

FINANCIAL LITERACY AND HIGHER EDUCATION CHOICES: THE GENDER EXPECTATIONS GAP

by

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ABSTRACT

This study examines young people's understanding of, and attitudes towards, the financial side of studying for a degree. It focuses on the relationships between understanding, perceptions, and university choices in England. First, this study looks at the graduate salary expectations of A-level students, including how much they think they would earn if they graduated from university and how much they think graduates earn on average. Second, A-level students' beliefs about the size of the graduate premium and their confidence in the predictions are analysed. Finally, the study explores first-year undergraduate students' perceptions of value for money in relation to their degree. Their views are considered together with their understanding of how the student finance system works. Previous research tended to focus on graduate salary expectations of current university students and graduates, but rather less attention has been paid to the financial expectations of prospective university students. This study contributes to filling this research gap. As for research into value for money, there has been growing interest in how university students perceive it, but most studies have been content to survey data analysis. This study explores value for money through a moderated group discussion.

The findings revealed complex relationships between young people's understanding of student finance and their beliefs around the financial implications of studying for a degree. Overall, A-level students expect the average graduate salaries and their own salaries that are higher than actual salaries of similar graduates, with male students being more optimistic than their female peers in their expectations. University plans have relevance for salary expectations - students have more optimistic expectations about their potential salary when they are asked about the degree that they intend to study at university. When asked about the size of the graduate premium at age 30, both male and female students expected similar returns, which ignores the fact that the expected gains of attending university are much greater for women. Furthermore, male students are more confident than their female peers in their financial predictions. Focus group discussions with first-year students showed that they rarely considered information about the graduate salaries before starting their degree course. Students also seem to have fragmented knowledge of the English student finance system and tend to mention the cost associated with studying for a degree only when they think that their degree offers poor value for money. These findings demonstrate the financial benefits of studying for a degree are often assumed and are not accurate despite the government's effort to promote informed choice.

DEDICATION

This thesis is dedicated to the memory of Ms Nina Rubleva, my beloved grandmother and a resilient woman, who sadly passed away in September 2020.

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LIST OF ABBREVIATIONS

HE	Higher Education
BAME	Black, Asian and minority ethnic
BIS	Department for Business Innovation & Skills
CAL	College of Arts and Law
CoSS	College of Social Sciences
DfE	Department for Education
DLHE	Destinations of Leavers from Higher Education
EPS	College of Engineering and Physical Sciences
GCSE	General Certificate of Secondary Education
HEFCE	Higher Education Funding Council for England
IFS	Institute for Fiscal Studies
LEO	Longitudinal Education Outcomes
LES	College of Life and Environmental Sciences
LFS	Labour Force Survey
MASN	Maximum Allowable Student Number
MDS	College of Medical and Dental Sciences
MMR	Mixed Method Research
NPD	National Pupil Database
NS-SEC	National Statistics Socio-economic Classification
OfS	Office for Students
OIA	Office of the Independent Adjudicator for Higher Education
RCT	Randomized Controlled Trial
SLC	Student Loans Company
SNC	Student Number Controls
STEM	Science, Technology, Engineering, and Mathematics
TEF	Teaching Excellence and Student Outcomes Framework
UCAS	Universities and Colleges Admissions Service

CHAPTER 1. Introduction

1.1. Statement of purpose

This chapter provides an overall map of this thesis for the reader. The idea for this study emerged from an interest in the funding system for higher education (HE) in England. Over the last two decades, England has gradually moved away from a taxpayer-funded HE system to a system funded through taxes, students' contributions, and other private-sector sources. These changes to the student finance system were motivated by the view that university education delivers large private returns alongside social returns and that, therefore, individuals should share the burden of paying for their education.

This cost-sharing policy initiative provides an interesting research context. In England, prospective students rarely pay for their education upfront because the majority of them take advantage of the government-backed student loan system, where the government pays tuition fees directly to HE providers. Historically, undergraduate students in England could attend universities free of charge. In 1998/99, up-front tuition fees of up to £1,000 a year were introduced. From 2006/07, HE providers were able to charge variable fees of up to £3,000 a year for students starting their courses in 2006 or later. In the same year, tuition fees loans were introduced. Later, in 2012/13, the cap on tuition fees rose to £9,000. The system of variable fees never worked to make HE providers compete based on price - universities did not want to charge lower fees because they did not want it to be seen as second-rate providers.

Now, two decades later after the introduction of tuition fees, HE providers tend to charge a maximum of £9,250 a year for degree courses that are associated with different labour market outcomes. In addition, prospective students can apply for the student maintenance loan that is paid directly to them and, as the name suggests, is designed to help with livings costs. University students are not expected to repay their student loans until after they graduate and earn above a repayment threshold of £27,295 at the time of writing. If they are not able to repay their student loan debt, it is written off 30 years after the first of April following graduation (House of Commons, 2018b). A more extensive history of the student finance system in England will be discussed later in the thesis (see Section 2.2).

Importantly, when the most recent iteration of the student finance system was introduced for courses starting from 2012 onwards, it was assumed that prospective students will make sound financial decisions to apply to university. The expectation was that prospective students will

take a value for money calculation to work out whether studying for a degree is the right decision for them. The current system supposedly "gives power to students to hold universities to account (p.10)" and drives teaching excellence (Department for Business Innovation & Skills, 2011).

However, evidence has emerged that prospective students tend to have a limited understanding of the student finance system (Mangan, Hughes and Slack, 2010) and appear to be deterred from applying to university because they associate it with accumulating debt (Callender and Jackson, 2005), a fear that seemed to affect students from different class backgrounds differently (Jones, 2016). Moreover, some gender differences were observed in response to the new student finance system. Anchor *et al.* (2011) found that female and male students anticipate similar returns of around 18% to an undergraduate degree. The actual returns to an undergraduate degree are slightly higher, with women getting a rise of 25% and men obtaining a pay increase of 20% compared to someone with at least two A-level qualifications (O'Leary and Sloane, 2011). At the same time, undergraduate students in the UK overestimate their starting salaries by an average of 15% (Jerrim, 2011). The findings from O'Leary and Sloane's study and Jerrim's study prompt the question of whether and to what extent young people consider the financial implications of their university choices.

Around the same time, Davies and Qiu (2016) completed a randomized controlled trial (RCT) that looked at the impact of providing Year 11 students with information about graduate earnings on their A-level subject preferences. The researchers found that their information intervention affected actual A-level subject choices. Their findings also demonstrated that prospective students overestimated how much, on average, graduates earn. This study is an extension of Davies and Qiu's RCT. It is based on the follow-up survey that looked at Year 12 students' financial beliefs related to their HE choices.

Approaching prospective students' HE plans through human capital and consumer lenses, I wanted to explore the extent to which Year 12 students think about the financial side of their intention to apply for HE and whether having more accurate expectations of the financial value of their HE choices can benefit them. The purpose of this research was to explore the prospective students' expectations around graduate earnings and provide a comparison between female and male applicants who are thought to approach the HE choice differently (David *et al.*, 2003; Reuben, Wiswall and Zafar, 2015). I had a unique opportunity to analyse prospective students' expectations related to their own likely earnings for 11 degree subjects and also

compare those expectations with predicted average earnings for each subject and actual earnings of similar graduates. I wanted to know the extent to which female and male prospective students have different beliefs about the graduate labour market. In addition to exploring students' salary expectations, it was also important to explore how they understand the difference that going to university would be likely to make to their future earnings and how confident they are in their expectations.

The research on prospective students' earnings expectations and their confidence in those beliefs prompted me to conduct a more in-depth analysis of the financial beliefs and perceptions that first-year students have around their HE choices. The findings relating to the salary expectations confirmed that the gender gap in pay expectations exists before prospective students apply to university. Importantly, prospective students' beliefs seem to be inconsistent. For example, those who expect to repay their student loan tended to be less optimistic about average graduate earnings. In addition, prospective students' salary expectations were found to be positively associated with their confidence in the graduate premium. At the same time, expecting a graduate premium of at least 20% was positively associated with being confident in the predicted graduate earnings. These findings prompted me to investigate first-year students' beliefs around the value of their degree and student finance.

I also had a personal motivation for researching this topic. For the first 21 years, I lived in Russia, a country where HE is free. Even though I had to move across the country to study for my undergraduate degree, tuition fees were never a part of my decision-making. During my undergraduate degree, I was receiving a small studentship from my university, which was enough to pay for a monthly Oyster-like card. In 2014, when I moved to England as a self-funded Master's student, I learnt about the student finance package that local undergraduate students are eligible for. Learning about student finance in England made me reflect on my educational choices and sparked academic interest in this topic.

1.2. Significance of the study

Prospective students' perceptions and beliefs around the financial implications of studying for a degree matter because policymakers and commentators continue to speculate about the role of student choice for the HE sector. Shifting the responsibility for funding HE onto students (even if supported by a loans system) ultimately meant prospective students were expected to make informed decisions about their education. Following the failure of the variable fees

reform, the government continued viewing student choice as a driving force that was supposed to stimulate competition and improve quality across the sector (Department for Business Innovation & Skills, 2016b). While this approach seemed to be appealing, some became increasingly concerned about post-graduation employment prospects for university students. For example, Michelle Donelan, the Minister of State for Universities, argued that university students were taken advantage of, particularly first-generation students, as they were left with a debt burden (Donelan, 2020). The Office for Students (OfS) commented that, regardless of their motivation for going to university, university graduates might need more support when transitioning into the world of work. It was argued that HE should aspire to build strong internal accountability within universities and colleges and provide accurate and timely information to current students and applicants (Dickinson and Kernohan, 2020). A study that explores prospective students' beliefs around their likely earnings, graduate premium and confidence in those beliefs might help to understand whether and to what extent these factors influence student choice.

Ongoing concerns in relation to value for money for university students and taxpayers provide further motivation for researching young people's beliefs and perceptions related to the financial implications of their HE choices. Value for money can be defined differently by different stakeholders and is not easy to measure (Carden, 2020). Evidence from the UK suggests that some applicants, students, and graduates think their tuition fees offer poor value for money. This perception was directly linked to students' dissatisfaction with an idea that universities use tuition fees income not only to pay for teaching but also to fund academic services and research (Which?, 2014; Trendence UK, 2018). What is important to remember is that the majority of university students do not pay their tuition fees upfront because they apply for a tuition fee loan that they are not required to pay back until they reach the earnings threshold. It is therefore essential to establish how students' views about value for money relate to their attitudes towards the financial side of studying for a degree and whether their understanding of student finance plays a role in shaping their perceptions. The introduction of a quasi-market relationship between universities and students and the emphasis on good value for money created a new environment where students adapt consumer-like behaviours and attitudes while they are not responsible for their student loan debt the way they would for other types of consumer debt.

In sum, this study aims to explore students' expectations around graduate earnings, graduate premium, and confidence in those predictions. This research also intends to provide useful insight into young people's perceptions of their education in terms of value for money.

1.3. Research questions

This research addresses the following objectives:

- to explore the extent to which salary expectations vary between female and male A-level students;
- to compare A-level students' salary expectations with earnings of similar graduates;
- to examine A-level students' expectations related to their graduate premium and their confidence in these predictions;
- to provide an up-to-date overview of first-year students' beliefs and perceptions related to the financial implications of their university choices, with a particular focus on value for money.

The first three objectives are focused on the financial returns to an undergraduate degree that potentially influence prospective students' preferences. When Year 13 students and first-year students were asked about motivational factors that influenced the choice of their degree, 23% of male students and 15% of female students reported that salary was a very important factor (Davies *et al.*, 2013). Another study that looked at anticipated benefits of studying for a degree found that, although the respondents did not have a clear understanding of how much they are likely to be earning after graduation, they tended to think that going to university is a sound investment for them (Evans and Donnelly, 2018). This study also looks at students' confidence in their predicted graduate earnings. Previous research showed that men tend to be more confident than women, including in the context of future earnings (Briel *et al.*, 2020). Finally, this study considers whether first-year students have an accurate understanding of student finance and to what extent potential graduate earnings influence their perceptions of value for money. The specific research questions that I sought to answer in this thesis are outlined in the next section.

1.4. Overview of design and methods

This project emerged as an extension to an RCT by Davies and Qiu (2016). As a part of the RCT, the researchers sent a follow-up questionnaire to schools that participated in the RCT. Twenty-five out of fifty schools agreed to distribute the questionnaire among their Year 12 students. The first two empirical chapters rely, therefore, on secondary data that was collected using convenience sampling.

Table 1.1 Research questions and data collection methods.

