security rated as a considerably more important value than had been observed for the previous cohorts, which may reflect life-cycle stage but may also reflect experience of or awareness of increasing labour market precarity. Graduates who had prioritised job security over other values in obtaining their employment reported having encountered difficulties graduating into the post-recession labour market and remained less satisfied with their employment outcomes overall than those who had prioritised other values.

9.5 Were these graduates using their HE knowledge and skills in their jobs?

As was shown in Table 2.3 comparison of the reasons for having taken the jobs they had in 2011 with the reasons for taking the jobs they held in 2019 revealed that their integration to appropriate labour market positions had increased substantially over this period. The reported comparative use of skills and capabilities had increased on every dimension between 2011 and 2019, with particularly significant increases in written communication and critical evaluation, which is indicative in increasing seniority and career development. and spoken communication. In their current 2019 jobs, the most frequently reported general skills by both men and women were 'Ability to manage my time', 'Ability to work individually', both of which suggests a high level of autonomy, and spoken and written communication. Males reported being very significantly more likely to be using critical evaluation, numerical analysis and research skills, and women more likely to be using spoken communication and 'ability to manage my time'.

The least frequently required skill of those listed remained the one least developed on undergraduate programmes: entrepreneurial skills, with no significantly increased use reported as respondents' careers had developed.

9.6 Graduate and Non-graduate jobs

Analyses throughout this report has revealed that respondents' reported levels of satisfaction with their current jobs and career progress generally had increased substantially since the earlier survey stage, and a significantly lower proportion of respondents were in non-graduate jobs, whether we measure the distinction between graduate and non-graduate jobs with reference to the established and widely-used SOC(2020) classification of occupations, and as we have chosen to do in this report, through the version of this classification we refer to SOC(HE)2020[28]. As is shown in Chapter 3, there is considerable congruence in the resulting analytic outcomes of using either of them to classify the current occupational data that we collected in the survey, and the inevitable limitations of both are revealed. We decided to use the latter because it had been designed precisely to enable assessment of the degree to which HE knowledge and skills are used in different occupations and it facilitates comparison of outcomes and attitudinal responses among those in the different occupational categories.

According to this classification, over a third of the sample were in non-graduate jobs in 2011 and this had reduced to 16 per cent in 2019. As we go on to demonstrate, a significant sub-sample of these were either mis-classified as non-graduate jobs in 2019 for one or more of

[28] The classification is outlined in Chapter 3 and in more detail in Elias and Purcell (2013)

three reasons: because of limitations in the job title data they had provided; because the jobs they held were in areas subject to occupational restructuring and technological changes; or because they were employed in low-wage industry sectors where employers are able to recruit knowledgeable and highly-skilled workers willing to exercise considerably greater responsibility and innovation than they are paid for because they value the quality or ethics of the work they are able to do there: for example, in charities or social welfare organisations.

Study members and the characteristics of their current jobs were explored in Chapter 3 via the SOC(HE)2020 classification. Higher proportions of men than women were in Expert and Orchestrator occupations and higher proportions of women in Communicator and Non-graduate occupations, but there was little difference in SOC(HE)2020 distributions according to socio-economic background, apart from a somewhat greater likelihood of those from routine and manual backgrounds than those managerial and professional backgrounds to be in Non-graduate occupations and less likely to be in Expert occupations.

Using SOC(HE)2020 to analyse differences in graduate labour market integration revealed systematic differences in the contractual arrangements that employees in different occupational groups had according to the industry sector they worked in. Orchestrators were most likely to have permanent or open-ended contracts, whereas Experts and Communicators were most likely to have fixed-term contracts. This is explained by their substantially greater likelihood of working in Education or Other Public Services. These are also the sectors where women working in part-time employment were most concentrated.

9.7 Graduate earnings

It is well established that a degree confers a graduate premium relative to comparable employees who had the qualifications to proceed to undergraduate study but did not do so, and this premium grows rapidly in these early years, but the financial returns vary according to a wide range of factors, including hours worked, subject studied, type of job held, sector of employment, size of organisation and region of employment. These are not particularly new results, but they indicate the continuing influence of these factors almost ten years after graduation. More importantly, the analysis presented here shows the importance of including factors such as hours worked and the experience of unemployment in other sources of information on longer term graduate outcomes, such as the large scale and continuous Longitudinal Educational Outcomes datasets.

The analysis in Chapter 4 and the examples of the current salaries of those we interviewed indicates a wide range of diversity in the earnings of this graduate sample. Those who chose subjects allied to medicine, those who went to lower tariff higher education institutions and those with poorer degree results had significantly lower rates of growth of earnings. However, the interview data shows that several of those who told us about what they did in their jobs, including a number of those in non-graduate occupations and others who had not (in terms of their job titles) been misclassified, had undergraduate qualifications from high and highest tariff universities and low earnings.

Perhaps the most important result from analysis of the earnings of this cohort is the scale and persistence of the gender pay gap, evident in the growth of graduate earnings, revealing a widening and significant gap some nine to ten years after adjusting statistically for a wide variety factors that could account for such a growing gap. In an earlier study we showed that women who graduated in 1995 were on an earnings growth path 1.4 percentage points *per annum* below that of men. For Futuretrack respondents to the Stage 5 survey who had graduated in 2009/10, the difference is 1.7 percentage points *per annum*, a finding corroborated via analysis of earnings information from the Labour Force Survey. As discussed in section 9.3 above, gender differences run through just about every element of our analyses of both the structure and distribution the Futuretrack sample and the labour market sectors

they entered. The experiences of male and female graduates according to the SOC(HE)2020 categories illustrate more clearly the way that gender, subject and areas of skill required and used in their jobs, as well as subject knowledge, interact in reinforcing these differences and illustrates the complexity and diversity within different discipline/subject areas and types of occupation. Further analyses of this diversity will be undertaken using these data.

9.8 The relevance of subject studied to occupational outcomes

In addition to earnings, the subject graduates had studied revealed significant variation on just about every dimension we investigated: occupation, sector of employment, working arrangements, the likelihood of having undertaken postgraduate work and satisfaction with current jobs and careers, responses and outcomes varied according to the subject graduates had studied. The distribution of graduates among the occupational categories varied according to the knowledge and skills they had developed on their undergraduate programmes. Figure 3.2 showed the distribution of the sample according to subject studied and within each, the proportion of employed graduates on each, which provides a revealing summary map of the sample population. Those who had studied vocational subjects were less likely to be in the Non-graduate category, ranging from none who had studied Medicine & Dentistry, followed by low proportions of those who had studied Subjects Allied to Medicine and the most numerical STEM subjects. At the other extreme, we find higher Non-graduate proportions of those who had studied Biology, Veterinary Science, Agriculture & related, Interdisciplinary subjects and Creative Art and Design. The first two of these with higher Non-graduate jobholders are the largest and arguably most heterogeneous subject areas and we cite job-holders interview accounts that show some interesting examples of misclassification of Creative Art & Design graduates, who were among the most likely group to have been self-employed.

Among the Experts, 60 per cent had required a subject-specific degree, which was the case for only 30 per cent of the Communicators and 23 per cent of the Orchestrators but given that 14 per cent of those in Non-graduate jobs also claimed this, it flags up the need for further detailed research on graduates in jobs classified as non-graduate and the importance of exploring and finding a more satisfactory way of clarifying and classifying the non-graduate job category.

At this mid-career stage of their careers, however, substantial proportions of those in all categories reported employment experience in another organisation had been an important in obtaining their current employment; most often seen as significant in the Non-graduate and Orchestrator categories.

9.9 Accessing current jobs in early mid-career

It is not surprising that at this stage of their careers, almost a quarter of respondents had obtained their jobs via internal promotion and between 10-15 per cent via professional networking. The other most frequent sources cited reflect the extent to which employment intermediaries have become an increasingly important element of the labour market, and the increased importance of the internet, with evidence of reported successful online job-seeking via recruitment agencies and employers' websites. The interview accounts revealed substantial use of specialist internet platforms, networking and the activities of professional 'headhunters'; the last of these a clear sign to those concerned that their careers were firmly established, and their knowledge and skills sought. Family and friends remained important sources of information about careers, and the analysis revealed interesting gender differences.

Post graduate qualifications and further qualifications had been obtained by half of the respondents and of those, around half had been academic postgraduate qualifications, many

of which have a clear vocational objective and most of the others were professional and vocational qualifications. Those working in jobs requiring postgraduate qualifications were concentrated in Expert occupations to a greater extent than the graduates in the two other graduate occupational groups. Analysis undertaken in both Chapters 3 and 7 revealed that those in jobs for which a postgraduate degree had been required, although not necessarily shown in the Chapter 4 analysis to have realised a higher graduate premium than those without postgraduate qualifications, reported higher job satisfaction and greater likelihood of being in a job in their organisations done solely or mainly by graduates.

Other professional or vocational training had been required by just under a third of Experts and Communicators, but only by 18 per cent of Orchestrators and 14 per cent of Non-graduate jobholders. Asked what had helped them to gain appropriate jobs for people with their knowledge and skills, subject of degree studied, qualifications, and university attended were cited as important by many, but the accounts provided by those respondents who were interviewed suggest that most regarded these as a foundation for experience since graduation, which had become very much more important in accessing the kinds of jobs they now held and aspired to. We conclude that the SOC(HE)2020 classification as it stands has probably been a better evaluator of early career graduate labour market integration, which is what it was designed for, rather than as a classification for medium-stage careers. Both the survey data about use of skills in current jobs and the interview data revealed that an increasingly high proportion of the respondents whose job titles led them to be classified as Experts or Communicators (appropriately, given that their subject knowledge and skills were the most important prerequisite for their ability to do their jobs), had by this time moved to more senior roles where they had been required to exercise orchestration capabilities and develop hybrid skills.