Stage	Research Questions	Data Collection	Data Analysis
0 (RCT)	The overarching question: Would students make better decisions (for themselves and society) if they were better informed about the labour market implications of studying different subjects?	Baseline questionnaire, post-intervention questionnaire; NPD data; Data on actual A-level subject choices requested from the schools	logistic regression analysis
1	1. What are factors associated with predictions of the graduate salaries? 2. Are there gender differences in salary expectations? 3. How do salary expectations of A-level students relate to the actual graduate salaries? 4. Is there an association between the preferred degree subject area and the accuracy of graduate salary expectations?	Sixth form questionnaire	an effect size analysis; OLS regression analysis
2	1. What expectations do A-level students have about the difference going to university would make to their annual earnings by the time they are 30? 2. What is the level of student confidence when they are asked about their earnings prediction? 3. What are the characteristics of those predicting the graduate premium of at least 20%? 4. What are the characteristics of those indicating high levels of confidence in their predicted graduate premium?	Sixth form questionnaire	frequencies and percentages analysis, logistic regression analysis

3	1. What sort of beliefs do students hold about the financial implications of graduating with a degree in England? 2. What do students know about student finance in England? 3. Focusing on the expected financial implications, how do students judge the value for money?	Questionnaire and focus groups with first-year students	frequencies and percentages analysis, thematic analysis
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Stage 0 was included in Table 1.1 to demonstrate the link between the RCT and this project, which is discussed in more detail in Chapter 3. Stages 1 to 3 are reported separately in Chapters 4 to 6.

1.5. Theoretical framework

In this study, beliefs and perceptions related to HE participation are considered from the position of market theory and human capital theory. A series of HE funding policy reforms introduced a quasi-market relationship between the service providers and users (Le Grand, 1991). These reforms are discussed in more detail in Section 2.2 The state maintained the role of funder and allowed HE institutions to function as service providers. In this quasi-market, it was expected that the introduction of student choice could improve HE provision by increasing competition between HE providers (Bunce, Baird and Jones, 2017). University students, in their turn, adopted the consumer identity and demanded value for money (Tomlinson, 2017). Viewing the HE choice through the consumer lens helps to understand how the intrinsic value and the instrumental value of education coincide. A recent study found that the intrinsic value becomes less important as people progress through their degree and graduate which was explained by stress related to student loan debt (Rasciute, Downward and Simmons, 2020). In contrast, other studies demonstrated university students do not feel pressured into paying off their loans and see studying for a degree as an investment in themselves (Evans and Donnelly, 2018; Budd, 2017). It is important to examine the perceived value for money together with young people's knowledge of student finance.

Human capital theory is commonly used to explain HE participation. The basic premise behind human capital theory is that the knowledge and skills that people acquire have an economic value which is comparable to the value of other resources involved in the production of goods and services (Schultz, 1961). According to this theory, five activities improve productivity:

health facilities and services, on-the-job training, formally organised education, study programmes for adults, and migration. In the context of HE, individuals who invest in studying for a degree are thought to increase their skills level and become more productive, and greater productivity leads to higher income. Another important assumption behind human capital theory is that, when investing in education, individuals have full information about the costs and benefits of their investment decision. In reality, however, individuals have incomplete information about their educational options. In these circumstances, individuals who choose to go to university are still rational, but their decision involves a degree of uncertainty (Jacobs, 2007). Another limitation of this theory is that it does not recognise the intrinsic value of education, and focuses solely on financial returns (Robeyns, 2006). Looking at HE participation as an investment decision, individuals' confidence in their financial expectations matters. Following the logic of the human capital theory, individuals choosing to continue their education should be confident that studying for a degree would help them to improve their position in the graduate labour market. I will explore these matters in more depth in Section 2.3. Human capital theory is by no means the only theory describing HE participation. There are some other theories that explain the phenomenon - cultural capital, social networks and signalling theory to name a few. But the current UK government approach seems to be based on human capital theory. Specifically, human capital theory views a degree as an investment which improves a young person's productivity and leads to better income prospects (Becker, 1962). Currently in the UK, prospective students are also encouraged to think about HE as an investment in themselves and consider the costs and benefits of every option.

1.6. Scope of this study and limitations

This subsection explains how the scope of this project was defined. This project is an extension to the RCT (Davies and Qiu, 2016) that showed that a short information intervention can affect students' A-level subject choices. It was also demonstrated that Year 11 students tend to overestimate graduate salaries. In this project, I was interested to learn what Year 12 students think about graduate earnings, particularly how male and female students' expectations differ. Unlike Year 11, Year 12 students did not have a classroom intervention that was focused on graduate earnings. As a result of this, their responses are likely to be based on their own research around the topic. No significant differences were found between students who participated in the RCT and those who only completed the sixth questionnaire in terms of their

average salary expectations and how much they think they would be likely to earn if they went to university.

In the second stage of this project, I examined the graduate premium expectations and confidence in those expectations, the topic that had previously received little attention. I completed the analysis using a new set of predictors that were not available in Davies and Qiu (2016). I felt that this study could benefit from combining the economic and sociological perspectives on the issue, but questions around student background (ethnicity, parents' occupation, career aspirations and cultural capital) are not available in the sixth form dataset. Working with secondary data meant that my analysis was restricted to the information that had been collected.

When working with the secondary data, I realised that information about the respondents' understanding of student finance is incomplete. I wanted to extend the scope of the project by collecting data about *both* prospective students' earnings expectations and their understanding of student finance. A combination of practical issues prevented me from contacting sixth form schools and colleges. I had to adjust my project plan and contact university students who have just started their degree courses. I was initially concerned about possible differences between prospective students and first-year students and attempted to minimise any disparities by collecting the data early in the academic year. For example, Slack *et al.* (2014) and Davies *et al.* (2013) also recruited prospective and first-year students for their research into financial beliefs and did not disaggregate their findings. While I was not able to recruit students from different universities, I still feel that the focus groups and supplementing questionnaire constitute valuable data that probe more deeply and look at current issues given the date of the previous dataset.

1.7. Structure of the thesis

This thesis is divided into four main parts. They are the literature review, design and methods, findings, discussion and conclusion. The literature review consists of one chapter which explores policy, theoretical and empirical literature in relation to HE choices. The first main subsection within the literature review chapter provides a chronological account of policy developments and reforms which transformed the HE sector into a quasi-market. The second main subsection of the literature review focuses on how the role of a student has changed, drawing on the market theory and human capital theory. The relevant empirical research related

to the HE choice and young people's beliefs about the financial implications of going to university are discussed in the third main subsection of the literature review.

The second part, the research design and methods chapter, describes the research questions that this study aims to address and how these questions fit into the pragmatic approach to the research problem. The links between the research questions and methods that were selected to answer the research questions are explained, and limitations with regard to the project design are discussed. The methodology chapter also describes how the focus groups and questionnaire tools were designed and implemented.

The third main part of this thesis consists of three chapters, each one addressing a set of research questions. The first chapter focuses on prospective students' salary expectations, with a particular interest in the gender expectations gap and how the expected salaries relate to the actual graduate salaries. The second chapter explores prospective students' graduate premium expectations and their confidence in those expectations. Again, I am interested in knowing whether there are any differences between female and male students. The focus in the third chapter shifts to the perceptions and beliefs of first-year university students. I consider how the respondents understand the value for money in relation to their HE choices and how their perceptions are linked to their understanding of the current student finance regime.

The final part of this thesis, the discussion and conclusions chapter, draws together findings from the three empirical chapters to present a more rounded picture and indicates areas for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review the literature in relation to HE choices and the financial implications of student choices. The chapter is divided into three main sections, namely policy background, theoretical framework and research literature. First, I overview the policy context of the current student finance regime in England. The first part of this chapter focuses on how policy decisions of consecutive governments contributed to the development of a consumer-oriented model of HE. It also discusses the literature on the accountability culture and how the sector was envisioned to regulate itself. The second part of the chapter examines student engagement in the decision-making about university education through the consumer choice theoretical lens. The third part of this chapter is examining the literature in relation to the financial implications of holding an undergraduate degree. This review is based on research in England and elsewhere. There is a particular focus on value for money in student choices, which is expressed through the review of students' financial beliefs and expectations.

In conducting this literature review, I followed the following procedure. Studies written in English and published between January 2010 and June 2021 were considered for inclusion. When checking references, I sometimes found older publications that seemed to be relevant; some of which were included in this literature review because of their important contributions to the field. Some seminal works were also included.

The list of search keywords for this literature review were: 'higher education' or 'university'; 'choice' or 'decision' or 'decision-making', 'undergraduate' or 'bachelors', 'students' or 'university applicants' or 'undergraduates' or 'sixth form'; 'student finance'; 'student loan'; 'student debt'; 'financial literacy' or 'financial education' or 'financial management' or 'financial capability'; 'financial returns'; 'graduate salaries' or 'graduate earnings'; 'graduate premium' or 'wage premium'; 'value for money'; 'England' or 'Britain' or 'UK' or 'United Kingdom'. A two-step search strategy was used to undertake this review. I carried out an extensive search using the above keywords across databases (British Education Index, ERIC ProQuest, JSTOR and ProQuest Social Sciences). I read the abstract or key findings section of each article to understand whether the article should be read in more detail.

In addition to database searching, the following search methods were employed: 1) reference checking of all papers that meet the inclusion criteria; 2) searching for citations of all studies

that meet the inclusion criteria using Google Scholar; 3) contacting subject matter experts to identify unpublished research; 4) reading HE magazines including WONKHE and Times Higher Education; 5) skimming through the recommendations from Mendeley that were based on my reading.

2.2 Policy background

2.2.1 Introduction

This section summarises key policy developments in the context of English HE, mapping the route to the introduction of the student finance system based on graduate contributions in 1998/99. In this section, different initiatives and decisions that shaped the current student finance regime are discussed. The opening section describes the educational reforms that were introduced by the early Conservative government in 1979 - 1997. These reforms paved the way for the market-oriented system and the accountability culture. The second subsection considers how the market agenda was intensified during the New Labour years. Focusing on widening participation, the New Labour office introduced several policy initiatives aimed at increasing the HE participation rate among 18-30-year-olds to 50 % by 2010. Next, this section outlines market-oriented reforms under the Coalition government. It then addresses the changes that the Conservative government has implemented most recently and outlines the features of the current student finance system.

2.2.2 Conservative government higher education reforms (1979-1997)

Education policy is high on governments' agenda across the world because of the link between improved education quality, economic growth, and social prosperity. The HE education policy in England cannot be understood in the abstract, it should be considered within a broader political context. Since the Second World War, there was a growing demand for graduates. Western European countries reached the broad consensus that access to HE should not be limited to a select few; anyone with a recognised qualification should have the right of access. In France, for example, access to free HE is enshrined in the French Constitution (Deer, 2008). In Britain, it became clear that young people need to be qualified at the post-16 level if the country was to maintain its position as a strong global player. Britain, however, took a different path from continental Europe.

The UK has a long tradition of competition between universities. The oldest is the competition between Oxford and Cambridge which began in the late 12th century. This policy overview begins with the Conservative government reforms of 1979-1997, which mark the beginning of the quasi-market of HE. Market-oriented reforms introduced by the Conservative governments of the 1980s and 1990s echo reforms in schools. In the 1980s, the Conservative government was facing major issues with education. Enrolment in post-compulsory education, although rising, was not sufficient for the needs of the economy (Hansen and Vignoles, 2005). Furthermore, exam performance at age 16 had stagnated, with more than two-thirds of students leaving school with no academic qualifications (Machin and Vignoles, 2006). This generated concern for the quality of school education. In response, the Conservative governments of the 1980s and 1990s implemented market-oriented reforms that changed relationships between schools and parents. The 1980 Education Act introduced a parental choice of school in England and Wales. It allowed parents to choose a school for their children that was different from their designated school. The 1988 Education Reform Act introduced a national curriculum and testing and linked school funding with student enrolment numbers. These reforms were aimed at improving standards in the sector by creating a quasi-market of school-based education.

Similarly, the HE sector evolved into a quasi-market. In his seminal paper, Trow (1973) divided the development of HE into three stages, namely elite, mass and universal. According to his classification, elite systems enrol up to 15% of the target population, mass systems enrol between 15% and 40%, and universal systems enrol more than 40% of the target population. It is important to note that, in Trow's terms, the move from one stage to another is not inevitable, and the system can exist without being transformed. Growth in HE participation, however, has economic and political effects: "as a system grows it [...] becomes an increasingly substantial competitor for public expenditures along with housing, welfare and defence (Trow, 1973, p.4)". Consequently, the governing and funding structures have to adapt. In the UK, HE participation increased from 8.4% in 1970 to 19.3% in the early 1990s, shifting from an elite system to a mass one. While more people were encouraged to stay in post-16 education, the elitist private school sector was resilient to the changes, with the proportion of privately educated students remaining at around 7% throughout the expansion of the HE sector (Green, Henseke and Vignoles, 2017). In other words, while the number of students being educated in private schools remained stable, the number of students going to university continued to grow. Changes towards a quasi-market of HE coincided with economic downturns in the early 1980s and 1990s when staying in education became more attractive than leaving (Bolton, 2012).

A focus on increasing HE participation continued to be one of the key features of the Conservative policy. Before 1992, there were two types of HE institutions, polytechnics and universities. Polytechnics tended to focus on vocational qualifications, while universities offered academic qualifications. The 1992 Further and Higher Education Act abolished the binary divide between universities and polytechnics, allowing institutions offering HE to apply for university status and award their own degrees. The end of the binary divide came about naturally since polytechnics were known as more business-oriented and being able to expand at a lower cost. They were responsive to the needs of the labour market and their local community. Polytechnics were taken out of the Local Authority control and became overseen by a new funding body - the Higher Education Funding Council for England (HEFCE). The HEFCE was responsible for the distribution of funding to HE providers. This move towards the idea that academic and vocational forms of education could work together became the basis for the new sector that was created in 1992. By the end of the 1990s, the HE participation rate reached almost 35% (Mayhew, Deer and Dua, 2004).

Moving from an elite to a mass system of HE, the HEFCE expressed concern over the cost of increasing student numbers. In 1994/95, the government introduced student number controls that were linked to the distribution of funding to ensure more sustainable growth over the next three years. Each university was set a Maximum Allowable Student Number (MASN), which applied to all English domiciled undergraduate and taught postgraduate students. Introduced as a short-term measure, the controls remained in place until 2002. They were subsequently replaced by limits on maximum teaching funding, which performed the same function. Despite these number controls, spending per student continued to fall throughout the 1990s, which prompted important changes in the way university education was funded.

As HE participation rose, government funding became scarcer. While it remained at the same level between 1989 and 1997, spending per student fell by 36% (Clark, Conlon and Galindo-Rueda, 2005). In response to this problem, the Dearing Committee proposed radical changes to the student finance system. The Dearing report of 1997 drew attention to the significant returns enjoyed by graduates in the labour market which, in the Committees' view, meant that university graduates should contribute to the costs of their education. This proposal became a basis for the 1998 Teaching and Higher Education Act that introduced a tuition fee of up to £1,000 per year in 1998/99, which students from poorer households were not expected to pay. The Act proposed to replace part of the maintenance grant with a loan in 1998/99. From

1999/00 maintenance grants were to be replaced entirely by loans. It also introduced an income-contingent mechanism, based on graduate earnings, for the repayment of student loan debt. The loans were not expected to be paid back until the graduate was earning at least £10,000 per year. The repayments were based on a percentage of the graduate's marginal income over £10,000. Repayments came directly from a graduate's salary through the tax system.

During this period of Conservative rule, the HE participation rapidly increased in response to the needs of the economy (McCaig, 2011). The expanding HE sector required more funding that could not be supported by the government funding alone. England, like many other countries, has gradually moved away from a HE system funded primarily through taxes to a system funded through a mix of the taxpayer and student contributions. For the first time since the 1960s, university students were asked to contribute towards the costs of their education. The notion of value for money was yet to become a strategic imperative. It was mentioned by David Blunkett, now in the House of Lords, who suggested that a fee-based system will drive the HE participation up while delivering value for money (House of Commons, 1997). That is how a quasi-market of HE was created.

2.2.3 The New Labour Years (1997-2010)

The New Labour government adopted a more individualistic outlook, suggesting that individuals must take responsibility for their continuous learning and seek opportunities to update their knowledge and skills. Simultaneously, the government supported competitive behaviour between HE providers and student choice (Tomlinson, 2001). New Labour embraced aspects of a quasi-market in education in the same way their Conservative predecessors did, but the new government aspired to create a fairer and more inclusive system.

Under the New Labour government, universities continued to be funded through a mix of taxation and tuition fees. By 1999, the New Labour government phased out maintenance grants. They were replaced by means-tested loans, repayable on an income-contingent basis after graduation. The financial support was continued to be assessed against university applicants' family income, but the student loan repayments were linked to the graduates' income. Although the new income-contingent loan system was an enormous relief for the HE sector, two problems persisted. First, the repayment mechanism was little understood by prospective students and their parents, causing fear of debt (Callender and Jackson, 2005). Second, the

subsidised interest rate on student loans was poorly designed and benefited high-earning graduates, not graduates from disadvantaged backgrounds who the loans were meant to help (House of Commons, 2001).

In 2003, the New Labour government proposed student finance reforms aimed at increasing university funding by introducing tuition fees for all undergraduate students. The 2004 Higher Education Act allowed universities to charge 'top-up fees' of up to £3,000 for full-time undergraduate degrees from 2006/07. At the same time, the direct funding from the HEFCE was reduced. The shift from flat to variable fees could be explained as follows. It was argued that students have different needs and wants, and variable fees would help the educational market to regulate itself and offer more flexible provision (Shattock, Farrant and Temple, 2006). In contrast with the £1,000 fees introduced by the Conservative government in 1998/99, these fees no longer had to be paid upfront. Instead, the tuition fees debt was only to be repaid after graduation on an income-contingent basis, when the graduate was earning £15,000 per year or more.

The government was criticised for its decision to allow universities to charge 'top-up fees'. It was suggested that the introduction of 'top-up fees' would disproportionately affect students from disadvantaged backgrounds. For the first time, these students were asked to contribute towards the costs of their education. It was argued that many students will have to work part-time to fund their education. This, combined with the possible deterrent effect of the student loan debt on students from disadvantaged backgrounds had the potential to increase social inequalities in HE participation (House of Commons, 2003).

Policy changes that were implemented in 2006 did not meet the government's expectations. The 'top-up fees' were intended to be variable between institutions and subjects, but, in practice, almost all universities charged the full amount for most subjects from the outset (Brown, 2013). In other words, there was no price competition between the HE providers. The fears that the increased tuition fees would deter disadvantaged students from applying to HE did not seem to materialise. After a short dip, the demand for university education continued to rise (Harrison and Hatt, 2012). The number of students who worked part-time during their studies did not increase. In fact, part-time employment declined in 2006/07 (Office for National Statistics, 2021). The introduction of the 'top-up fees' did not compensate for the reduction in government funding. The underfunding of HE became a more urgent issue in the lead-up to the general election of 2010.

During the New Labour Years, student number controls remained in place. They were linked to the previous year's student numbers, requiring universities to increase their enrolment by at most 5%. The purpose of this measure was to control the level of public funding needed for student support and loans. This allocation is referred to as the student number controls (SNC). If universities wanted to expand the number of funded places beyond the 5 % tolerance band, they needed to bid for the additional funding through the Learning and Teaching Capital Fund. At the same time, the government set out a target of 50% of 18-30- year-olds going to university. The participation rate was at 37% when New Labour entered office. They did not achieve the 50% target, and only reached 42% by the time they left.

The consolidation of the consumer culture in HE coincided with the launch of an Independent Adjudicator for Higher Education (OIA) in 2004, which was designed to provide more accountability for public spending in HE as well as to build a HE sector that is more responsive to students' demands. Since the introduction of 'top-up fees', the number of complaints increased from 586 in 2006 to 900 in 2008 (Jones, 2010).

In summary, the New Labour considered personal responsibility a key part of its domestic policy. This behaviour change initiative, or 'responsibilisation', meant that citizens were expected to bear more of the financial risk and costs (Perri 6, Fletcher-Morgan and Leyland, 2010). In the HE context, prospective students were encouraged to consider the costs and benefits of going to university. The New Labour government also embraced a quasi-market of HE. The idea behind 'top-up fees' was to introduce a HE market with variable prices, but the market never materialised in that way. The market manifested itself in the contractual nature of the relationship between HE providers and university students. The marketisation of the sector reconstructed students as customers or consumers (Bradley, Bathmaker and Waller, 2013; Jones, 2010).

2.2.4 The Coalition government (2010-2015)

The 2008 financial crash, which was followed by a period of economic stagnation and public spending cuts, drew attention to the purpose of education. The European Council (2015) recognised the importance of education and training for economic growth and announced its commitment to two educational goals that member states should aim to achieve by 2020. The Council declared its commitment to reduce early school leaving below 10% and to ensure that at least 40% of 30-34-year-olds have participated in HE. In the UK, the Coalition Government

of 2010-15, which inherited a large budget deficit, introduced several policies that dramatically changed education. Between 2013 and 2015, the school leaving age was gradually increased from 16 to 18. Students now stay in school until age 16, then must either remain in school or take on vocational training or apprenticeship until the age of 18.

The government also worked on transforming HE. The Browne Review (2010) introduced the term *value for money* which became deeply embedded in the political discourse. Initially, it was used in reference to HE institutions' responsibility to provide value for money for taxpayers and students. Pursuing a regime of austerity, the government regarded university students as the main beneficiaries of HE who now need to contribute towards the costs of their degree (Hillman, 2013). The role of the welfare state was scaled down and more private funding was pumped into HE through tuition fees and business contracts (Kwiek, 2017). In line with these changes, value for money was used to give more agency to students, who were perceived as demanding good value for money from their universities. The educational policy adopted a customer-centric strategy, according to which, students were able to influence the HE market through their purchasing decisions. In other words, students were perceived to be able to hold universities to account and drive teaching excellence (Department for Business Innovation & Skills, 2016b).

The Browne Review recommended removing the cap on tuition fees and raising the repayment threshold for student loans to £21,000. It also proposed removing public subsidies for all subjects and instead invest in priority subjects such as Medicine, Science, and Engineering. The independent committee considered a graduate tax unworkable because it could impede instructional autonomy and reduce the role of student choice (Browne, 2010). A year later, a White Paper *Students at the Heart of the System* outlined student finance reforms designed to establish a more responsible HE sector where "funding follows the decisions of learners and successful institutions are freed to thrive (Department for Business Innovation & Skills, 2011, p. 8)". The report highlighted the need to open the educational market to further education colleges and alternative providers in order to meet the changing needs of employers, individuals and their communities. In that report, HE was viewed as a route to success, which should be open to students from all backgrounds (Department for Business Innovation & Skills, 2011).

The Browne review suggested that many prospective students do not receive sufficient information that they need to make informed decisions about their university studies. At the

same time, the Browne review acknowledged the abundance of information that was already available to prospective students, albeit not always accessible. The report highlighted the need to drive quality improvement in the sector by providing applicants with individualised career advice at school and detailed information about university courses, including information about contact hours, feedback arrangements and class sizes (Dodds, 2011).

From 2012/13, the tuition fee cap for full-time undergraduate degrees was raised to £9,000 (from £3,375 in 2011/12). The increase in the fee cap allowed to reduce upfront government investment while per-student resources were increased. Originally, the £9,000 fee was reserved for exceptional providers. In reality, around 98% of providers increased their fees to the maximum. Dr Gavan Conlon, a Partner at London Economics, suggested that the 2012 variable fee reform failed because universities had no incentive to charge anything other than £9,000 under the generous student finance regime. Moreover, universities did not like to give the impression that they offer lower quality provision by lowering their fees (House of Commons, 2018b). The high level of fees resulted in a higher level of student debt which raised some concerns among applicants and students. Since the increase of the fee cap, the low-cost subjects, such as Art and Humanities, received more tuition fees income per student than high-cost subjects, such as Science and Engineering, which resulted in cross-subsidies within many HE providers. When university applicants, students and graduates were asked about good value for money, all three groups of respondents disliked the idea of their tuition fees being used to fund teaching on other courses, research unrelated to their course, or management of university (Trendence UK, 2018).

Full-time undergraduate students continued to have access to tuition fees and maintenance loans, with repayments after graduation on an income-contingent basis. Part-time students became eligible for tuition fee loans for the first time. In addition, a variable tiered rate of interest was added on student loans and the repayment threshold for loans was raised to £21,000 (Atkins and Ebdon, 2014). From 2012/13, a real interest rate was charged on student loan repayments. The rate varied from inflation only, with a real interest rate of 0%, to inflation plus 3%.

In line with the overall aim of the 2011 White Paper, *Students at the Heart of the System*, from 2012/13, HE providers were allowed to admit as many high achieving applicants as they wished. This policy decision was made under the assumption that "the 'brightest' applicants would naturally wish to attend all the 'best' universities because everything pre-1992

institutions offered required the highest grades (McCaig and Taylor, 2017, p. 1651)". The high grades element within the SNC was designed to promote a price differential between institutions that would reflect the quality and increase demand. The number of controls was gradually relaxed over the period between 2012/13 and 2015/16. In 2012/13, the number cap was removed for students with AAB+ in their A-levels or equivalent qualifications. In 2013/14, the cap was also removed for those who achieved ABB+ in their A-levels or equivalent qualifications. The SNC was completely abolished in 2015/16. The high grades policy reform did not deliver the expected outcomes. It did not produce the desired market differentiation in a short period of time. The market mechanism did not work as intended because the demand for HE was still higher than the supply, with the university acceptance rates reaching a record high in 2014/15 (McCaig and Taylor, 2017).

HE providers did not adjust their tuition fees as a result of the scrapping of number controls. The number of students enrolled in HE continued to rise as the generous student finance regime attracted more prospective students. Contrary to previous research suggesting that prospective students were deterred from applying because of the fear of debt (Callender and Mason, 2017; Callender and Jackson, 2005), there is a growing number of studies showing the opposite trend where young people reported viewing the student loans as an opportunity or an inseparable part of their student experience (Connor *et al.*, 2001; Evans and Donnelly, 2018; Horton, 2015).