9.10 The importance of non-pecuniary values in graduate career decision-making

Responses to a question about main reasons graduates had taken their current jobs revealed that those in the three graduate job categories were significantly more likely to have done so for intrinsic work-related reasons than those in Non-graduate jobs and revealed high levels of satisfaction with their current jobs. The most frequent reason selected by both Experts and Communicators for accepting their current job was ‘It was exactly the kind of job I wanted ‘, but to understand the values underlying that conclusion, it was important to consider the wider values informing their career decision-making. Orchestrators were most likely to have indicated that ‘Salary level was attractive’, but the second most indicated reason for all three was ‘It offered interesting work’. Job security was one of the job’s attractions for around a third of Experts and only slightly less often indicated by the other groups, including the Non-graduates, and the same pattern applied to the option ‘it offered socially-useful work’, indicated by 26 per cent of the Experts at around one in five of the members of the other categories. As was discussed in detail in Chapter 6, the values that underlie reasons for choice of subject of study, career paths and satisfaction with employment, have an important impact on career decision-making and not always congruent with economic or social returns.

As at the previous stage of the survey and earlier graduate tracking studies, the most often-cited long-term values were ‘doing a job I really enjoy’ and ‘developing my capabilities’. These job attributes, along with ‘career progression’, ‘job security’ and ’the ethics of my employer’ were all more frequently rated as very important than “high financial reward’. Nevertheless, 70 per cent of the respondents rated both ‘high financial reward’ and ‘doing socially useful work’.as very important. Perhaps the most interesting finding among these ambitious graduates is the substantially increased incidence of rating job security highly in comparison responses at the earlier stage of this research and in earlier UK studies. This may reflect the life-cycle stage of these respondents but may also reflect their earlier experiences or awareness of the increase in precarious employment and its disadvantages.

The detailed analysis of values distinguishes between the majority of respondents who took principled but expedient accounts, trading off some values where there was a conflict between, and just over third who exhibited strong value-led orientations to career decision-making. Focussing on this interesting minority, four categories were identified: those with a strong enthusiasm for and an intrinsic orientation to their occupation; those who prioritised the extrinsic rewards provided by their work; those with strong ethically led orientations where doing work of social value and the ethics of their employer had informed career choices; and those whose primary concern was job security.

The analysis revealed the close relationship between values, choice of subject studied and current outcomes. Graduates who strongly valued money or prestige had sought jobs that provided these and by and large succeeded in achieving their objectives more likely to be in higher paid, higher status jobs but ironically exhibited less satisfaction with their current jobs than those less well-paid but more intrinsically committed to their work or the values that it, who had also achieved success according to their prioritised values.

Graduates who strongly valued job security found themselves in a much more difficult position graduating as they did into a changing labour market still recovering only slowly from the grip of a recession. This group demonstrates that the achievement of personal needs is not always enough if it comes with a high level of sacrifice. In seeking and finding jobs that offered security above anything else, this group had needed to sacrifice other factors to such an extent that they were less satisfied with their employment outcomes overall, as was discussed in Chapter 8.

9.11 Respondents evaluation of their career development so far

As far as respondents' satisfaction with their current occupations was concerned, the overall picture is positive. Comparing levels of overall satisfaction with their current jobs according to SOC(HE)2020 category, we find virtually similar levels of satisfaction across the three graduate categories, and significant but not substantially lower likelihood of high satisfaction ratings among the Non-graduate jobholders. Few of them *were* in employment that did not make use of (and indeed, benefit from), their HE knowledge and skills. Most were in areas of employment where organisational restructuring and access to ICT has changed divisions of labour in the workplace and the way that work objectives are met or were in low-paying sectors in the Public or Not-or-Profit sectors where employers have been able to enhance the skill-base of their workforce, or (in the case of the latter) simply cannot afford to pay more when there is a ready supply of well-qualified and able workers willing to accept low wages. The minority of those interviewed who clearly were in inappropriately lower skilled employment are likely to have been making choices that reflected lifestyle values.

9.12 Is there evidence that social advantage and disadvantage persist beyond HE and continues to facilitate and restrict access to opportunities and rewards?

Chapter 2 reported that, as in the graduate labour supply as a whole, the Stage 5 Futuretrack sample members predominantly came from Managerial and professional backgrounds, had classified their ethnicity as white, had embarked on their undergraduate education aged younger than 20 and studied full-time as undergraduates.

Comparison of their earnings some 9 to 10 years after graduation according to socio-economic background shows little difference in earnings that cannot be explained by their other educational, demographic, sectoral and job characteristics, including subject studied, the type of university attended, and hours worked. In terms of current occupation, those from routine and manual backgrounds were somewhat more likely to be in Non-graduate jobs and less likely to be in Expert jobs than graduates from managerial and professional backgrounds, who were also more likely to have acquired postgraduate qualifications. However over 80 per cent

of the 'non-standard' graduates *were* in graduate job categories and thus, by definition, successfully upwardly mobile in relation to their families of origin.

Chapter 8 provided a detailed exploration of the relationships between socio-economic background, the incidence and degree of social mobility and quality of job achieved by 2019. Relative to their parents, the proportion of the Futuretrack cohort working in higher and lower managerial and professional jobs was found to be considerably higher, with this expansion being seen especially in the lower managerial and professional occupations. However, they did not appear to have been as successful in accessing higher managerial and professional jobs as those whose parents were also from a managerial or professional background, or to earn equally high salaries. Following this, there is a difference between what helps you to get a job, and what helps you to progress in it. Qualifications and educational achievements remained important as a base line, but the interview accounts suggested that what increasingly matters is experience, successful performance in their roles, soft skills (as revealed in Chapter 2) and seeking or being presented with opportunities to go further. There is evidence in our findings and that of others cited, that factors such as social class, ethnicity, and especially gender play a role in how people's performance is evaluated, their ability to demonstrate through use the knowledge and skills that they possess, assessments about their suitability for promotion and managerial roles (and their own wishes for such roles). This, and their professional and personal networks, facilitated or restricts the opportunities presented to them in the workplace and the wider labour market. The graduates' age and life-cycle stage is bringing new inequalities and advantages and disadvantages to the fore. We see, for example, the differential impact of family building on the careers of men and women in Chapters 3, 6 and 8.

The lack of evidence of the effect of socio-economic background in the earnings and occupational analyses reflects the fact that they are disguised within these other educational, occupational, and demographic characteristics. Graduates from routine and manual backgrounds who have completed higher education, depending on their subjects of study and the type of university they attended, are atypical of the social class they grew up in. For example, from a comparison of the types of higher education institutions where participants had completed their first degree, we found that a slightly higher proportion of those working in postgraduate jobs had graduated from highest tariff universities. Graduates from Managerial and professional backgrounds were more likely to have completed academic postgraduate qualifications than those from less advantaged backgrounds. As their careers have progressed, they have acquired the attributes that lead to occupational and social advantage, which are in themselves more reliable determinants of access to the most prestigious, satisfying, and well-paid occupations.

The best illustration of an important variable that affected access to high earnings and wide graduate occupational choice is geographical location. Figure 4.4 showed the considerable regional disparities in average graduate earnings. Some participants had experienced very limited geographical mobility throughout the course of their education and subsequent careers, and at previous stages of the Futuretrack research, we found that participants who lived at home while they were studying, except for those living in London, were disproportionately from lower social class backgrounds and they were also more likely to have attended HEIs of a lower tariff than their prior educational achievements would suggest they could have accessed. This lack of early geographical mobility was replicated in their post-graduation careers and they remained embedded in social networks and economic settings that did not provide them with the resources they required to develop graduate careers.

We found some evidence of limited downward occupational mobility among those from Managerial and Professional backgrounds, with women more likely to have experienced downward occupational mobility or remain in lower managerial and professional jobs and intermediate jobs.

Throughout the report there are some tentative findings relating to associations between occupations accessed, earnings and attitudes according to particular categories of minority ethnic graduates, but these sub-groups are so small that our findings must be regarded as indicating areas that deserve more comprehensive research.

9.13 Policy Implications

The information collected and analysed at this fifth stage of the Futuretrack Longitudinal Study has enabled us to assess and attempt to achieve better understanding of how far the different clusters of knowledge and skills that these 2009/10 graduates acquired in HE has enabled them to obtain appropriate employment, develop careers and contribute to the economy. We have focussed on three longer-term outcomes: their occupations, their earnings, and the non-pecuniary aspects of their jobs. We looked at the routes they took to achieve these outcomes, sometimes via postgraduate education or further professional training, and examined the intergenerational mobility they experienced. We provide evidence that has addressed these questions and our findings are summarised earlier in this concluding chapter and discussed more fully in the report.