While the Browne Review and the 2011 White Paper focused on building a HE market and increasing the number of young people that can access universities, the Green Paper *Fulfilling Our Potential: Teaching Excellence, Social Mobility and Student Choice* (Department for Business Innovation & Skills, 2015a) outlined a vision of the sector where teaching is placed on equal footing with research. To achieve this, the government proposed to introduce a new Teaching Excellence Framework (TEF) that would "identify and incentivise the highest quality teaching to drive up standards in HE, deliver better quality for students and employers and better value for taxpayers (Department for Business Innovation & Skills, 2015a, p. 18). Most importantly, the TEF was designed to give students information about the quality of teaching, so that they can make value for money calculations.

Moreover, the TEF was intended to influence providers' behaviour by offering financial and reputational incentives to them. The reputational incentive was based on an assessment scale against which prospective students and other stakeholders can compare different courses. The bronze, silver, and gold ratings were meant to inform university applicants about the quality of

teaching at a given course. Those providers who have good TEF rating were meant to naturally attract more university applicants. The additional income that the university applicants bring with them could be reinvested back into teaching. The providers that received a low TEF rating are encouraged to improve the quality of teaching to maintain their student numbers. Under market conditions, providers that offer low-quality teaching were expected to leave the sector, freeing up space for new providers.

The TEF has been criticised for not being a valid means of assessment. To date, the TEF operated on a provider level. Most students, however, choose their subject first and then choose between providers offering that subject. This brings up a question of the TEF value, or lack thereof, for university applicants. Knowing that the TEF does not offer more granular information that prospective students need, some argued that this assessment facilitates raising fees, rather than provides students with better information (Department for Business Innovation & Skills, 2016a). The government planned to introduce the subject-level TEF in 2019/20 but this initiative was abandoned for several reasons. It increases the administrative workload for those who are involved in the submission. In addition, the subject-level model has statistical weakness due to the small number of students on some degree courses. Another issue with the subject-level TEF is the assessment of interdisciplinary programmes, which fall outside the scope of this exercise.

Another criticism of the TEF is related to its impact on the relationship between HE providers. The TEF encourages competition and highlights differences, which, in turn, might reduce trust and cooperation. As a result, the creative dialogue and knowledge dissemination slow down (Franco-Santos and Otley, 2017). On a similar note, Barkas *et al.* (2019) argued that by encouraging the competition between the established universities and new providers the TEF could potentially drive the quality of provision down. In other words, academic staff might feel that they need to design their teaching programmes in a way that diverge attention from students' learning to metrics of teaching excellence (Bartram, 2020). In more general terms, two trends have been dominating HE - marketisation and regulation. The TEF attempts to play a dual role. It was introduced to promote market competition between the HE providers and, simultaneously, to assess whether they meet baseline quality requirements. Some argued that pursuing two goals, the TEF cannot achieve either of them (Barkas *et al.*, 2019).

Responding to the *Students at the Heart of the System* report, the Coalition government pledged to set up a new framework, which would provide incentives for universities to widen

participation. Widening participation goes beyond the increase in the number of students from disadvantaged backgrounds and underrepresented groups, it connects students, communities and educators (Taylor, Mellor and Walton, 2009). As a metrics, widening participation links the participation to socio-economic capital and compulsory education factors that has been shown to determine more of the course of one's life than some are comfortable with.

The Dearing Review, published in 1997, could be defined as the starting point of a discussion around inequalities within HE. The Aimhigher programme, which ran between 2004 and 2011, drew together various initiatives aimed at encouraging young people who were historically underrepresented in HE to apply. In addition to this, since 2006, HE providers charging more than the basic fee, in effect all universities and some further education colleges and independent training providers are required to have Access Agreements approved by the Office for Fair Access. In their Access Agreement (in future an Access and Participation Plan), the provider is expected to outline steps they take to reduce gaps between different groups of students in relation to access to, success in, and progression beyond their degree (Harrison and Waller, 2017).

Despite the continuous policy attention and efforts to keep HE providers' widening participation strategy in check, participation has been increasing very slowly. A study examining admissions data for the period between 1996 and 2006 showed that, after controlling for prior attainment, students from state schools were 41% less likely to be offered a place at a Russell Group university. Similarly, Black, Asian and minority ethnic (BAME) students were still less likely to receive an offer from a Russell Group university. For example, Black Caribbean/African students were 33% less likely to be offered a place compared to their White counterparts (Boliver, 2013). Over the past five years, the proportion of students from low participation neighbourhoods attending a Russell Group university gradually increased from 6.26% in 2015/16 to 6.69% in 2019/20. It was projected that the OfS' target to eliminate the participation gap between POLAR4 quintile 1 and quintile 5 at higher tariff providers would disappear by around 2038, meaning changes might happen slowly (Kernohan, 2021).

In 2015, the Government set out two targets for widening participation: to double the proportion of young people from disadvantaged backgrounds entering HE in 2020 compared to 2009, and to increase the number of BAME students going to university by 20% by 2020 (Department for Business Innovation & Skills, 2016b). Since these targets were set, the proportion of undergraduate students who live in POLAR4 quintile 1 areas increased from

18.7% in 2009/10 to 29.9% in 2019/20 (Department for Business Innovation & Skills, 2015b; Office for Students, 2021). This means that the first target was not met. According to the Universities and Colleges Admissions Service (UCAS), the proportion of BAME applicants increased to 29.4% in 2020 (UCAS, 2020), which means that the second target was achieved. The government required HE providers to take better account of an applicant's background when making admissions decisions and utilise the TEF assessment to fulfil widening participation goals (Department for Business Innovation & Skills, 2015a).

To recap, the Coalition government allowed universities to triple the cap on tuition fees to £9,000. This was done to achieve two objectives. The first one was to shift more of the cost burden onto students. Secondly, the hope was to encourage competition between universities by setting different tuition fees (Foskett, 2010). The first objective was accomplished but the second one was not: all but one HE provider chose to charge the maximum fees. That meant universities had to attract prospective students through non-price competition. At the same time, policymakers and commentators claimed that students demand value for money, and they should have access to information that could help them to choose wisely. The Coalition government was criticised for fixating on the tuition fees and overlooking other important issues such as the removal of student number controls (Hillman, 2016).

2.2.5 The Conservative Government (2016-Present)

The 2016 White Paper *Success as a Knowledge Economy, Teaching Excellence, Social Mobility and Student Choice* emphasised the Government's commitment to creating a competitive market, where competition between providers results in "a greater choice of more innovative and better-quality products and services at lower cost (Department for Business Innovation & Skills, 2016b, p. 8)". This White Paper outlined a number of criticisms of the wider HE system, including concerns around large variation in graduate outcomes, a lack of innovation in the provision and the quality of teaching. Insufficient competition and a lack of informed choice are understood as the primary reasons for the sector setbacks (Department for Business Innovation & Skills, 2016b).

To promote a self-regulated market model, the Conservative Government created the OfS, which replaced the HEFCE (Higher Education Commission, 2017). The new regulator was designed to "be explicitly pro-competition and pro-student" (Department for Business Innovation & Skills, 2016b, p. 15). It was established in acknowledgement of the need to

regulate the market (Augar, 2019). The OfS is responsible for overseeing the registered providers and promoting a financially sustainable, efficient and well-governed sector. The OfS is also responsible for granting the Degree Awarding Powers to new providers.

The government also outlined its commitment to ensuring high-quality standards of teaching and learning. The TEF assessment was introduced in 2016/17 to meet this goal. The OfS is responsible for the delivery of the TEF. The development of the TEF was described in the previous subsection. To be eligible for the TEF assessment, providers need to publish a statement on their widening participation strategy and fair access. The core metrics of the TEF are split by POLAR4 quintiles, which means that the expert panel can assess a provider's performance for different groups of students. The TEF offers financial incentives to providers - a provider's fee/loan cap is dependent on whether they participate in the TEF (UCAS, 2021b).

In 2017/18, HE providers participating in the TEF were eligible to raise their fees by an inflationary amount to £9,250 – this is the first fee rise since 2012. The fee cap remains frozen at that level. The £9,250 increase also affected students who had already started courses. Freezing the fee cap meant the providers will receive less income than they expected, and the government will need to limit the total amount the university students can borrow. The repayment threshold was increased to £25,000, which meant the proportion of graduates whose student loan debt will be forgiven could increase from around 70% to around 80 % (Hubble and Bolton, 2018). The combined effect of these changes manifested in an increase of student loan debt. From a three-year degree, it is projected that students from the poorest backgrounds will accrue debt of £57,000 compared to around £43,000 for students from a more affluent background (Belfield *et al.*, 2017). Not surprisingly, in the 2017 General Election, the Labour Party manifesto included a commitment to abolish tuition fees and to restore maintenance grants. Their proposal proved popular among young voters.

The traditional three-year undergraduate degree was heavily criticised because the traditional model was deemed to be not responsive to the industry demands (Higher Education Commission, 2017). The White Paper *Success as a Knowledge Economy* also pointed out that there are gaps in flexible and part-time provision. Once accepted for the course, "most students remain locked into the institutions they first choose (Department for Business Innovation & Skills, 2016b, p. 53)". The report argued that a more flexible provision will give a competitive edge to graduates in the labour market.

Two years later, the Augar review (2019) was published. It made several recommendations that are relevant to student finance. The Augar's panel recommended lowering the undergraduate fee cap to £7,500. The hope was that this would allow better targeting of taxpayer investment since the new fee cap was described as representing reasonable costs of a degree course. In addition, the repayment period was proposed to be extended which would allow more graduates to repay their student loans. The review also proposed to reduce the in-study interest rates and introduce a cap on graduates' lifetime repayments. The Augar review suggested that while "most graduates benefit significantly from higher education - as does the economy and wider society (Augar, 2019, p.10)", a small number of students are disappointed with their university experience, while the state "foots the bill (p. 65)". The proposed solution was to take some pressure off from the providers by removing low-value degrees. Low-value degrees received wide coverage within and outside the HE sector and it was pointed out that low-value provision is difficult to define. Unlike the quantity of provision, which is assessed against a defined list of factors (Quality Assurance Agency, 2018), the definition of value would depend on who seeks to define it. It can be the HE provider, the student, the taxpayer or the employer. Whether this term refers to the monetary or a non-monetary value of a degree is another question.

A university, for example, could describe a course as low value when course provision is expensive, and the graduate outcomes pull the providers' performance down. Several studies looked at how students define the value of their undergraduate degrees. The results of the Student Academic Experience Survey showed that since 2016/17 the number of students who perceived poor value started to decrease whereas the number of students who perceived good value went up. University students who thought that they receive poor value for money referred to the level of fees and contact hours as the main drivers of the poor value perception (Neves and Hillman, 2019). When students were presented with a different list of factors and asked to rate them based on their role in defining whether their course offers good value for money, students selected the following factors as the top three: quality of teaching, fair assessment and helpful feedback, and learning resources for students. Interestingly, the costs associated with studying for a degree were excluded from the list of factors determining good value for money (Trendence UK, 2018). The ranking of the most important factors might have been very different if a different set of factors was offered to the survey respondents.

For a potential employer, the value might be defined by the match between the needs of their business and skills and advanced technical knowledge that a graduate can offer. For a graduate, in turn, the value of their degree can be retrospectively demonstrated by their job satisfaction, earnings and use of graduate skills. Prof Julia Buckingham, Universities UK President, criticised the government's approach to defining the value through students expected future salaries:

While universities need to work collectively and respond more effectively to legitimate challenges around the value of some university degrees, government also needs to broaden its current narrow definition of success based on salaries alone. This is a blunt tool which does a disservice to students and recent graduates, while failing to consider the wider student experience.

(Universities UK, 2020)

The revised UK quality code for Higher Education includes a glossary of terms, in which value is defined as "the credibility and standing of qualifications, and their reliability as a reflection and consistent record of academic achievement (Quality Assurance Agency, 2018, p.5)". This definition seems to lack clarity and reference to any measurable outcomes.

In addition to the changes to student finance, the Augar review commented on issues relating to student choice. Despite all the efforts put into promoting informed choice, there is still a lot of misunderstanding around the student loan system. Some prospective students are still deterred from applying because of the perceived high costs of participation and the fear of debt. Changing the name of the system might be a sensible solution in the current context. The Student Contribution is a new name proposed by the Augar review's authors. This proposal was not addressed by the government.

In January 2021, the Government published an interim conclusion of the Augar review. Tuition fees were not mentioned in the report. However, it did acknowledge the impact of the coronavirus pandemic on the HE sector and reiterated the need for flexible provision. A link between education and jobs was highlighted in the report: "we will ensure employers are at the heart of our skills system (Department for Education, 2021, p.5)". It is important to pay attention to the language of the report. The BIS White Paper put students at the heart of the reforms (Department for Business Innovation & Skills, 2011), while the DfE indicated in their

response that the focus has to shift towards employers. The report acknowledged the discussion around low-value subjects. It stated that further reforms will be needed and that a more detailed response will be applied in due course. Perhaps because of the backlash on the low-value provision, the report used the low-quality provision term instead. Furthermore, the response included an updated view of the TEF. The TEF will continue to play a critical role in driving the quality improvement in HE provision. The report mentioned an OfS consultation that is looking into an improved, low-burden TEF. Finally, it seems possible that the HE sector will see a return of the binary system since the report pledges to guarantee "genuine choice between the academic and the technical [provision] (p.9)".

A couple of weeks before the beginning of the first national lockdown the government published a new budget report. The report did not mention tuition fees which means that they continued to fall in real terms (Norman, 2020). That would have a knock-on effect on research funding and high cost courses because of the cross-subsidy from tuition fees. Drayton and Waltmann (2020) published a briefing note describing three scenarios for the future of HE - optimistic, central, and pessimistic. Their analysis concluded that the coronavirus pandemic will result in substantial losses for the HE sector. Overall, the sector is resilient, but some providers might be affected more than others, especially those who recently begun to grow their international student recruitment.

There has been a general sense that the government did not prioritise HE in their response to the coronavirus pandemic. With the universities having to close, it was not clear how everything will be shifted online, including lectures, seminars, and assessment. A recent survey conducted among 630 academic staff and staff supporting learning and teaching showed that during the pandemic student attendance and participation improved, staff benefited from flexible working and found using technology as a communication platform helpful. There were some challenges as well. Additional time was required for adapting learning materials for the online format. There were some technical issues. Many respondents reported feeling isolated, experienced loss of motivation and digital fatigue (WONKHE, 2021).

University students also had the opportunity to reflect on their university experience during the pandemic. The most recent National Student Survey suggests that the number of students who think they received good value for money dropped to just 27%, the number of respondents reporting that they received poor value for money increased to 44%. The remaining 29% thought that they received neither good nor bad value for money. The upward trend in the

number of students who thought they received poor value for money began in 2019 and in 2021 the number of dissatisfied students exceeded the number of those who believed that they received good value for money for the first time (Neves and Hillman, 2021).

Some students were extremely dissatisfied with the quality of their university experience. Following staff strikes in early 2020 and subsequent university closures due to the pandemic, a petition asking universities to reimburse all students of their 2019/20 tuition fees was opened. It reached 353,130 signatures. The government did not address the students' concerns as a collective issue and instead recommended submitting individual complaints to their universities. Justifying such an approach, the government referred to the market-oriented model of HE and accountability culture, two reoccurring themes in the HE policy, that have been discussed in this chapter. The response reads:

More must be done to ensure that students know their rights and can play an active part in holding their provider to account, to ensure that they are receiving the value for money which should be expected of our world-leading universities

(House of Commons, 2020)

A year later a new petition asking universities to partially refund tuition fees for 2020/21 due to the coronavirus pandemic was open. It reached 270,660 signatures. Similarly, concerned students were advised to submit individual complaints in the first instance. In a way, the pandemic response constitutes a litmus test with the respect to the type of system universities and students operate in.

The coronavirus pandemic forced the HE sector to reflect on its direction and adjust accordingly. There have been some controversial ideas about how the impact of Covid-19 should be mitigated. For example, Policy Exchange published a report criticising the HE sector for mismanagement of resources caused by "low-value degrees and disorganised approach to vocational training (Goodhart, 2020, p.5)". Although the low-value degree was not clearly defined, the report suggested that re-introducing the binary divide between the research-intensive universities and teaching-focused ones is a solution to the current crisis (Goodhart, 2020). Historically, there were differences in funding between traditional academic universities and polytechnics. Among other reasons, polytechnics were granted university status to reduce inequality. The question of reputation was also important. The re-introduction of the binary

divide contradicts the idea that student choice drives changes in the HE sector. In a way, this report implied that letting student choice alone drive the HE market development brought the sector to the point where the government needs to intervene.

In summary, the current period of Conservative administration is characterised by an introduction of a self-regulated model of the HE market. The OfS was instrumental to this new regulatory regime. Debates about tuition fees continued. HE providers taking part in the TEF and developing their Access and Participation Plan were allowed to raise their fees to £9,250 in 2017. Despite a rather small increase compared to the past changes, this funding reform was divisive, and concerns were expressed about its impact on current and prospective students. To address issues within the post-18 education and funding system, the Conservative government launched the Augar review. The Augar review proposed to reduce tuition fees and extend the student loans repayment period. The hope was that this would help to reduce overall student debt and encourage more students to study for a degree. The Augar review also called for clearer language around student finance because the current vocabulary does not do justice to the HE sector and leads to common misunderstandings. The report also noted the student finance system can benefit from reiterating the expectation that graduates should repay their student loans once they are able to do so. Value for money for students and taxpayers was a common thread running through all Augar report's recommendations.

The government's interim response to the Augar review did not address the proposed changes to the student finance system. Instead, the government recommended freezing the maximum tuition fee cap and keeping fees in line with previous years. The government expressed support for a strong link between education and the labour market that would provide value for money to students and taxpayers. The government acknowledged that the HE sector needs to adapt so as to respond to the pandemic, life outside the EU, and new technologies. As for students' views on value for money, students, more than ever, reported that their degree represented poor value for money (Neves and Hillman, 2020; Neves and Hillman, 2021).

2.2.6 Policymakers and commentators' views on the student finance system

Over the course of the last two decades, the student finance system has changed significantly. In the late '90s, the Conservative government introduced means-tested upfront tuition fees of up to £1,000 a year. Under the New Labour government, they were replaced by loans repayable on an income-contingent basis in 2006. The cap on the tuition fees was raised to £3,000 in the

same year. Following the 2010 election, the Coalition government allowed universities to triple the cap on tuition fees to £9,000. This reform affected students starting university in 2012. Most recently, in 2017, the Conservative government allowed eligible HE providers to raise the cap to £9,250. In parallel, student maintenance support has evolved. Means-tested grants were abolished in 1999, re-introduced in 2006 and then replaced by loans for new students in 2016. The maintenance loan is also repayable on an income-contingent basis.

Unlike any other consumer loan, student loans provided by the English government, are linked to graduates' income, meaning the monthly repayments depend on how much they earn. The repayments were designed this way to ensure that every graduate can afford their repayments. According to recent estimates, the average debt at graduation is £45,000 and only a quarter of current full-time undergraduates are expected to repay their loans in full (Bolton, 2021). The supporters of the student finance system describe it as "the most progressive in the world (Chester and Bekhradnia, 2008, no page)". Johnstone (2014) also noted that income contingent student loans that were introduced in England, Australia, and New Zealand are more progressive compared to dual-track tuition fee schemes that can be found in Russia and the other countries of the former Soviet Union. In dual-track tuition systems, universities offer a limited number of free places and accept full-cost upfront fees from students who did not secure a free place based on their academic ability. The dual-track tuition systems have contributed to rising inequality in post-Soviet countries.

In England, there is no upfront payments and graduates are required to repay their loans only when they earn above the set repayment threshold. This is done to ensure that no one is deterred from applying because of their financial circumstances. These repayments are more manageable for graduates than a conventional personal loan because they are not put on a fixed schedule (Johnstone, 2014). Critics, such as Nicholas Barr and Iain Crawford, argued that the introduction of student loans made HE free for students. Many graduates contribute very little or nothing towards their student loan debt, leaving taxpayers unreasonably burdened by student loan debt (Barr and Crawford, 2004).

There is also a more general argument against the student finance system. Students intending to invest in their education operate under risk and uncertainty because they have a limited understanding of their preferred course and their graduate prospects. In addition, private lenders are hesitant to offer affordable loans because there is no asset to recover in the event of default. As a result, the private market for student loans does not develop (Friedman, 1955,

cited in Murphy, Scott-Clayton and Wyness, 2019). The English system, however, appeared to be unaffected by these issues. Since the introduction of the income-contingent loans, funding per student increased and the HE enrolment continued to grow.

The current student finance system assumes a special relationship between students and HE providers. Brooks (2021) analysed 92 policy documents from six countries - Denmark, England, Germany, Ireland, Poland and Spain - and found that university students are constructed differently in England. Overall, the English documents tended to criticise HE providers and describe students in more positive terms. The opposite trend was observed in documents that were published in Denmark and Poland. There, students were described as numerous and lacking academic aptitude. A further difference between the policy narrative in these six European countries relates to the concept of investment. The document analysis showed that while, in England, students are considered individual investors, the state invests in young people in Germany. Ireland, Denmark and Spain called for more responsible behaviour among students who receive the government's support.

Some commentators called for changes to the student loans repayment system. Barr and Crawford (2004) outlined an alternative system. They welcomed a targeted income tax or a graduate contribution that is paid only by those who attended university. It is similar to the current student loan repayment system except that the total graduate contribution is equal to the initial borrowed amount. Augar *et al.* (2019) proposed a different system, where graduates are expected to contribute 1.2 of the real initial loan value over 40 years from the April after graduation. If they do not contribute the expected amount the outstanding debt is written off in 40 years' time. These proposals were not implemented at the time of writing of this thesis.

2.3 University choices: the quasi market in higher education

2.3.1 Introduction

This section discusses a theoretical lens through which HE choices can be viewed. It outlines how the development of market-oriented policy, a trend that dominated the public sector over the last three to four decades, became a part of educational policy. The concept of quasi-markets (Le Grand, 1991) is discussed in the context of HE choices. In addition to the market model of HE choices, other theoretical perspectives are considered.

The consumer decision-making process can be broken down into five stages: need recognition, information search, evaluation of alternatives, purchase decision and post-purchase behaviour. It starts from identifying needs or wants. Once a need is identified, the consumer starts searching for information and considering alternatives. During this process, information about different products and their characteristics is collected from various resources. The identified products are then compared with each other based on different factors such as price, quality or any other factor that is important to the consumer. Following that, the consumer selects a product that they want to purchase. After the purchase, the consumer reflects on whether the product met their need/want. This five steps model gives a very simplistic overview of the process of consumer decision-making. It does not refer to the supply side of the market, but this model can be used to punctuate our understanding of the HE choice.

The UK HE sector can be described as a quasi-market, where the state no longer acts as a funder and a provider of services but instead it retained the funder role while letting not-for-profit organisations offer the service. The funding system has changed: the HE providers do not simply receive funding as their performance is linked to how much they will be allocated. At least in theory, the introduction of a market relationship between the state and HE providers is supposed to stimulate growth and generate substantial benefits for the students and society in general (Le Grand, 1991).

The UK HE quasi-market has many peculiar characteristics. The government failed to introduce price-based competition into the HE quasi-market as I showed in Section 2.2.4. HE providers use marketing budgets to attract students rather than compete by setting different prices for different courses. In doing so, they rely on their reputation and perceived prestige (House of Commons, 2018a). Unlike customers in the quasi-market for transport services, where customers receive transport vouchers and decide how to use them, prospective students are removed from the transaction between the government and HE providers. Prospective students do not receive any money, instead, the tuition fees are paid directly to an HE provider of their choice. One more unusual characteristic of the HE quasi-market is that the government can change the terms and conditions of the student loan contracts (Student Loans Company, 2020). It did so retrospectively for when the £9,000 tuition fees were introduced. Which? (2014) found that 58% of the current students experienced some changes to the course content, location or fees, with one in three students reporting more than one change. The surveyed students often viewed these changes as unfair and they did not know that the university can

make changes to their course. In other words, *pacta sunt servanda* does not seem to apply in the context of the HE market.

2.3.2 Higher education as a good

Before applying the customer choice model to the HE choice, it is important to define the good that prospective students purchase. HE can be described as a Veblen good, experience good or post-experience good. It is important to establish what kind of a good HE is because purchasing different types of goods is motivated in different ways. The degree of rationality also varies. Finally, the consumer's ability to make an informed choice can be limited depending on the type of good they purchase.

To an extent, a degree course has some characteristics of a Veblen good (Veblen, 1899, cited in Bagwell and Bernheim, 1996). A Veblen good is understood as a good for which the demand increases as the price increases. Veblen goods appeal to customers because they are typically well-made, exclusive, and work as a status symbol. A BMW car is an example of a Veblen good. BMW has a reputation for well-built, reliable luxury cars and its customers would not want to pay less, not least because of the status signal.

Likewise, university education can be described as a Veblen good because of its high price that can be perceived as an indicator of high quality and prestige. Under this assumption, the decision to study at university can be described as status-seeking (Bagwell and Bernheim, 1996). People with university education tend to enjoy higher earnings, status (Walker and Zhu, 2013) and better health outcomes (Zajacova and Lawrence, 2018). However, the status symbol characteristic affects different students differently. In the context of the English HE system, international students pay almost triple the tuition fees of the home students fees. International students do not have access to the Student Loans Company (SLC) support and tend to rely on the financial support from their government, private organisations, or their own savings. Despite high prices and demanding student visa process, the UK is the second most popular destination for international students after the US (Hubble and Bolton, 2021). Students residing in the UK, on the other hand, can apply for student loans through the SLC. That means some do not have any other option but to pay upfront, while others have greater flexibility and education is free at the point of use.

The conceptualisation of university education as a Veblen good intersects with signalling theory (Spence, 1973). According to signalling theory, job applicants send signals to a potential employer about their productivity, and education is one of the signals that they send. When sending a signal, job applicants attempt to maximise returns on signalling. Sending a signal about a degree demonstrates applicant's higher productivity through their ability to graduate (Frazis, 2002). In the context where HE providers charge similar tuition fees for courses that offer variable returns, prospective students are expected to aim for getting into a more prestigious university because holding a degree from a more selective university represents a stronger signal.