We conclude by identifying key areas where new or invigorated directions for policies are required, along with research priorities that we hope can be addressed in the future:

- Employers, professional associations, and governmental policymakers must address *the continuing and growing gender gap in graduate earnings,* a matter of increased concern that needs intensified scrutiny and greater efforts by all these bodies through further concerted actions, initiatives and policies designed to tackle this issue. The gender gap in graduate earnings may emerge through the recruitment of more male graduates than females to higher paid jobs within an organisation, via gender-biased promotion within organisations or both. Annual gender pay gap reporting is currently required of all organisations with more than 250 employees. Such reporting puts a public spotlight on organisations with large gender pay gaps, especially those that employ significant numbers of graduates. This, in turn, can cause employers to think more about the reasons underlying gender pay differences and act to remedy the situation. It is important that such information is made publicly available to potential employees. *We recommend that gender pay gap reporting should be extended to organisations with 25 or more employees and should be presented in a manner that identifies the gender pay gap within the highly qualified workforce.*

- HEIs, employers and policy makers need to consider *how to prevent the seeming ossification of social mobility* to achieve fairer access to opportunities, which would almost certainly bring more innovative contributions to economic development and socially representative participation at the higher end of the labour market. The access and admissions policies of higher education institution are now monitored by the Office for Students. An independent review of the effectiveness of such monitoring activities is currently in progress, to inform the ways in which higher education institutions will be required to develop a strategic approach to fair access policies, and to establish their monitoring and assessment regimes. *We urge the Office for Students to include tough penalties to be applied to higher education institutions that fail without good reason to deliver improved access for potential students from disadvantaged backgrounds and to ensure their retention within higher education.*

- Graduate earnings have long been one of the key outcome measures used by policy makers to evaluate not just the apparent success of actions to expand higher education, but now form part of the outcome measures to evaluate individual higher education institutions. The availability of new and large-scale continuous sources of information, brought together in the Longitudinal Educational Outcomes datasets. We have shown in this report the importance of including information on hours worked and location in these data and we support further calls to this effect[29]. More importantly though, while we recognise the value of monitoring and evaluating individual financial rates of return, we advocate the *development of an effective means of recognising and monitoring the wider benefits of graduate study to individuals, communities, and society as a whole*. It has been widely acknowledged that, in addition to the obvious measurable financial benefits of higher education participation, there are other less-easily-measured impacts on individual well-being and capacities, and on the communities and societies to which they contribute[30]. Recent calls to make progress on this issue have been made by Universities UK[31] and within the Independent Review of the Teaching Excellence and Student Outcomes Framework[32]. *We strongly support these calls to develop indicators of the wider benefits of higher education and propose that the Office for Students should spearhead this work.*

- Detailed and up-to-date *analysis of earnings differences by subject of degree and the knowledge and skills acquired* can provide useful indicators on the emergence of skills shortages or over supply of graduate labour. For example, aggregations of subjects such as STEM are justifiable, useful, and revealing, but disaggregation within them, and even more, within heterogeneous subjects such as Interdisciplinary and the Biological Sciences, would provide better labour market information about the knowledge and skills sought by employers and used in graduate recruitment. *This is an area where further statistical cooperation between the Department for Education, the Higher Education Statistics Agency, the Department for Work and Pensions, HM Revenue and Customs, and the Office for National Statistics could lead to significant improvements in the identification of over or under supply of specific graduate skills and knowledge.* Making such detailed information available in a timely manner could help potential students with their subject choices, assist institutions with curriculum planning and provide employers with vital data for planning recruitment and pay strategies.

- Finally, *we recommend the continuation of long-term longitudinal studies of graduates and the creation of new such studies to enable further cross cohort comparisons of graduates' careers and opportunities*. When we commenced the Futuretrack Study in 2005, we could not have foreseen the value of the study fifteen years into the future. Support for the continuation of this study and for new cohort studies is vital. In this respect we are fortunate in gaining further funding from the Nuffield Foundation to follow the Futuretrack cohort as they navigate their ways through the Covid 19 pandemic.

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[29] Department for Education, 2021.

[30] See, for example Wilson and Pickett, 2009, Pascarella and Terenzini 2005, Brennan *et al.* 2013.

[31] Snelling, C. and R. Fisher, 2020.

[32] Department for Education, *op. cit.*

10 References

Adams, R. (2020). 'Radical plan to overhaul university admissions' in The Guardian, 27th June,: 1-2.

Ashley, L., Duberley, J., Sommerlad, H. and D. Scholarios (2015) A qualitative evaluation of non-educational barriers to the elite professions. Social Mobility and Child Poverty Commission.https://dera.ioe.ac.uk/23163/1/A_qualitative_evaluation_of_non-educational_barriers_to_the_elite_professions.pdf

Bekrahdnia, B. (2013). '"Higher education in the UK: Punching above our weight." Really?' 2013 HEPI Annual Lecture, delivered 26 November 2013. Oxford: Higher Education Policy Institute.

Belfield, C., J. Britton, F. Buscha, L. Dearden, M. Dickson, L. van der Erve, L. Sibieta, A. Vignoles, I. Walker and Y. Zhu (2018) 'The impact of undergraduate degrees on early-career earnings'. Department for Education Report, Institute for Fiscal Studies.

Brennan, J., N. Durazzi and T. Séné (2013) *Things we know and don't know about the wider benefits of higher education: a review of the recent literature*. BIS Research Paper, URN BIS/13/1244. Department for Business, Innovation and Skills, London, UK. http://eprints.lse.ac.uk/55427/

BIS (2016). Wakeham Review of STEM Degree Provision and Graduate Employability. London: Department of Business and Skills.

Britton, J., L. Dearden, L. van der Erve and B. Waltmann (2020) 'The impact of undergraduate degrees on lifetime earnings'. Report, Institute for Fiscal Studies.

Committee on Higher Education (1963). Higher Education Report of the Committee Appointed by the prime Minister under the Chairmanship of Lord Robbins 1961-63. Cmnd.2154. London: HMSO.

CBI (2010). Ready to Grow? London: Confederation of British Industry.

CIPD (2017). From 'inadequate' to 'outstanding': making the UK skills system world class. Policy Report, April 2-17. London: CIPD.

Conlon, P. and Patrignani, P. (2011) The Returns to Higher Education Qualifications, London: Department for Business, Innovation and Skills.

Coser, L. (1974) Greedy Institutions: Patterns of Undivided Commitment. New York: Free Press.

Coulter, S. (2016) 'The UK labour market and "the great recession"', in Myant, M., Theodoropoulou, S. and Piasna, A., (eds.) *Unemployment, Internal Devaluation and Labour Market Deregulation in Europe*. Brussels, Belgium: European Trade Union Institute, 2016, pp. 197-227

Cowling, M. (2001) 'Fixed Wages or Productivity Pay: Evidence from 15 EU Countries.' Small Business Economics, 16, 3, 191–204.

Daenekindt, S. and Roose, H. (2011) 'A Mise-en-scène of the Shattered Habitus: The Effect of Social Mobility on Aesthetic Dispositions Towards Films' European Sociological Review, 29(1)

de Gayardon, A., C. Callendar, K.C. Deane and S. DesJardins (2018) 'Graduate indebtedness: its perceived effects on behaviour and life choices – a literature review'. Centre for Global Higher Education, UCL.

Department for Business, Innovation and Skills (BIS) (2014) Participation Rates in Higher Education: Academic Years 2006 to 2007 and 2012 to 2013 (Provisional), London: BIS.

Department for Business, Energy & Industrial Strategy (2017) Good Work: The Taylor Review of Modern Working Practices. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/627671/good-work-taylor-review-modern-working-practices-rg.pdf

Department for Education (2019) Graduate labour market statistics 2018, London: Department for Education.

Department for Education (2020) Participation Rates in Higher Education: Academic Years 2006/2007 – 2017/2018 (Provisional) Department for Education, available at: https://www.gov.uk/government/statistics/participation-measures-in-higher-education-2006-to-2019.

Department of Education (2020). 'Education Secretary calls for an end to low value degrees'. 26th May 2019. https://www.gov.uk/government/news/education-secretary-calls-for-an-end-to-low-value-degrees

Department for Education (2021) Independent Review of the Teaching Excellence and Student Outcomes Framework (TEF).

Easterbrook, M. J., T. Kuppens, and A. S. R. Manstead (2016). 'The Education Effect: Higher Educational Qualifications are Robustly Associated with Beneficial Personal and Socio-political Outcomes', Social Indicators Research, 126(3), 1261-1298.

Egerton, M. (2001) 'Mature graduates 1: occupational attainment and the effects of labour market duration' Oxford Review of Education, Vol. 27, No.1 135-150, 135-150.

Elias, P., K. Purcell, S. Durbin, R. Davies, R. and S. Warren (2005) The employment of social science PhDs in academic and non-academic jobs: research skills and postgraduate training, Swindon: Economic and Social Research Council.

Elias, P. and K. Purcell (2004a) 'Is mass higher education working? Evidence from the labour market experiences of recent graduates', National Institute Economic Review, 190, 60 – 74.

Elias, P. and K. Purcell (2004b) 'The Earnings of Graduates in their Early Careers'. Research Paper 5, Researching Graduate Careers Seven Years On. Warwick, Institute for Employment Research.

Elias, P. and Purcell, K. (2013) Classifying graduate occupations for the knowledge society – Futuretrack Working Paper 5. Coventry: HECSU and Institute for Employment Research, University of Warwick.

Elias, P. and K. Purcell (2017) 'Mathematics and social mobility'. Paper presented at the Western Economic Association International conference, January 5th, Universidad Catolica, Santiago, Chile.

Friedman, S. (2012b) 'Cultural omnivores or culturally homeless? Exploring the shifting cultural identities of the socially mobile'. Poetics 40: 467–89

Friedman, S., Laurison, D. and Miles, A. (2015) 'Breaking the "class" ceiling?: social mobility into Britain's elite occupations'. The Sociological Review, 63 (2). pp. 259-289

Green, F. and G. Henseke (2016) 'The Changing Graduate Labour Market: Analysis Using a New Indicator of Graduate Jobs'. IZA Journal of Labor Policy, 5:14.

Gregg P. and J. Wadsworth (2010) The UK labour market and the 2008-2009 recession, *National Institute Economic Review*, Vol.212, Issue 1: 61-72.

Goldthorpe, J. H. (2013) 'Understanding – and Misunderstanding – Social Mobility in Britain: The Entry of Economists, the Confusion of Politicians and the Limits of Educational Policy' in Journal of Social Policy, 42(3), 431-450.

Hall, D. T. and D.E. Chandler (2005). 'Psychological success: When the career is a calling., Journal of Organizational Behavior, 26(2), 155-176.

House, G. (2020) Postgraduate education in the UK. HEPI Analytical report 1. London: Higher Education Policy Institute.

ISE (2018). The Global Skills Gap in the 21st century. London: Institute for Student Employers.

Kelsall, R., A. Poole and A. Kuhn (1972) Graduates: the Sociology of an Elite. London: Macmillan.

Laurison, D. and Friedman, S. (2015) Introducing the Class Ceiling: Social Mobility into Britain's Elite Occupations. Sociology, London School of Economics, http://www.lse.ac.uk/sociology/pdf/Working-Paper_Introducing-the-Class-Ceiling.pdf.