University education can be described as a Veblen good in the context of HE participation of English students who apply for financial support from the SLC and only a small proportion of them repay their debt. Despite this, policymakers comment:

Where a key selling point of a course is that it provides improved employability, its charge will become an indicator of its ability to deliver - the students will only pay higher charges if there is a proven path to higher earnings.

(Browne, 2010, p.31).

The above quote suggests that prospective students would be willing to pay for their degree course only if they know that studying that course would increase their future earnings. This view overlooks the fact that prospective students might want to study for a degree for multiple reasons, with graduate earnings not being important to all. Also, prospective students are not literally being made to pay for their education. Graduates start repaying their student loan debt when they earn above the repayment threshold. In addition, they do not make direct payments, instead the payments are automatically taken from their pay, which means that the majority of prospective students are distanced from the price they pay for their education.

Furthermore, describing HE as a Veblen good fails to account for the fact that students' graduate destinations are strongly associated with factors that are unrelated to their degree. Previous research suggests that graduates tend to use their personal contacts when looking for opportunities (Pellizzari, 2010; Ioannides and Datcher Loury, 2004). Family background and type of school that graduates attended also matter. Using data from the Destinations of Leavers from Higher Education (DLHE) survey Macmillan, Tyler and Vignoles (2015) looked at the

proportions of graduates who were in high-status occupations sixth months and 3.5 years after graduation. They found 40% of graduates who attended a private school were in a high-status occupation compared with 28% of graduates who went to a state school. Their analysis also showed that 32% of graduates from the most affluent backgrounds (NS-SEC Group 1 or 2) were in a high-status occupation compared to 27% of graduates from less affluent backgrounds (NS-SEC Groups 3-7).

Higher education can also be described as an experience good (Dodds, 2011). Its distinguishing characteristic is that the consumer is not able to assess the quality of the good before consumption. Although defining university education as an experience or post-experience good is helpful, the original definition of an experience good overlooks the collaborative nature of learning. Nelson (1970) introduced the term using canned tuna as an example of an experience good. He argued that a consumer who bought canned tuna does not know if the purchase would be to their liking until they open the can and taste the fish. Choosing to study a degree subject is more complicated.

Those who hold specialist knowledge in a subject might argue that their assessment of HE provision is more accurate than the assessment made by someone who has little or no experience in that subject. Following this logic, the quality of degree courses is known to the HE providers, but not to prospective students. Applicants must rely on information provided by universities and others but would be able to assess the quality of a degree course only after they have enrolled. Alternatively, HE can be described as a post-experience good. This means prospective students will be able to evaluate their HE choice only after they have graduated. Viewing university education as an experience or post-experience good does not marry well with the notion that student choice should drive change in the sector because they are not able to make an informed choice by definition. Nonetheless, referring to university education as a post-experience good perhaps seems to be the most sensible option, with the caveat that students are involved in the co-production of their education and they have limited knowledge about their HE options. The OfS also refers to university education as a post-experience good but highlights that "a degree has many dimensions of value - economic, cultural and social - and their relative importance varies with each individual (Diamond *et al.*, 2018, p.12)".

Describing a degree as a certain type of good is important for the understanding of the HE quasi-market. This section has outlined how a degree can be conceptualised as a Veblen good, an experience good, or post-experience good. The types of goods discussed here provide a

framework for understanding how HE choices are made. But one theory cannot fully describe the reality. Courses with high tuition fees may attract more applicants because they may serve as a status symbol. However, the Veblen good framework falls apart in the context where HE providers do not charge different prices for different courses and education is free at the point of use for students living in the UK. A degree can also be described as an experience good where product characteristics are difficult to observe in advance, but they can be experienced upon consumption. That means prospective students can ascertain the quality of their preferred course only after they have enrolled in a university. According to this definition, prospective students make rational choices, but within the limits of the information available to them. They have no other option but to rely on information provided by others because they cannot rely on their own previous experience. Considering that the value of a degree may not be entirely known to a student even after they have completed their studies, it would be more accurate to refer to a degree as a post-experience good.

2.3.3 Motivation toward university education

The traditional economic approach assumes that the consumer always engages in rational behaviour and, therefore, seek to maximise the utility of their needs and wants. Prospective students can be described as consumers. This is in line with a human capital model of education, which suggests that individuals choose to invest in HE because they anticipate it will improve their knowledge and skills, which, in turn, will increase their productivity and earnings (Tan, 2014). However, in the reality, prospective students apply to university for different reasons. For example, Davies (2018) described a three-dimensional model of choice, where rationality is one of the dimensions. The other two dimensions are information and motivation. The rational dimension is divided into two parts where the consumer can be a consistent maximiser of utility or an uncertain follower of the norms.

Prospective students might choose to go to university when they think that doing so will maximise their earning potential. If this assumption holds true, the prospective students need to be able to identify a course that offers the maximum earning potential. On the other hand, according to the three-dimensional model of choice (Davies, 2018), some students go to university because this is normal for people like them to do so. There is no decision as to whether to apply. David *et al.* (2003) found that middle-class parents tried to ensure that their children receive the same education as they did, whereas the working-class parents wanted their children to have education that is better than theirs. Some consumers struggle to reconcile

their behaviour when it goes against the norms that they follow. Reay, Crozier and Clayton (2009) interviewed nine working-class students studying at a prestigious English university and found that these students had to adapt and reinvent themselves in order to fit into the university environment. Similarly, the tension was observed by Ryan and Lőrinc (2018) in a longitudinal study where 17 apprentices reclaim the normalcy of their educational choices against the three-years degree course which is regarded as the norm. It is possible to argue that a dichotomy between a consumer who aims to maximise their utility and a consumer who follows the norms is artificial. Prospective students might choose to go to university because they think that holding a degree will increase their likely earnings and they also might think that it is the right thing to do for people like them.

Prospective students apply to university for different reasons. Skatova and Ferguson (2014) described four reasons for going to university: career, interest in the subject, helping others, and loathing. The consumer choice perspective on university education only accounts for the first factor; the remaining three fall outside this framework. Budd (2017) outlined two different frames of consumer preferences, instrumental and intrinsic, that can be used in the context of HE. These were described as opposites. Prospective students with instrumental motivation use their degree as a mean to reach their immediate goals, i.e. improve their career prospects, whereas those with intrinsic motivation are driven by a longer-term goal of intellectual development. He looked at how students perceive their education in Germany and England. While the number of students studying at university has been rising in both countries, the countries took different approaches to funding the sector. The HE system in Germany is supported through the state funding, while the HE in England is funded through the combination of state funding and tuition fees. Contrary to Budd's assumption about fee-paying students, participants from England did not feel entitled - they were actively involved in their studies. In both Germany and England, students saw intrinsic and instrumental value in their degrees with some differences in students' accounts. Students attending university in England described the graduate labour market as competitive, while students in Germany did not. For some, going to university was a natural next step. This group of prospective students is often overlooked by researchers who present study participants with predetermined list of reasons for going to university.

A recent survey commissioned by the Department of Education looked at the attitudes of applicants, students and graduates towards the current student finance regime (Looney,

Drummond and Grayson, 2019). A little more than half, 54%, appeared to believe that prospective students should make their choice based on their interest level, while 10% felt that the degree choice should be based on likely graduate earnings; a third of participants, 31%, argued that both factors should be equally considered.

When applying for a degree, prospective students express their interest in a degree course to a HE provider. The HE provider then selects applicants based on their potential that is evidenced by prior attainment, predicted grades, and sometimes work experience. Some courses have an interview or internal admissions test. To give applications full consideration, prospective students' social, health and other backgrounds are considered as well. It is clear, therefore, that both the consumer and the service provider engage in the choice process.

2.3.4 Value for money from the student perspective

This section reviews the literature in relation to value for money in the context of university education. Prospective students are expected to determine whether going to university is the right choice for them in the HE system, which is increasingly reliant on the tuition fees income. As mentioned earlier in this chapter, prospective students are not able to fully appreciate the quality of their degree course because HE can be described as a post-experience good. Nonetheless, the notion of value for money has become deeply ingrained in public discourse about HE. Prospective students are therefore in a unique position of being expected to make a cost-conscious decision about their education while they have a limited understanding of their options. This section focuses on how young people perceive value for money.

The first principle of the market-oriented reforms proposed by Browne (2010) is that HE requires more investment and HE providers should demonstrate to students that they benefit from investing more in their education. The value for money was directly linked to the costs of delivering education:

Different courses will cost different amounts. Institutions will have to persuade students that the charges they put on their courses represents value for money.

(Browne, 2010, p.25)

According to a recent report by Universities UK (2018), only 44% of the surveyed university applicants and 40% of undergraduate students reported that they had enough information about

which courses and HE providers offer good value for money when deciding whether to apply to university. These findings demonstrate that the majority of the respondents found it difficult to determine whether their preferred course is right for them.

In the absence of variable tuition fees that send a price signal to students, students as consumers define value for money in ways that are specific to their understanding of the term. Which? (2014) conducted a mixed-method study where applicants, university students and graduates were asked about their perceptions of value for money. The researchers identified three dimensions of value for money: social and personal, academic and labour market. The views on the value for money and the importance of each dimension varied between the three groups of respondents. Prospective students tended to be passive followers of norms who viewed university education as the next step. In their view, the value for money was centred around employability and future earnings, which were often assumed rather than considered in detail. The decision to enter HE was explained by a lack of alternative options that offer similar value for money. University students, on the other hand, tended to focus on the social and wider personal benefits of their degree. One in three students thought that their academic experience offers poor value for money, with 92% of students complaining about the hidden costs such as field trips or equipment. Nevertheless, students seemed to be satisfied with their university experience because the social and wider personal benefits appeared to outweigh the negative impressions. University graduates, on the other hand, tended to have a holistic view of their education. The findings showed that a quarter of the surveyed graduates were in a job that did not require a degree and two in five of graduates were earning less than they expected.

Trendence UK (2018) also looked at how prospective students, university students and graduates understand good value for money in the context of HE participation. Contrary to the findings from the Which? report, the study commissioned by the OfS suggested that all respondents, regardless of where they are on their HE journey, identified the same factors that offer good value for money. The participants described the quality of teaching, fair assessment and feedback, and learning resources as very important for good value for money. The report does not include detailed information about factors that demonstrate value for money for applicant or graduate subsamples. It is clear, however, that their views on poor value for money agree between different demographic groups as 45% of recent graduates and 44% of current students shared the view that their tuition fees represent poor value for money.

Student expectations are important for how they perceive value for money. Bates and Kaye (2014b) conducted focus groups with Psychology students at two UK universities and found that university experience very often did not match participants' expectations across different domains: contact time, resources, employability expectations and value for money. The study involved students who witnessed the rise in the fee cap to £9,000 per year. Some avoided thinking of themselves as customers or consumers but the tripling in tuition fees made them think of their degrees as a financial investment. The notion of investment seemed to motivate students to make most of their time at university. Overall, the participants tended to think that higher tuition fees should offer greater value for money.

The annual Student Academic Experience Survey includes a set of questions related to value for money. The latest report highlighted the drop in the number of students who think they receive good value for money from 39% in 2020 to 27% in 2021. Tuition fees, contact hours and limited opportunity to access in-person teaching were found to be the top three factors in dissatisfaction. Tuition fees and limited contact hours were cited as factors influencing perceptions of poor value in the past. The lack of in-person teaching was associated with the ongoing pandemic (Neves and Hillman, 2021).

2.3.5 Consumer biases in perceptions of HE value for money

Researchers studying consumer behaviour found many anomalies in decisions made by consumers and some of them apply in the context of the HE choice. The present bias refers to the tendency to focus on smaller rewards in the present moment rather than on more distant, larger ones. This anomaly was explained by the fact that people have multiple identities and some of them can be more silent in different contexts. This bias has important implications in the context of education. Students might prefer spending time with their friends over studying an extra hour. Similarly, some might choose to study an easy course over an advanced one because the former seems to be more appealing in the moment (Lavecchia, Liu and Oreopoulos, 2014). The multiple-self model also suggests that it is hard for people to relate to their future selves because these future selves are perceived as someone else. A similar pattern of thinking has been observed in studies that looked at career planning among university students. Greenbank and Hepworth (2008) found that working-class final year students tend to consider limited career options and delay their attempts to look for opportunities until after they have graduated. Such behaviour can be interpreted through the multiple-self model. That is, students

choose to delay looking for job opportunities because they regard this task as a 'tomorrow me' problem.

Tversky and Kahneman (1988) demonstrated that framing, along with consumer's norms, habits and expectations, may influence decision-making. Framing refers to the way in which a problem is presented - it can be negative or positive. Previous research demonstrated that loss aversion in decision-making manifests itself so that individuals have a more extreme response to losses than to gains of equal amounts (Ainia and Lutfi, 2019). Applied to the HE context, different framing leads to different preferences.

Some consumers purchase products when purchasing more products does not always benefit them. Applied to university education, some students tend to continue their education beyond the point when staying in education is an optimal option for them. Those who stay longer than they need experience pay penalties and a rise in the level of job dissatisfaction. Green and Zhu (2010) found that, in Britain, between 1992 and 2006 the proportion of people who are overqualified for their job has increased from 21.7% to 33.2%. For both men and women, overqualification was shown to be associated with increasing pay penalty. The tendency to stay in education might be explained by habitual behaviour, which prevents consumers from thinking about an alternative. A student who is familiar with their study routine might be inclined to stay in education because changing the routine by entering the labour market might be seen as a less attractive option.

2.3.6 Search for information

This section reviews the literature in relation to search for information during the HE choice. Along with previous sections, it provides a clear framework through which to understand the introduction of quasi-market reforms in HE. Once prospective students have identified their need in degree education, or that they want to go to university, they search for information about different products. The economic-rational model of human behaviour assumes that consumers have the information that they need to engage in rational decision-making. However, this does not accurately describe how decisions about HE participation are made in real life. As it was established in Section 2.3.2, a degree can be described as a post-experience good. Post-experience goods differ from other types of goods in that consumers cannot determine their quality of a good before the purchase, and, even after the purchase, they are not able to fully appreciate the quality of the selected product. In addition, consumers cannot rely on their

previous purchasing experience when searching for a post-experience good. These characteristics have important implications for the HE choice.

The information asymmetry opens the opportunity for exploitation. The OfS acknowledged the information imbalance between prospective students and HE providers and called for the transparency revolution in student recruitment (Higher Education Commission, 2017). This is important for protecting students as less powerful market participants. Prospective students need to search for information, and they cannot rely on their previous consumer experience. The search for information has benefits and costs. In terms of benefits, searching for information may help prospective student to make an informed decision about their education. In terms of costs, looking for information requires time and resources. Once information is obtained it needs to be analysed.

Contrary to the assumptions of the economic-rational model of human behaviour, Menon (2004) argued that "consumer decisions are seldom the result of purely rational deliberations based on the stable set of preferences (p.269)". At best, she concludes consumer information search can be described as partially rational. For example, the order in which information is collected appears to matter. Young people tend to rely on familiar information which leads to discounting of new information and seeing familiar information as more valuable (Lavecchia, Liu and Oreopoulos, 2014). Furthermore, as was mentioned in Section 2.3.3, decision-making about HE participation is complex because prospective students' needs, values and goals vary. The present market-oriented policy narrative suggests that prospective students look for information about future earnings and employment. Some actually do. Maringe (2006) analysed how sixth form students living in Hampshire choose universities and degree courses, including their information search behaviour. His findings showed that prospective students are increasingly involved in viewing their education as an investment and searched for information related to financial returns to HE. Their reasons for choosing degree courses were no longer explained by their interest in the subject alone. Another study showed that the majority of Year 13 students do not search for information related to expected earnings, rather they assume that studying at university is an investment in their future (Esson and Ertl, 2016).

Recently the OfS commissioned an updated literature review on student information use and behaviour. Their analysis showed that prospective students' behaviour can be explained through the lens of the bounded rationality that emerged in the field of behavioural economics (Diamond *et al.*, 2018). Consumer's rationality is bounded due to their limited abilities and

uncertain circumstances in which they operate (Simon, 2000). The OfS report suggests that, in line with the bounded rationality theory, prospective students make their decisions about HE participation under uncertainty. Applicants tend to view their choices as rational when conditions of the graduate labour market remain unknown to them.

Diamond *et al.* (2018) found that prospective students focus on different factors in their information search. Those factors are linked to how they define value. The general idea is that students' expectations of success, the expectancy-value, and the value that they place on their education, the task value, affects their subsequent behaviour. The value of a degree course therefore might consist of its instrumental value and intrinsic value. Instrumental value refers to the future graduate labour outcomes, including graduate earnings. The intrinsic value refers to prospective student's interest in a degree subject. A recent study has reported that 50% of prospective students think their subject choices *should* be guided by their interest in the subject, 7% think their potential earnings should be more important and 38% think these factors should be considered together (Brown, 2019).

Processing new information comes at a cost and takes time. Balancing the search for information, prospective students can be described as maximisers or satisfiers. The former group aims to collect as much information as possible whereas the latter collects information until the point where they believe that there is enough information to make a decision (Parker, De Bruin and Fischhoff, 2007). Another approach that describes how information is collected and used suggests that people have two thought systems that they use to process information. System 1 processes information in a fast and automated manner, it is prone to produce inaccurate results. System 2 processes information in a slower and controlled manner, leading to more accurate results (Kahneman, 2011). These perspectives are not mutually exclusive. When considering different educational options, prospective students could benefit from using System 2, however, due to the limited mental capacity, applicants tend to switch System 1, away from more controlled thinking.

Having more information does not necessarily translate into better decision-making. In fact, an excess of information can impede decision-making. Ariely (2000) conducted four experiments where participants had to choose a product in two conditions: where they have control over the information flow and where they have less control over it. The results showed that the environment in which the participants receive information has a substantial impact on how information is processed. Having control over the content, order and duration of the

information flow was associated with higher perceived value and usability of that information. Participants who had more control over the information flow were able to remember the information that they receive better and, consequently, they tended to be more confident in their judgement compared with participants who had less control over the incoming information. The results of this study are important for the information search in the context of the HE choice. In the view of the government, HE providers need to offer "robust, timely and objective information (Department for Business Innovation & Skills, 2015a, p.11)" to prospective students. It is, however, also important to have a sense of control over the information flow.

Finally, information resources can be characterised in a number of ways. Slack *et al.* (2014) built their research on the notion of 'hot' and 'cold' knowledge that was first used by Ball and Vincent (1998) in relation to parental choice of schools. 'Hot' knowledge refers to first-hand or second-hand information. Such knowledge is perceived as more reliable and trustworthy than 'cold' information that is provided by schools. This typology was applied in the context of HE research. Smith (2011) contends that providing access to 'cold' information is not enough, because some students, especially those from lower socioeconomic backgrounds are not able to interpret such information. Slack *et al.* (2014) explored the notion of 'hot', 'warm' and 'cold' knowledge using focus groups and a questionnaire. In their study, information that prospective students collected through talking to current students was considered more reliable than information from other information channels that universities control. In addition, first-generation applicants perceived the written comments of current students as true and honest. Information provided by university students, therefore, was defined as 'warm'. The researchers found that access to different types of information varied among surveyed students with access to 'hot' information being lower among low-income and first-generation students.

This section covered the literature related to the search for information. It highlighted that prospective students have a limited understanding of education that they are going to receive. Despite the government's intentions to promote economically rational decision-making, the literature indicates that not all students consider the financial implications of their university choices. Therefore, the rationality of student choices is bounded, meaning their decisions are rational but within the limits of the information that they found. In addition, there is an irrational component to decision-making that was discussed in Section 2.3.5. This section

highlighted that process leading up to the choice of a degree is complex. It is limited by students' cognitive capacity and prone to bias.

2.3.7 Evaluation of HE options

So far, this literature review has provided an account of how policymakers rationalised the introduction of quasi-market reforms into HE. It also outlined a consumer framework through which the decisions about HE participation can be interpreted. The discussion of this framework in the context of the current English HE has shown that treating the decision to study at university as a consumer choice is problematic for several reasons. Students are encouraged to think about value for money in relation to their degree education when they are not able to fully understand the quality of the course that they prefer. This section is focusing on how applicants evaluate their HE options.

Prospective students typically choose what they want to study, then where they want to do it. When considering their options, prospective students evaluate alternatives based on different factors like quality, price or other factors which are important for them. As previously discussed in this chapter, the quality of a degree course is difficult to access because HE is a post-experience good, and its outcomes are uncertain at the point when prospective students decide to apply.

According to the traditional economic approach, university students are assumed to forego current earnings while studying in HE. When asked about amounts of lost earnings, students on benefits reported that, on average, they lost £1,588 (from higher socio-economic groups) and £3,107 (from lower socio-economic groups); those who previously worked reported they lost, on average, £5,177 (from higher socio-economic groups) and £4,765 (from lower socio-economic groups). The results showed that three-quarters of the current students felt that did not know well enough how much staying in full-time education is going to cost them (Connor *et al.*, 2001).

In addition to foregone earnings, Gorard *et al.* (2007) suggested that the costs can be a barrier for staying in education: the costs can be direct, such as fees, or indirect, such as transport, childcare, and foregone income. The authors pointed out that the costs of entering the HE might deter some applicants and removing the barrier is not easy as it sounds. The complexity of the HE choice requires the consideration of a broader context - personal, social, and economic. On

the other hand, tuition fees might not be an important factor when students compare different courses because there is no price competition on the English HE quasi-market. The majority of home students are eligible for student loans from the SLC, which means they do not pay for their degree until after they have graduated. The latest data from England suggest that, in 2018/19, 90.8% of students took maintenance loans and 95.8% of students took fee loans. The take-up of the fee loan was lower among EU students - 74.2%. The government expects that only 25% of current full-time undergraduate students will repay their student loans in full (Bolton, 2021). The projected number of those who will be able to pay off their student debt fell from 30% in 2019. Overall, men are expected to repay a larger fraction of their student loans than women (Britton *et al.*, 2020).

2.3.8 Alternative views on the HE quasi-market

Human capital and consumerist perspectives on HE participation provide the theoretical framework for policy shifts in HE funding that were discussed earlier in this chapter. There is, however, a continued debate over viewing students as customers (Guilbault, 2018). Before discussing the alternative theoretical positions in this section, it is useful to summarise the dominant theoretical framework, where the financial expectations of prospective students have relevance for HE choices. The proponents of human capital theory view education as an investment whereby individuals respond rationally to the benefits and costs of participating in education. The second core assumption of human capital theory is that individuals have complete information (Tan, 2014). In other words, individuals base their human capital investment decisions upon accurate economic views of their future. The consumerist explanation of participation, in turn, views education as 'consumption' and, unlike human capital theory, it allows that individuals do not have complete information about their options. That means prospective students are described as individual rational consumers who base their HE choices on expectations that can be corrected by "giving all students better information on where the best provision is found"(Department for Business Innovation & Skills, 2016b, p.9).

Human capital theory suggests that gender differences in earnings can be explained by differences in education, skill, and labour market experience. To illustrate, Becker (1993) describes that in the US, before the 1960s, women chose to study home economics, teaching, foreign languages and literature over maths, sciences, economics, and law. He continues that these choices were rational as they helped women to manage households and improved their position in the marriage market. Job opportunities for women improved from the 1960s

onwards, and women entered traditionally male-dominated fields - accounting, law, medicine, engineering, and other subjects with high paying jobs. This account of gendered choices overlooks discrepancies in returns to investment in HE. Occupations with a higher proportion of women are paid less than occupations with a lower proportion of women, controlling for education and skill. Herbert and Stipek (2005), examined two possible explanations of this phenomenon - devaluation and queuing - and found substantial evidence for the former explanation. Using longitudinal data, the researchers were able to see that an increased proportion of women in an occupation was associated with a decline in earnings. They attributed this to a gender bias where employers find less value in the work done in female-dominated occupations. There is evidence that these differences persist within the same degree subject (Chevalier, 2011). These findings are problematic for an investment explanation of HE participation, which does not explicitly account for social inequality.

This section considers two alternatives. First, rational action theory retains a version of rational decision-making, but points out that HE participation should be understood relative to the starting point from which the individual decides to enter HE (Breen and Goldthorpe, 1997). What is unique about rational action theory is that the individual perceptions of the costs and benefits of staying in education are thought to depend on one's social background. Variation in HE choice by class, ethnicity and gender are explained by intrinsic values that are not universal (Goldthorpe, 1998). This implies that in addition to the instrumental value, that human capital theory is concerned with, the intrinsic value of education lies at the heart of student decision-making. Accordingly, individuals have different educational goals, which lead to different destinations.

Second, variations in HE choices can be explained in terms of the sense of what is normal for people like me. The concept of habitus is useful for understanding how norms vary systematically between individuals from different social classes (Bourdieu, 1973). Habitus influences student decision-making highlighting the custodian, structured relations between an educational system and the public. Bourdieu argued that the academic market reproduces the educational values of the dominant social classes. Bourdieu's theory is useful for understanding of how social inequality is reproduced through the educational system. Family is central to transmitting the different forms of capital, and evidence from literature demonstrated the gender of both a parent and their child is important to how they interact in the context of student choices of HE (David *et al.*, 2003). Combining rational action theory and Bourdieu's habitus

theory together, Glaeser and Cooper (2014) explored how undergraduate students in England and Germany understand and experience HE; their findings demonstrated that students' perceptions of their HE choices fit rational action theory accounts, with habitus defining upper and lower boundaries for students' aspirations.