Lee, Y.-j. and M. Sabharwal (2016). 'Education-Job Match, Salary, and Job Satisfaction Across the Public, Non-Profit, and For-Profit Sectors: Survey of recent college graduates' Public management review, 18(1), 40.

Macmillan, L. and Vignoles, A. (2013). Mapping the occupational destinations of new graduates. Social Mobility and Child Poverty Commission.

http://dera.ioe.ac.uk/18589/7/Mapping_the_occupational_destinations_of_new_graduates_Final.pdf

McKnight, A. (2015) Downward mobility, opportunity hoarding and the 'glass floor',

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/447575/Downward_mobility_opportunity_hoarding_and_the_glass_floor.pdf

Marginson, S. (2016). The Worldwide Trend to High Participation Higher Education: Dynamics of Social Stratification in Inclusive Systems. Higher Education, 72, 413-434.

Montacute, R. and C. Cullinane (2018). Access to Advantage. London: Sutton Trust.

Mora, J. G., A. G. Aracil and L. E. Vila (2007). 'Job satisfaction among young European higher education graduates', Higher Education 53, 29-59.

OGL (2019). Review of Post-18 Education and Funding. Report of the independent panel chaired by Sir Philip Augar, report presented to Parliament by the Secretary of State for Education by Command of her Majesty, May.

Pascarella, E.T. and Terenzini, P.T. (2005) How College Affects Students: a third decade of research, San Francisco: Jossey-Bass / John Wiley.

Purcell, K. and P. Elias (2004) 'Seven Years On: graduate careers in a changing labour market'. Short report, Higher Education Careers Services Unit, Manchester.

Purcell, K., P. Elias and G. Atfield (2009) 'Analysing the relationship between higher education participation and educational and career development patterns and outcomes: a new classification of higher education institutions', Futuretrack Working Paper #1, Institute for Employment Research, University of Warwick. https://warwick.ac.uk/fac/soc/ier/futuretrack/findings/ft3.1_wp1_access_tariff_classification.pdf

Purcell, K., Elias, P. and N. Wilton (2007) 'Hard lessons for lifelong learners? Age and experience in the graduate labour market'. Higher Education Quarterly, Vol.61:1:57-82.

Purcell, K., Elias, P. and N. Wilton (2006) Looking Through the Glass Ceiling: a detailed investigation of the factors that contribute to gendered career inequalities. Liverpool: European Social Fund Higher Education Report/ Coventry: Warwick Institute for Employment Research.

Purcell, K., P. Elias, G. Atfield, H. Behle, R. Ellison and D. Luchinskaya (2013). 'Transitions into employment, further study and other outcomes', Futuretrack Stage 4 Report, Institute for Employment Research, University of Warwick. https://warwick.ac.uk/fac/soc/ier/futuretrack/findings/stage_4_report_final_06_03_2013.pdf

Raddon, A. and J. Sung (2009) 'The Career Choices and Impact of PhD Graduates in the UK: A Synthesis Review'. Report prepared for the Economic and Social Research Council the Research Councils UK. Centre for Labour Market Studies, University of Leicester.

Shockley, K. M., H. Ureksoy, O. B. Rodopman, L.F. Poteat and T. R. Dullaghan, T. R. (2016). 'Development of a new scale to measure subjective career success: A mixed-methods study', Journal of Organizational Behavior, 37(1), 128-153.

Snelling, C. and R. Fisher (2020) *Protecting the value of UK degrees: reviewing progress one year on from the statement of intent*. UK Standing Committee on Quality Assessment. Universities UK.

Social Mobility and Child Poverty Commission (2009) 'Unleashing Aspiration: The Final Report of the Panel on Fair Access to the Professions' https://dera.ioe.ac.uk/9496/7/fair-access_Redacted.pdf

Social Mobility and Child Poverty Commission (2012) 'Fair access to professional careers: a progress report', Cabinet Office

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/61090/IR_FairAccess_acc2.pdf

Social Mobility and Child Poverty Commission (2014) '2014 State of the Nation Report', Social Mobility and Child Poverty Commission.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/365765/State_of_Nation_2014_Main_Report.pdf

Social Mobility Commission (2020) Changing gears: Understanding social downward mobility. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936038/SMC_Changing_gears_Downward_mobility_Main_Report.pdf

Støren, L. V. and C. A. Arnesen, C A. (2011). 'Winners and Losers' in Allen, J. and R. van der Velden (eds.) The Flexible Professional in the Knowledge Society. New Challenges for Higher Education. Dordrecht, Heidelberg, London and New York: Springer, pp. 199-240.

Social Mobility Commission (2017). Time for Change: An Assessment of Government Policies on Social Mobility 1997-2017.London: Social Mobility Commission, June.

Sutton Trust and The Social Mobility Commission (2019) Elitist Britain 2019.: the educational backgrounds of Britain's leading people.

Tayor, P. and P. Bain (1995) 'An assembly line in the head: work and employee relations in the call centre'. Industrial Relations Journal, Vol. 30:101.

Tayor (2019). Social Mobility Commission in Great Britain - state of the nation 2018-2019.London: Social Mobility Commission.

Universities UK (2015). The Economic Role of Higher Education on the UK. London: Universities UK. Report of the Scoping Group chaired by Professor Sir Robert Burgess.

Wakeling, P. and Laurison, D (2017) Are postgraduate qualifications the ‘new frontier of social mobility’? The British Journal of Sociology, 68, 3, 533-555.

Wilkinson, R. and K. Pickett (2009) *The Spirit Level: Why More Equal Societies Almost Always Do Better.* London: Allen Lane.

Appendix A: Methodology

Futuretrack is a multi-stage survey of applicants who made an application for a full-time place in a UK Higher Education Institution (HEI) at the undergraduate level in 2006. The original population sampling frame was created and managed by the Universities and Colleges Admission Service (UCAS) in June 2006.

UCAS recorded a total of 506,304 applicants for an undergraduate place in a UK HEI in 2006. Given that some of these applications were made after the first survey, the survey population for Stage 1 consisted of 427,786 applicants. UCAS subsequently supplied anonymised data for all 506,304 applicants, providing details of subjects applied for, institutions applied to, accepted subject and institution, personal information including age, gender, social background and ethnic origin, educational information (type of school attended and tariff points), and whether the applicant was a home applicant or from overseas.

A.1 The Futuretrack datasets

Futuretrack Stage 1 main survey
In May-December 2006 in total 121,368 UCAS, applicants took part in the first stage of the Futuretrack survey, 82.7 per cent of whom were recorded by UCAS as having accepted a full-time place to commence in 2006. For 5 per cent of the respondents information on whether or not they had been accepted by an HEI is missing.

Futuretrack Stage 1 short survey
In addition to the Stage 1 main survey, a supplementary survey of non-responding HE non-participants (known as 'Stage 1 short survey') was developed. The short survey was conducted in December 2006 - February 2007, and 7,590 UCAS applicants took part, most of whom (85 per cent) were recorded by UCAS as not having been accepted for study in 2006 (14.9 per cent unknown).

Futuretrack Stage 2 survey
In June-December 2007 respondents of Stage 1 who had indicated a willingness to participate in future rounds of data collection and who had provided an email address were re-contacted and invited to complete the Stage 2 questionnaire. A total of 49,555 respondents replied to this questionnaire. They were either Stage 1 main survey or short survey participants, or completely new entrants to the study. The 5,497 new entrants were recruited via HE institutions and the project websites from amongst year 2006 UCAS applicants.

Futuretrack Stage 3.1 survey
At the end of January 2009 Stage 2 respondents who had provided an email address and were willing to participate in future stages of the survey were re-contacted and invited to complete the Stage 3.1 questionnaire. In addition to Stage 2 participants, new entrants were invited to the study. They were again recruited via HE institutions and the project websites from amongst year 2006 UCAS applicants. The cooperation with Higher Education Funding Council for England (HEFCE) resulted in that eligible students were also targeted in February 2009 via a smart link placed at the end of the National Student Survey (NSS) 2009. The Stage 3.1 survey ended in July 2009. A total of 24,569 respondents completed the questionnaire, of which 2,512 were new entrants.

The Stage 3.1 questionnaire was mainly aimed at final year HE students, and students who were not in their final year were asked only a few basic questions. Some undergraduate courses last longer than three years, especially courses at Scottish HE institutions and courses of certain subjects, *e.g.,* Medicine, Engineering and Languages. Looking at the Stage 3.1 unweighted data it appeared that nearly half (45 per cent) of the student respondents were

not yet in their final year, and consequently not much data was collected about them. Therefore Stage 3.1 data gave only a partial view of the final year students as certain subject groups and Scottish HE institutions were underrepresented.

Futuretrack Stage 3.2 survey
It was deemed necessary to conduct Stage 3.2 survey to also include fourth year finalists. The survey commenced in January 2010, and in total 27,053 Stage 1, Stage 2 or Stage 3.1 respondents who were potentially in their fourth and final year of studies were contacted. The questionnaire was principally the same as in Stage 3.1. As previously, HE institutions were targeting eligible students, and NSS 2010 included a smart link to the Stage 3.2 questionnaire. The Stage 3.2 survey ended in July 2010. A total of 6,360 respondents replied to the questionnaire, of which 744 were new entrants to the study.

Data from Stage 3.1 and 3.2 were merged to create a joint Stage 3 dataset which had originally 30,929 records. Altogether 4,375 respondents had participated in both Stage 3.1 and 3.2 and consequently one of their responses was to be removed. As a rule, the response that contained less data, which normally was the response from Stage 3.1, was removed. The final number of records in the joint Stage 3 dataset was 26,554 of which 20,206 originated from Stage 3.1 and 6,348 from Stage 3.2.

Futuretrack Stage 4 survey
Stage 4 commenced in November 2011 and ended in February 2012. The invitation to complete the Stage 4 questionnaire was sent to 136,237 Stage 1, 2 or 3 participants who were willing to be contacted. For each person, their most up-to-date email address was used. The contact details originated from different stages as follows: 60.9 per cent from Stage 1 main and short survey, 20.5 per cent from Stage 2 and 18.6 per cent from Stage 3.

To boost the response rate, HEI Alumni offices and Careers advisers invited 2009-10 graduates to take part in the survey. Additionally, several organisations were involved in recruiting potential new entrants using their established connections to graduates and HE careers advisers. These organisations were the Higher Education Careers Services Unit (HECSU) via their *Prospects* and careers advisers' networks and newsletters, the Graduate Recruitment Bureau (GRB), the Association of Graduate Recruiters (AGR), the Council for Industry and Higher Education (CIHE), the National Union of Students (NUS), Research Councils UK (RCUK), Vitae, *Back on course* and several professional associations with large numbers of graduate and undergraduate members. The study was also promoted on several websites, in social media (Facebook, Twitter, LinkedIn, Student room) as well as via traditional media. Altogether 17,075 usable responses were received, of which 2,163 were new entrants to the study.

A.2 Futuretrack Stage 5 survey

We identified an initial sample of 13,146 people who had completed the Stage 4 survey, were willing to be contacted again (and had an email address), were UK nationals who were UK domiciled at the time of applying to HE and who had completed a first degree or were doing a first degree at the time of the Stage 4 survey.

In order to boost the number of responses we then identified a second cohort who had completed the Stage 3 survey (but not Stage 4), were willing to be re-contacted (and had an email address), were UK nationals and born in the UK[33] and were studying for an undergraduate degree at Stage 3. This second sample consisted of 9,572 people.

[33] Country of birth is UK was used as a proxy for UK domiciled at the time of applying to HE as this information was not available for Stage 3 respondents.

In total, 22,718 Futuretrack graduates were contacted for Stage 5, 58 per cent of whom had participated most recently at Stage 4 and 42 per cent who had participated most recently at Stage 3.

The Stage 5 survey was an online survey administered via the survey software Qualtrics. It was carried out between March 2019 and October 2019. Participants were invited via email and sent an individual link to the survey which would allow us to link their response back to their responses from previous stages. There were two different versions of the survey. The first (referred to as FT5S4) was designed for the respondents of the Stage 4 survey and asked about their current activities, work and qualification history and some general questions about themselves. The FT5S4 survey was piloted with 20 Stage 4 respondents in March 2019 followed by a full rollout in April 2019.

A second version of the survey (referred to as FT5S3) was then designed to be sent to respondents to the Stage 3 survey who had not participated at Stage 4. This version required some additional questions to ensure comparability with the previous survey. FT5S3 began with a screening question to ensure that these Stage 3 respondents had completed their undergraduate degree and it also contained additional questions asking about respondents' activities at the end of 2011 (the time of the Stage 4 survey) which would allow us to create some equivalent Stage 4 variables. The FT5S3 survey was distributed in July 2019.

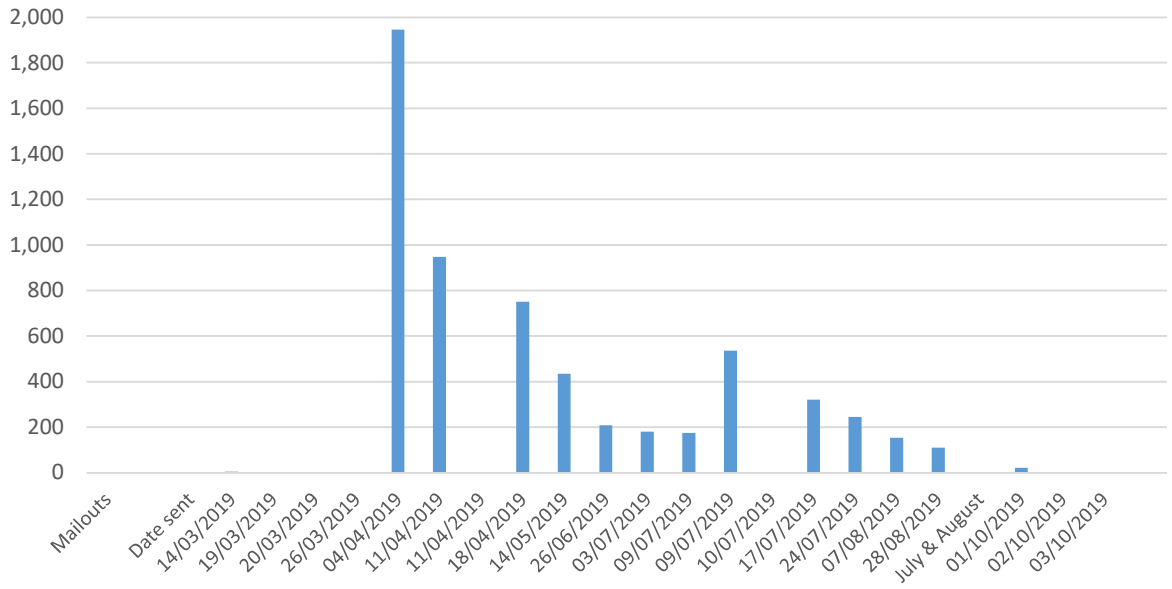
We also designed a generic survey based on the FT5S3 survey, with an additional question which asked the respondent for the subject of their undergraduate degree. This survey was advertised via The Association of Graduate Careers Advisory Services, the National Centre for Universities and Business and the Institute of Student Employers. UK-domiciled students who started their undergraduate degrees in 2006 were encouraged to check their email inboxes for an individual invitation to complete the Futuretrack Stage 5 survey and directed to the generic version of the survey.

A series of reminder emails were sent to the participants along with targeted emails to partial responders encouraging them to submit their response. The survey was also promoted via a Warwick University press release, twitter (IER, Warwick University, and Futuretrack twitter accounts), a Futuretrack study Facebook page and news items and a blog post on the IER and Futuretrack websites.

After removing partial and duplicate responses, in total we received 6,053 responses to the Stage 5 surveys. This breaks down into 4,679 responses to the FT5S4 survey and 1,374 responses to the FT5S3 survey, giving a response rate of 36 per cent and 14 per cent respectively. The lower response rate from the participants whose most recent contact was at Stage 3 was expected due to the longer interval since contact - it had been over 7 years since the Stage 4 survey and 10 years since Stage 3 – and associated problems with email addresses being further out of date. 13 responses to the FT5S3 survey were not useable as they were screened out at the first question which asked them whether they completed their undergraduate course. The total number of useable survey responses was 6,040.

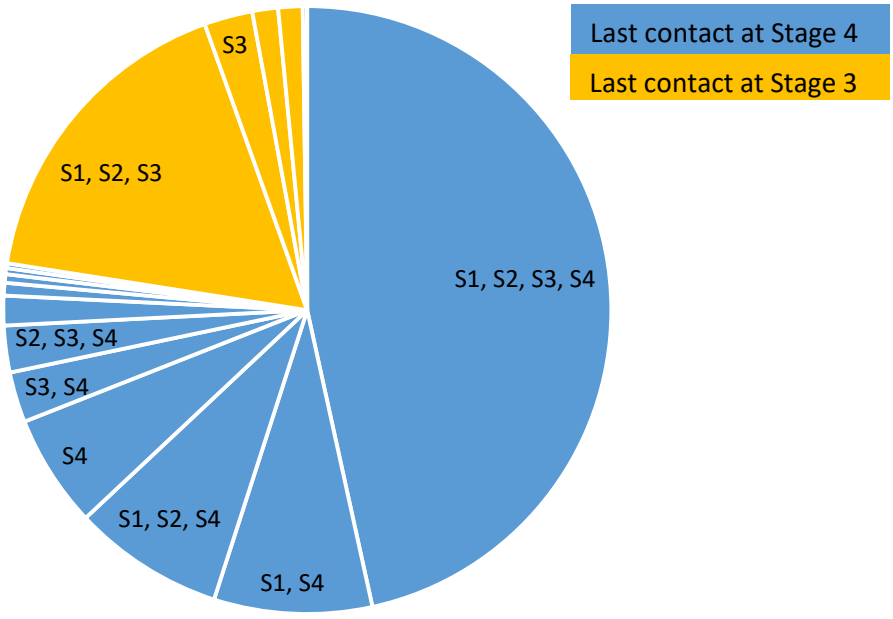
Although we did receive a small number of responses to the generic survey which had been advertised via organisations in touch with graduates, none of these could be linked back to any previous stages of the Futuretrack study and so could not be included. Figure A.1 shows the profile of responses from March through to October 2019. The smaller peak in July relates to the mail out of the FT5S3 questionnaire.

Figure A.1 Distribution of Stage 5 responses, March 2019 to October 2019



The responses to the Stage 5 surveys were linked back to responses from the other stages of the study to create a longitudinal dataset. Figure A.2 below shows that nearly half (47 per cent) of the 6,040 respondents to the Stage 5 survey had participated in all four of the previous stages of the study.

Figure A.2 Distribution of Stage 5 responses by participation at previous stages



Source: Futuretrack: combined Stages 1-5 dataset, data not weighted. N = 6,040

In several areas of analysis, we wanted to compare the position of the Stage 5 respondents in 2019 to their position in 2011 at the time of the Stage 4 survey. However, 23 per cent of the Stage 5 respondents did not participate in the Stage 4 survey. To overcome this issue we

created some new variables which combined information from the Stage 4 survey with information collected at Stage 5 about respondents' activities in 2011 (from the FT5S3 survey) to create some 'Stage 4 equivalent variables'. These were created for economic activity, industry, sector, organisation size and SOC(HE) and so for analysis of how these have changed between 2011 and 2019 we were able to include all Stage 5 respondents. For any other comparisons between Stage 4 and Stage 5, we have restricted the analysis to Stage 5 respondents who participated at Stage 4.

A.3 Classifying jobs in relation to Higher Education - SOC(HE)2020

Respondents to FT5S3 were asked to provide information about the job they held in 2011, the date of the Stage 4 survey. To create a version of SOC(HE) for use in Stage 5 that was equivalent to that used in Stage 4, we combined the SOC(HE) information from the Stage 4 survey, which was based on the SOC2010 classification, with the information collected at Stage 5 about respondents' jobs in 2011, which we also coded to SOC2010 for consistency. The SOC(HE) variable for 2019 (Stage 5) is based on the new SOC2020 classification[34]. Therefore, when comparing SOC(HE) occupational categories in 2011 with 2019, we are not comparing like with like. To partially resolve this inconsistency, when we updated the SOC(HE) classification for SOC2020 we also modified SOC(HE)2010 to be more consistent with SOC(HE)2020. We then recoded our 2011 SOC(HE) variable so that it was based on the modified SOC(HE)2010. This means that the SOC(HE) occupational categories published in this Stage 5 report vary slightly to those published in the Stage 4 report.

Table A.1 below shows a comparison, for men and women separately, of the modified SOC(HE)2010 with SOC(HE)2020 for respondents' current jobs. It shows that over 90 per cent of jobs classified in each of the 4 occupational categories in SOC(HE)2020 are classified in the same category according to SOC(HE)2010. Table A.2 gives some examples of the titles of jobs classified within each category of SOC(HE)2020.

Table A.1 Comparison of SOC(HE)2010 with SOC(HE)2020

Men		SOC(HE)2010				
		Expert	Orchestrator	Communicator	Non-graduate	
SOC(HE)2020	Expert	98%	0%	1%	1%	100%
	Orchestrator	1%	91%	7%	1%	100%
	Communicator	6%	1%	90%	3%	100%
	Non-graduate	3%	0%	0%	96%	100%
	Women					
SOC(HE)2020	Expert	98%	0%	1%	1%	100%
	Orchestrator	2%	90%	7%	1%	100%
	Communicator	7%	1%	89%	3%	100%
	Non-graduate	5%	0%	1%	95%	100%

34 https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc/soc2020

Table A.2 Examples of selected Stage 5 respondents' current jobs classified according to SOC(HE)2020 categories

Experts	Orchestrators	Communicators
Actuaries	Army officers	Actors and musicians
Manufacturing Laboratory Technologist	CEOs and senior managers	Advertising/Creative Agency Planner
Airline pilots	Charity operations manager	Alumni Engagement Manager
Architects	Chief strategic officer	Brand Marketing Manager
Audiologists	Clinical Director	British sign language Interpreter
Barristers and solicitors	Commissioning manager	Campaign Manager
Chartered accountants	Company directors	Composers and artistic directors
Clinical psychologists	Commercial and Contracts Manager	Copywriter
Credit Risk Analysts	Construction Environment Manager	Creative artworkers
Cybersecurity Policy Manager	Consultant (International Development)	Deputy editor
Economists	Consulting Senior Manager	Deputy Stage Manager
Engineers	Continuous Improvement Manager	Exhibitions and interpretation manager
Market research analysts	Crisis Management Consultant	Freelance singer (classical/opera)
Medical practitioners and clinicians	Deputy head of internal communications	Freelance Senior Graphic Designer
Nurses, midwives and health visitors	Digital marketing account director	Freelance singer (classical/opera)
Optometrists	Desk Officer, EU Negotiations	Freelance Speaker Coach
Paramedic	Development Director	Events organisers
Pharmacists	Diplomat	Filmakers
Physicists	Directors of PR agency	Graphic designers
Radiograohers	Head of community management	Journalists and broadcast journalists
Physiotherapists	Management consultants	Language Translators
Secondary schhool teachers	Managers (e.g. HRM, Marketing, Operations)	Primary school teachers
Social workers	Project mamager (NHS)	Fundraising manager
Software developer	Professional Civil Servants	Television and radio producers
University lecturers	Studio manager, Architectural Practice	Video editor and photograoher
Web developers	Widening particiation and outreach manager, HE	Writer and Researcher in Residence

A.4 Statistical significance in figures and tables

Most of the tables and figures in this report examine the information provided by graduates by focussing on specific groups of interest (*e.g.,* age, gender, subject of undergraduate degree, social background, *etc*.), exploring the variation shown between these groups within categories such as occupations [SOC(HE)2020], satisfaction with current job, *etc.* But what constitutes a significant difference in the distribution of categories between groups. Survey respondents constitute a sample that has been drawn the population of people who gained a first degree in 2009/10 via full-time attendance at a UK higher education institution. But samples can vary, so the observed difference may be due to sampling

Typically, we rely upon statistical theory to answer this question, making assumptions about the general distribution of these categories within the population, making statements such as:

> *'We find that 47 per cent of older graduates gained a good degree, whereas 52 per cent of younger graduates did so. There is a 95% chance that the observed difference of 5 percentage point has a margin of sampling error in the range +/- 2 percentage points.*

With a confidence interval of 3 to 7 percentage points, it appears that the observed difference is statistically significant'

Statements such as this rely upon the sample being representative of the underlying population from which it was drawn. The problem we have with Futuretrack is that the sample observed at Stage 5 is no longer a random sample of the whole population of 2009/2010 full-time first-degree graduates. We know that it is biased towards females, towards those who gained a good degree and towards those who attended a high tariff higher education institution. What we can do though, is to consider all the information presented in this report as if it were a random sample of such graduates. Bearing this qualification in mind, statistical theory can then give some guidance on the significance of the observed differences between categories presented in tables and figures in this report. This depends critically upon the size of the group under consideration, the size of the category of interest within this group and the degree of uncertainty we are willing to accept. While this provides a very rough approximation, we can examine what it tells us about the statistical significance of the findings shown in this report.

We have a sample of approximately 6,000 graduates who are likely to be representative of the wider population of 2009/10 first degree graduates who have been relatively successful in terms of the higher education and subsequent careers. If we analyse by gender and then by some categories within gender groups, an observed difference in our survey of, for example, 10 percentage points will be indicative of a true difference within the population that could range between 8 and 12 percentage points. Table A.3 below shows how this margin of sampling error varies according to the size of the group under consideration and where the difference observed is centred around 50 per cent.

Table A.3 Sampling errors associated with different size samples

Size of sample	95% chance that the true (population) percentage will lie within these bounds
1,000	50 % +/- 3 percentage points
400	50 % +/- 5 percentage points
100	50 % +/- 10 percentage points

While this is a very rough approximation, what it indicates is that with a sample of 6,000 graduates, analysed by, say, gender and then by categories within gender groups, an observed difference in these categories between gender groups of 5 per cent is likely to be representative of a similar difference in the underlying population. However, when we focus on ethnic groups, with fewer than 400 in a particular group, the sampling error is much wider, and an observed difference of 5 percentage points may not be indicative of a difference in the underlying population.

For all the figures and tables in this report we indicate the size of the sample being analysed and report findings where we are reasonably confident that the differences described are representative of differences in the underlying population of relatively successful 2009/10 first degree holders.

A.5 Weighting the dataset

The bias towards respondents with higher-than-average tariff points that was in evidence at Stage 4 and Stage 3 has continued in Stage 5. Due to the smaller numbers involved and the extent of the tariff point bias in Stage 5, creating a set of weights in the same way as we did in Stage 4 was not an option. Therefore, we have created a 'pseudo weight' for Stage 5, which is the Stage 4 weight when the respondent comes from Stage 4, and the Stage 3 weight for those from Stage 3.

Table A.4 below shows the pronounced effect of the Stage 5 weighting system in shifting emphasis away from the respondents with a high number of tariff points.

Table A.4 Percentage of respondents with 360+ tariff points

	Men	Women
UCAS database	30.3%	26.9%
Stage 5 unweighted	57.7%	54.1%
Stage 5 weighted	31.3%	33.0%

Table A.5 shows the distribution of weights for Stage 5 respondents where we have information on their tariff points (79 per cent of cohort).

Table A.5 Distribution of weight by gender and tariff points

	Tariff points	Mean	N	Std. Deviation
Men	0	54.3	246	11.8
	1 to 79	62.0	26	10.7
	80 to 119	60.4	14	2.5
	120 to 179	73.1	41	6.8
	180 to 239	50.6	83	6.8
	240 to 299	36.1	141	2.9
	300 to 359	28.0	227	3.9
	360 to 419	21.7	259	2.8
	420 to 479	16.3	262	2.2
	480 to 539	13.5	231	2.3
	540 plus	9.2	306	0.8
Women	0	36.4	499	10.0
	1 to 79	42.3	40	9.6
	80 to 119	39.1	24	8.5
	120 to 179	45.9	48	10.3
	180 to 239	38.3	121	5.0
	240 to 299	25.2	228	4.2
	300 to 359	20.2	394	3.3
	360 to 419	16.9	461	3.5
	420 to 479	13.0	463	2.4
	480 to 539	10.5	345	2.0
	540 plus	8.1	329	1.4

The weights for low tariff respondents are four to five times greater than the weights for high tariff respondents. Weighting the data to make the sample more representative of the

population of graduates who applied for a place in higher education in 2006 is, therefore, subject to a high degree of uncertainty. For this reason, a decision was taken to present our analysis of the survey data in this report as unweighted data, ensuring that analyses were undertaken separately for men and for women, and, where appropriate, by tariff points. In a few instances we have used the weighting system, particularly when making comparisons with weighted data from the Labour Force Survey.

A.6 Interview sampling frame

Alongside the Stage 5 survey, we also conducted 200 in depth telephone interviews. We identified an initial list of respondents to the FT5S4 survey who had indicted in their survey response that they were willing to be interviewed and had provided their contact details. Within the 200 interviews we wanted a relatively even representation of men and women, people from different socio-economic backgrounds, who attended different types of universities and studied different kinds of subjects. As well as obtaining a broadly representative mix, we also intended to use the interviews to address questions that are difficult to capture well in a survey, for example, experiences of precarious or non-traditional employment. To achieve this, we set up marginal quotas for gender, socio-economic background and ethnic origin and then kept a running tally of these and other characteristics[35] of interviewees and targeted remaining interviews based on characteristics that still needed to be covered. Table A.6 shows the final breakdown of interviewee characteristics achieved in the interviews.

Table A.6 Characteristics of interviewees

	N	%
Gender		
Male	94	46%
Female	106	52%
Broad socio-economic background		
Managerial and professional occupations	101	50%
Intermediate occupations	39	19%
Routine and manual occupations	58	28%
Ethnicity		
White	158	77%
Non-white	42	21%
Subject of undergraduate degree		
Architecture, Build & Plan	2	1%
Biology, Vet Science, Agriculture & related	19	10%
Business & Admin studies	11	6%
Creative Arts & Design	17	9%
Education	2	1%

[35] Subject of undergraduate degree, type of university attended, region where living, satisfaction with current job and experience of precarious employment.

Engineering, Technologies	12	6%
History & Philosophical studies	14	7%
Interdisciplinary subjects	25	13%
Languages	10	5%
Law	10	5%
Linguistics and Classics	9	5%
Mass communication and Documentation	4	2%
Mathematical & Comp Science	16	8%
Physical Sciences	16	8%
Social Studies	19	10%
Subjects allied to Medicine	13	7%
Type of university attended		
Highest tariff university	89	44%
High tariff university	38	19%
Medium tariff university	42	21%
Lower tariff university	23	11%
Other	7	3%
Experience of precarious employment[36]		
Yes	127	64%
No	73	37%
Appropriateness of current main job		
1 - Ideal	62	31%
2	52	26%
3	36	18%
4	21	11%
5	9	5%
6	8	4%
7 - Very inappropriate	4	2%
Region where currently live		
North East England	4	2%
North West England	12	6%
Merseyside	1	1%
Yorkshire & the Humber	12	6%

[36] Precarious employment includes paid/unpaid internships, other unpaid work experience, contractual work through a specialist agency, temping through an agency, other temporary, fixed-term or casual work, working on a zero-hours contract, and self-employment.

East Midlands	4	2%
West Midlands	13	7%
East of England	13	7%
Greater London	60	30%
South East England	26	13%
South West England	17	9%
Wales	8	4%
Scotland	12	6%
Northern Ireland	2	1%
Republic of Ireland	1	1%
Other European country	5	3%
Other overseas country	10	5%

A.7 Survey questionnaires and interview guidelines

Copies of the survey questionnaires and the interview guidelines are available from the authors on request.

Appendix B: Multivariate statistical tables

Table B.1 Analysis of factors associated with earnings in 2019 of graduates in employee jobs

	Model 1	Model 2	Model 3	Model 4	Mean value	
(Constant)	**9.381**	**9.658**	**9.774**	**9.474**	Males	Females
Male	**0.188**	**0.142**	**0.081**	**0.082**	1.00	0.00
Female	Ref.	Ref.	Ref.	Ref.	0.00	1.00
Weekly hours worked	**0.027**	**0.026**	**0.014**	**0.021**	40.7	37.9
Age on application to HE						
18 and under	Ref.	Ref.	Ref.	Ref.	0.66	0.61
19 to 20	-0.016	0.012	0.008	0.012	0.23	0.24
21 to 25	**-0.107**	**-0.073**	**-0.024**	**-0.047**	0.05	0.06
26 and over	**-0.109**	**-0.067**	-0.011	0.003	0.06	0.08
Social background						
Managerial and professional	**0.048**	0.015	0.016	0.009	0.60	0.55
Intermediate occupations	Ref.	Ref.	Ref.	Ref.	0.16	0.17
Routine manual	**-0.056**	-0.035	-0.003	0.005	0.18	0.19
Missing information	0.012	0.013	0.014	0.023	0.07	0.08
Ethnic group						
Asian	**0.143**	**0.081**	**0.071**	**0.059**	0.05	0.03
Black	-0.005	0.020	0.009	-0.003	0.01	0.01
White	Ref.	Ref.	Ref.	Ref.	0.91	0.92
Mixed	0.065	0.065	0.041	0.027	0.03	0.03
Other	-0.098	-0.073	-0.058	-0.079	0.01	0.01
Type of HEI attended						
Highest tariff HEI		Ref.	Ref.	Ref.	0.47	0.40
High tariff HEI		**-0.133**	**-0.097**	**-0.061**	0.25	0.27
Medium tariff HEI		**-0.215**	**-0.144**	**-0.087**	0.19	0.22
Low tariff HEI		**-0.253**	**-0.141**	**-0.110**	0.05	0.07
General HE college		**-0.352**	**-0.212**	**-0.179**	0.01	0.01
Specialist HE college		**-0.193**	**-0.121**	**-0.078**	0.01	0.02
Overseas		0.005	0.190	0.006	0.00	0.00
Subject studied						
Medicine & Dentistry		**0.255**	**0.218**	**0.181**	0.03	0.03
Subjects allied to Medicine		0.010	-0.050	**-0.058**	0.04	0.11
Biology, Vet Sci, Agr & related		**-0.122**	**-0.063**	-0.024	0.08	0.14

Physical Sciences	**-0.076**	**-0.072**	-0.042	0.12	0.06
Mathematical & Comp Sci	**0.151**	**0.077**	**0.082**	0.13	0.04
Engineering, Technologies	**0.093**	**0.046**	0.055	0.11	0.01
Architecture, Build & Plan	0.047	0.014	0.069	0.02	0.01
Social studies	Ref.	Ref.	Ref.	0.07	0.08
Law	**0.010**	0.030	**0.057**	0.04	0.04
Business & Admin studies	**0.126**	**0.060**	**0.074**	0.06	0.04
Mass communication and Documentation	**-0.132**	-0.107	-0.038	0.01	0.01
Linguistics and Classics	**-0.096**	-0.031	-0.014	0.02	0.07
Languages	**-0.113**	-0.057	-0.055	0.02	0.04
Hist & Philosophical studies	**-0.124**	**-0.082**	-0.047	0.06	0.06
Creative Arts & Design	**-0.168**	**-0.113**	**-0.059**	0.05	0.05
Education	**-0.121**	0.032	0.018	0.01	0.06
Interdisciplinary subjects	**-0.048**	-0.041	-0.025	0.11	0.15
Class of degree obtained					
First Class Honours	Ref.	Ref.	Ref.	0.23	0.18
Upper Second Class Honours	**-0.076**	**-0.045**	**-0.034**	0.37	0.01
Unclassified Second Class Honours	-0.085	-0.104	-0.059	0.01	0.09
Lower Second Class Honours	**-0.192**	**-0.115**	**-0.079**	0.12	0.01
Third Class Honours	**-0.275**	**-0.165**	**-0.099**	0.02	0.01
Ordinary Degree (unclassified)	**-0.205**	**-0.130**	-0.039	0.02	0.02
Other	-0.080	0.006	0.042	0.01	0.68
Missing information	**-0.075**	**-0.019**	-0.014	0.23	
Occupation of current job (SOC[HE])					
Expert		**0.235**	**0.148**	0.61	0.52
Orchestrator		**0.354**	**0.233**	0.17	0.15
Communicator		**0.165**	**0.072**	0.10	0.16
Non-graduate		Ref.	Ref.	0.12	0.14
Sector of current job					
Agriculture, mining, quarrying (includes oil and gas extraction)		**0.119**	**0.129**	0.02	0.01
Manufacturing		**0.124**	**0.185**	0.10	0.03
Electricity, gas, water supply		**0.183**	**0.230**	0.02	0.01
Construction (includes civil engineering)		**0.122**	**0.136**	0.03	0.02
Distribution, hotels, catering (includes retailing, supermarkets, wholesale or retail distribution)		Ref.	Ref.	0.04	0.05
Transport and tourist services		**0.163**	**0.176**	0.03	0.02
Information and communications sector (includes media)		**0.186**	**0.231**	0.10	0.05
Banking, finance, insurance		**0.294**	**0.333**	0.11	0.05

Business services (includes legal services, computing, advertising, public relations, R&D)	**0.236**	**0.258**	0.12	0.08
Education (includes schools, colleges, and universities)	-0.049	-0.034	0.17	0.26
Other public services (local or central government, health services, police, social services)	**0.051**	**0.076**	0.24	0.38
Inadequately described	0.315	0.270	0.00	0.00
My type of work in current job is done:				
Only by graduates	**0.174**	**0.108**	0.44	0.44
Mainly by graduates	**0.137**	**0.103**	0.29	0.25
By a fairly equal mixture of graduates and non-graduates	Ref.	Ref.	0.06	0.07
Mainly by non-graduates	**-0.146**	**-0.126**	0.15	0.16
Only by non-graduates	**-0.106**	**-0.126**	0.01	0.01
Only by me	**0.073**	0.083	0.04	0.04
Type of organisation				
Public sector	**-0.099**	**-0.052**	0.29	0.45
Private sector	Ref.	Ref.	0.59	0.35
Not-for-profit sector	**-0.077**	**-0.054**	0.12	0.17
Size of organisation where currently working		.		
1	**-0.280**	**-0.265**	0.00	0.00
2-9	**-0.236**	**-0.199**	0.04	0.03
10-49	**-0.148**	**-0.123**	0.10	0.11
50-249	**-0.076**	**-0.083**	0.15	0.18
250-999	**-0.080**	**-0.079**	0.13	0.14
1000 or more	Ref.	Ref.	0.58	0.51
Experience of unemployment since graduation				
No experience of unemployment		Ref.	0.49	0.47
Less than three months		**-0.061**	0.22	0.27
Three to six months		**-0.110**	0.15	0.15
More than six months but less than a year		**-0.168**	0.08	0.07
More than a year		**-0.269**	0.05	0.04
No. of paid jobs since graduation				
1 paid job		Ref.	0.11	0.08
2 paid jobs		**-0.052**	0.19	0.14
3 paid jobs		**-0.107**	0.20	0.20
4 paid jobs		**-0.112**	0.19	0.18
5 paid jobs		**-0.143**	0.12	0.15

6 or more paid jobs	**-0.183**	0.19	0.25
Number of jobs since graduation requiring degree			
No paid jobs requiring degree	Ref.	0.16	0.17
1 paid job	**0.093**	0.22	0.21
2 paid jobs	**0.153**	0.23	0.21
3 paid jobs	**0.181**	0.18	0.18
4 paid jobs	**0.180**	0.10	0.11
5 paid jobs	**0.194**	0.05	0.07
6 or more paid jobs	**0.217**	0.05	0.06
Number of jobs since graduation requiring degree subject knowledge			
No paid jobs requiring degree subject knowledge	Ref.	0.33	0.34
1 paid job	**-0.036**	0.19	0.19
2 paid jobs	**-0.061**	0.20	0.16
3 paid jobs	**-0.047**	0.12	0.13
4 paid jobs	**-0.072**	0.08	0.08
5 paid jobs	**-0.075**	0.03	0.05
6 or more paid jobs	-0.001	0.04	0.05
Number of jobs since graduation requiring degree skills			
No paid jobs requiring degree skills	Ref.	0.15	0.14
1 paid job	0.003	0.18	0.17
2 paid jobs	0.024	0.23	0.19
3 paid jobs	**0.058**	0.18	0.19
4 paid jobs	**0.075**	0.12	0.12
5 paid jobs	**0.124**	0.07	0.08
6 or more paid jobs	**0.061**	0.07	0.09
Further qualifications since first degree			
No further qualification	Ref.	0.54	0.48
Foundation degree, DipHE, HND	-0.108	0.00	0.01
Undergraduate degree (e.g. BA, BSc)	-0.028	0.01	0.03
Apprenticeship (please specify level)	0.097	0.02	0.01
Postgraduate Teaching Certificate	**-0.077**	0.03	0.07
Other vocational training leading to professional qualification or diploma	0.028	0.10	0.11
Other postgraduate diploma	-0.021	0.04	0.05

Taught Master's degree e.g. MA, MSc				-0.025	0.14	0.16
PhD or other research degree				**-0.067**	0.11	0.07
Other				**-0.058**	0.02	0.03
Caring responsibilities						
Has dependent children				**0.028**	0.21	0.26
Caring for adults				**-0.068**	0.04	0.06
Place of work						
London and South East				**0.173**	0.38	0.33
Rest of GB					0.48	0.58
Northern Ireland				**-0.146**	0.01	0.02
Republic of Ireland (ROI)				0.103	0.00	0.00
Outside UK and ROI				**-0.224**	0.12	0.07
N	4,288	4,288	4,288	4,288	1,926	2,956
Adjusted R^2	0.30	0.39	0.48	0.62		

Note: Coefficients which are significant at 5% are shown in bold.

Table B.2 Analysis of factors associated with earnings in 2019 of graduates in self employment

	Coefficient	Mean value	
(Constant)	**9.24**	Males	Females
Male	**0.175**	1.00	0,00
Female	Ref.	0.00	1.00
Weekly hours worked	**0.012**	36.3	32.4
Age on application to HE			
18 and under		0.45	0.47
19 to 20	0.051	0.35	0.35
21 to 25	0.244	0.10	0.08
26 and over	0.096	0.09	0.14
Subject studied			
Medicine & Dentistry	**1.191**	0.04	0.04
Subjects allied to Medicine	0.060	0.05	0.09
Biology, Vet Sci, Agr & related	-0.302	0.04	0.08
Physical Sciences	-0.088	0.05	0.06
Mathematical & Comp Sci	0.027	0.13	0.03
Engineering, Technologies	0.238	0.07	0.01
Architecture, Build & Plan	-0.244	0.01	0.01
Social studies	Ref.	0.05	0.05
Law	0.284	0.02	0.04
Business & Admin studies	-0.013	0.08	0.01
Mass communication and Documentation	-0.331	0.02	0.02
Linguistics and Classics	**-0.583**	0.02	0.05
Languages	-0.179	0.06	0.07
Hist & Philosophical studies	-0.332	0.03	0.05
Creative Arts & Design	**-0.609**	0.17	0.21
Education	-0.240	0.00	0.04
Interdisciplinary subjects	**-0.384**	0.12	0.11
Sector of current job			
Agriculture, mining, quarrying (includes oil and gas extraction)	-0.024	0.01	0.04
Manufacturing	**0.658**	0,07	0.04
Electricity, gas, water supply		0.00	0.00
Construction (includes civil engineering)	0.403	0.04	0.01
Distribution, hotels, catering (includes retailing, supermarkets, wholesale or retail distribution)	Ref.	0.03	0.08
Transport and tourist services	**0.458**	0.05	0.06
Information and communications sector (includes media)	**0.715**	0.22	0.16

Banking, finance, insurance	**1.390**	0.05	0.01
Business services (includes legal services, computing, advertising, public relations, R&D)	**0.760**	0.22	0.16
Education (includes schools, colleges, and universities)	0.175	0.09	0.10
Other public services (local or central government, health services, police, social services)	0.253	0.21	0.31
Inadequately described	0.091	0.01	0.01
Place of work			
London and South East	**0.328**	0.33	0.31
Rest of GB	Ref.	0.48	0.57
Northern Ireland	-0.323	0.01	0.01
Republic of Ireland (ROI)	0.239	0.00	0.00
Outside UK and ROI	0.091	0.18	0.11
N	366	138	228
Adjusted R^2	0.44		

Note: Coefficients which are significant at 5% are shown in bold.

Table B.3 Analysis of factors affecting the growth of earnings (2012 – 2019) of graduates in full-time employment

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Mean
(Constant)	**0.093**	**0.097**	**0.092**	**0.099**	**0.098**	**0.096**	**0.096**	**0.096**	
Male	**0.013**	**0.012**	**0.012**	**0.011**	**0.010**	**0.010**	**0.010**	**0.010**	0.427
Female	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	0.573
Age on application to HE:									
18 and under		Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	0.642
19-20		-0.002	-0.002	-0.001	-0.000	0.000	-0.000	0.000	0.242
21-25		**-0.022**	**-0.021**	**-0.019**	**-0.016**	**-0.016**	**-0.016**	**-0.016**	0.053
26 and over		**-0.033**	**-0.032**	**-0.029**	**-0.019**	**-0.018**	**-0.018**	**-0.018**	0.062
Socio-economic background:									
Managerial professional occupations			**0.007**	0.003	0.005	0.005	0.005	0.005	0.576
Intermediate occupations			0.004	0.003	0.004	0.004	0.004	0.004	0.168
Routine occupations			Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	0.183
Missing			0.003	0.004	0.003	0.003	0.003	0.004	0.075
Type of HEI attended:									
Highest tariff HEI				Ref.	Ref.	Ref.	Ref.	Ref.	0.436
High tariff HEI				**-0.006**	**-0.006**	**-0.006**	**-0.006**	**-0.006**	0.265
Medium tariff HEI				**-0.014**	**-0.013**	**-0.012**	**-0.011**	**-0.012**	0.205
Low tariff HEI				**-0.012**	**-0.010**	**-0.010**	**-0.009**	**-0.010**	0.054
General HE college				-0.008	-0.013	-0.013	-0.011	-0.012	0.006
Specialist HE college				**-0.018**	**-0.023**	**-0.023**	**-0.021**	**-0.022**	0.017
Subject studied:									
Medicine & Dentistry					-0.001	0.001	0.000	0.002	0.024
Subjects allied to Medicine					**-0.033**	**-0.033**	**-0.034**	**-0.032**	0.074
Biology, Vet Sci, Agriculture & related					0.001	0.001	0.001	0.001	0.115
Physical Sciences					-0.008	-0.007	-0.008	-0.007	0.088
Mathematical and Comp Sci					0.002	0.003	0.002	0.003	0.077
Engineering, Technologies					-0.008	-0.008	-0.008	-0.008	0.057
Architecture, Build and Plan					**0.021**	**0.022**	**0.022**	**0.022**	0.012
Social studies					Ref.	Ref.	Ref.	Ref.	0.075
Law					**0.020**	**0.020**	**0.021**	**0.020**	0.040

Business and Admin studies					**0.013**	**0.013**	**0.013**	**0.013**	0.050
Mass communication and Documentation					0.012	0.013	0.013	0.013	0.012
Linguistics and Classics					0.005	0.005	0.005	0.005	0.046
Languages					**0.013**	**0.013**	**0.013**	**0.013**	0.030
History and Philosophical studies					0.005	0.005	0.005	0.005	0.063
Creative Arts and Design					0.004	0.005	0.004	0.004	0.048
Education					-0.009	-0.009	-0.010	-0.008	0.035
Interdisciplinary subjects					0.007	0.007	0.007	0.007	0.136
Class of degree obtained									
First class honours						Ref.	Ref.	Ref.	0.198
Upper Second Class Honours						**0.005**	**0.006**	**0.005**	0.386
Unclassified Second Class Honours						-0.003	-0.003	0.003	0.009
Lower Second Class Honours						0.000	0.001	0.000	0.107
Third Class Honours						-0.007	-0.005	-0.007	0.012
Ordinary Degree (unclassified)						0.000	0.001	-0.001	0.015
Other						0.000	0.000	-0.001	0.015
In non-graduate job in 2019							**-0.007**		0.168
Has dependent children								-0.004	0.193
N	3,203	3,203	3,203	3,203	3,203	3,203	3,203	3,203	
Adjusted R^2	0.011	0.037	0.039	0.047	0.086	0.087	0.089	0.087	

Note: Coefficients which are significant at 5% are shown in bold.