Supporters of Bourdieu's account of education claim that rather than making individual calculated choices, prospective students are thought to be influenced by their family or follow in their parents' footsteps (Eldegwy, Elsharnouby and Kortam, 2022). Some, however, could be more accurately described as uncertain followers of norms (Reay *et al.*, 2001). Reay and her colleagues point out that despite high rates of HE expansion in the UK, the racial and class inequalities have persisted within the sector. In their study, interviews with non-traditional applicants show the participants' desire to 'fit in' overlaps with experiences of stereotyping and discrimination. The interviewees intending to study at university appear to be aware of that their plans challenge social norms (Reay *et al.*, 2001). Another example of when social norming is challenged is a psychological study by Banchevsky *et al.* (2016) that looked at perceptions of STEM academics. It demonstrated that, when presented with photos of male and female scientists, participants were likely to think that a person on the photo is an early childhood educator and not a scientist if the person looked feminine (Banchevsky *et al.*, 2016). These findings challenge the human capital perspective on education because both male and female STEM scientists made the same investment decisions, but they are perceived differently because of social norming.

Another aspect of social norming is that women are expected to care for their children and elderly relatives, and this harms their employment prospects. The effect of this expectation on working hours, career breaks and career progression has been discussed widely in the literature (Firestone, Harris and Lambert, 1999; Chevalier, 2007; McIntosh *et al.*, 2012). In the UK, one in five women who care for someone with dementia have gone from working full-time to part-time, have taken a leave of absence or had to quit their work. In comparison, only 3% of working men with caring responsibilities have gone from working full-time to part-time (Alzheimer's Research UK, 2015).

Despite issues with the human capital theory or consumerist "lenses", understanding HE participation as a purchase or an investment can be useful. The current HE policy narrative tends to describe the decision to enter HE as a personal investment (Department for Business Innovation & Skills, 2016b). When applying for funding through the SLC, students enter a

financial agreement by which they are required to update the SLC about any changes to their financial circumstances and make payments towards their student loan debt when they can. To navigate through the maze of student finance, prospective students need a more accurate understanding of student loans and their graduate prospects. Students also enter a contractual relationship with their HE provider, which was introduced through quasi-market reforms.

By using human capital theory and consumerist “lenses” together in this research, I expose the limits of these theoretical narratives in relation to my data on young people’s understanding of, and attitudes towards, the financial implications of their HE choices. For instance, in the first empirical chapter, I will examine graduate salary expectations of prospective students. Looking at these financial beliefs from human capital perspective creates an expectation that prospective students should have accurate views of their future. Similarly, in the second empirical chapter, prospective students' expectations related to graduate premium should be aligned with reality of graduate labour market. If they do not, these financial expectations are not consistent with human capital theory.

The fact that some young people have inaccurate expectations about their future could be explained by the consumerist perspective whereby students have limited understanding on their educational options and rely on external information to make sense of opportunities within HE. This view on HE choices becomes irrelevant if prospective students do not consider the costs and benefits of studying for a degree. In other words, prospective students might not be making an active choice of studying for a degree. Instead, they might see HE is a natural next step which resonates with the notion of social norming that was discussed earlier in this section.

Though recognising the role of one's social background in HE choices, I was not able to explore its role in my analysis of the sixth form data. For some unexplained reason, questions related to students' cultural capital, ethnicity and degree choice motivation were included in the baseline survey of Davies' study but were removed from the sixth form questionnaire. Davies' study report does not comment on this decision (Davies and Qiu, 2016). This had important implications for the theoretical framework of my research. Since information about students' background was left out of the sixth form dataset, I could not account for individuals' social starting points in my work with the sixth form data, which served as a basis for developing my research project.

The analysis of HE choices could be made from the rational action theory perspective which would require to account for prospective students' social background. Analysis in that case would be focused on variation in students' perceptions and attitudes in relation to their starting point. The lack of data on student background in the sixth form dataset is the major obstacle for employing this theoretical framework to explain the financial expectations of prospective students in this research project. Using Bourdieu's ideas could be useful in the context of students' perceptions of value for money because this notion is interpreted differently by different students as it will be demonstrated in the third empirical chapter. However, moving away from the theoretical perspectives that inform the current student finance regime has a potential to weaken this study. By choosing to look at young people's HE choices and perceptions in the way anticipated by the policy narrative creates a unique opportunity to test the boundaries of this framework.

2.4 Reviewing research evidence: student loans, graduate earnings and graduate premium

2.4.1 Introduction

The purpose of the following sections is to review the literature in relation to the financial implications of going to university. The quasi-market of HE in England is unique because prices are high and do not vary between different providers, while most students do not pay their tuition fees upfront and, instead, apply for government-backed loans that most of them never repay in full. In this context, young people's attitudes towards the student finance system are very important. Since the student loan repayments are linked to how much they earn after graduation, the research evidence related to young people's expectations of graduate earnings are also relevant for this thesis.

The discussion of research evidence is divided into six sections. I examine the role of financial literacy in the HE choice, focusing on various definitions of the term and pointing out that it should not be limited to personal responsibility. The second part of this section introduces students' perceptions of student loan debt. It uses research evidence to demonstrate how attitudes towards student loan debt among UK students have changed over the past 20 years. I then move on to the discussion of consumer confidence. This topic was not widely discussed in the context of the HE choices but it is clear from the evidence that consumer confidence influences consumer behaviour and beliefs that people hold in other contexts. The next section

examines the research literature around the graduate premium, with a particular focus on the gender differences in the returns to an undergraduate degree in the UK. The review then turns to the salary expectations of the prospective and current university students. It draws on existing evidence about the gender gap in pre-career salary expectations. In the final section, I briefly address reasons why the gender pay gap exists among graduates.

2.4.2 Financial literacy and HE choices

This section discusses financial literacy in the context of the student finance system that requires students to consider the financial implications of their decision to study for a degree. Prospective students are also expected to understand the terms and conditions of the student finance package that they apply for. First, I provide several definitions of financial literacy and then discuss literature on the levels of financial literacy among prospective and current university students in England.

The traditional economic approach suggests that, when applying for a degree, prospective students weigh up different options. They are expected to estimate realistically both the benefits and cost of going to university. Numerous studies have attempted to explain the relationships between students' financial literacy and their decisions to participate in HE (for example, Anchor et al., 2011; Bachan, 2014; Jerrim, 2011).

What is financial literacy? Beal and Delpachitra (2003), referring to Schagen and Lines (1996), list four main characteristics of a financially literate individual. They are the ability to understand the basic concepts of money management, practical knowledge of the financial system, analytical skills and a certain attitude that enable individuals to make sound financial decisions. While this definition may appear comprehensive, it is still unclear how a financially literate person is expected to behave in different life situations.

In his systematic literature review, Remund (2010) divides definitions of financial literacy into five categories: knowledge of financial concepts, ability to communicate about financial concepts, ability to manage personal finances, ability to make informed decisions, and ability to plan finances. He argues that most definitions describe the concept are one-sided and proposes a new definition of financial literacy:

Financial literacy is a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision making and sound, long-range financial planning, while mindful of life events and changing economic conditions.

(Remund, 2010, p.284)

One of the drawbacks of the above definition is that it is limited to the management of personal finance. Financially literate individuals not only enjoy improved economic well-being but also benefit the economy of their state; they are likely to manage their personal finances wisely, to be able to interpret the policies and mechanisms regulating the economy and tend to be conscious voters (Davies *et al.*, 2002).

Davies (2015) proposed a two-dimensional framework for financial literacy. Not only the framework covers the financial responsibility of individuals, but it also considers the financial responsibility of financial service providers and governments. These three elements of financial literacy are viewed in two time intervals, short-term and long-term, and they are closely interlinked. Davies (2015) pointed out that the problem with previous definitions is that they focused on the individual responsibility for being financially literate, e.g Atkinson *et al.* (2007). Such framing minimises the role of companies offering financial products and governments in supporting an informed choice.

The government of England is aware of the importance of financial literacy of the citizens and introduced compulsory citizenship education within the national curriculum (Davies *et al.*, 2002). One of the principal aims of this programme is to ensure that school students are able to manage their money on a daily basis and plan their financial behaviour. The programme also aims to enable school students to critically evaluate political questions, including economical ones (Department for Education, 2013).

Davies, Syed and Appleyard (2016) examined school students' understanding of the financial system and found that it tends to be fragmented. In that study, students were asked to describe having debt as good or bad. Most of the interviewees initially indicated that having debt is bad and about a quarter said that it depends. When prompted to elaborate on their answers, the participants described debt as good if it was associated with starting a business, buying a house, or studying for a degree. Importantly, student loan debt was perceived as good only when it

was going to boost one's career prospects. Some participants had debt avoidance attitudes, but researchers concluded that there was little evidence that those debt attitudes are related to students' decision to apply for a student loan.

To understand whether prospective students consider the financial support that is available to them Mangan, Hughes and Slack (2010) surveyed 1,628 prospective students who just submitted their applications through the UCAS in 2006/07. When asked whether the surveyed students think they had enough information about student finance, almost 40% indicated that they did not. More granular analysis revealed that students from medium income families were less likely to give extreme answers, 'not at all' and 'yes plenty', to questions about their knowledge of bursaries, maintenance grants, and student loans. It was found that 65% of students from low-income families felt they had plenty of knowledge about student loans, whereas only 52% of students from medium income families reported the same. The gap between the two groups was even wider when students reported their levels of knowledge related to bursaries and maintenance grants. This difference might be due to the fact that students from low-income families were aware that they could not rely on financial support from their parents alone and had to search for other options. Interestingly, only 55% of low income, 46% of medium income, and 43% of high-income students thought that they were eligible for maintenance student loans.

People with low financial literacy have a greater tendency to make poor financial decisions, including poor borrowing behaviour. Women and people with low education, and some ethnic groups have lower financial literacy compared to others (Lusardi, 2008). Evidence from the UK suggest that there are no significant differences between men and women in terms of their involvement in money management other than that women are better at tracking their finances. When in a couple, the money management responsibilities were found to be delegated to an individual who was deemed to be more capable (Atkinson *et al.*, 2007). A recent systematic review that included 502 peer-reviewed articles related to research into financial literacy showed that women have lower levels of financial literacy than men, with greater differences being observed in developing countries (Goyal and Kumar, 2021) The lack of financial literacy among women is rooted in their upbringing where parents introduce gender-stereotypical roles that exclude women financial decision-making (Agnew, Maras and Moon, 2018; Gudmunson and Danes, 2011).

This literature review showed that, in the context of university choices, the same groups of applicants might make decisions that are not beneficial for them. Graham *et al.* (2020) demonstrated in their study that Marketing students and business professionals appeared to have somewhat different ideas about courses that could improve Marketing students' career prospects. Both groups agreed that courses in Product and Brand Strategy, Digital Marketing, and Integrated Marketing Communications are very important but, overall, their course recommendations were significantly different.

2.4.3 Gendered choices

The relative importance of students' gender in decisions relating to HE participation has been extensively discussed in the literature (Sá, Florax and Rietveld, 2012; Zafar, 2013). Across OECD countries, young women are more likely than young men to enter HE, with young women making up, on average, 55% of the new undergraduate students in 2019. At the same time, women are less likely to be employed and earn less than men across all levels of education (OECD, 2021).

A recent study for England by Sammons, Toth and Sylva (2016) has found gender-based differences in attitudes towards going to university among Year 9 and Year 11 students, with girls more likely than boys to indicate that getting a degree was important to them in both year groups. Women are more likely than men to be enrolled in a degree course and have been for many years (House of Commons, 2021). According to the UCAS data from the 2021 application cycle, young women constituted 58% of new entrants in England (UCAS, 2021a). Despite the increased HE participation among young women and higher returns to university education for them (Britton *et al.*, 2020), graduate women are still disadvantaged in the labour market (see Section 2.4.8). According to the IFS's analysis, this phenomenon could be attributed to unobservable traits, such as different career paths or "different levels of passion or enthusiasm for working and studying" (Belfield, 2018, p. 9). Other researchers point out that the gender-based discrimination is another contributing factor. A panel study by Blau and Kahn (2017) showed that gender differences in career paths as well as a traditional gender division of labour contribute to the gender pay gap. Costa Dias, Joyce and Parodi (2020) come to a similar conclusion after reviewing evidence of the gender pay gap in earnings in the UK. Costa Dias and her colleagues call for better understanding of the mechanisms underlying women's career trajectories.

Next to gendered patterns of aspiration to go to university, there are persistent gender patterns relating to subject choices (Chevalier, 2011; Reuben, Wiswall and Zafar, 2015). For example, Henderson *et al.* (2018) identified significant gendered differences in subject choices at GCSE level. Across 28 GCSE subjects, Applied Health and Social Care had the highest uptake among girls, while Applied Manufacturing and Engineering saw the highest uptake among boys. Another study asked 14-16 year-old students about their favourite and least favourite school subjects, and found that both boys and girls described English and Maths as their most favourite subjects. The gendered preferences were more pronounced when the same students were asked about their least favourite subjects with Maths and Science being the least favourite among girls, and French and Maths being the least favourite among boys (Francis, 2000).

The literature shows that subject choices made by young people in upper secondary education are important for shaping their trajectories in education. This is particularly relevant for education systems requiring early specialisation. In England, school students typically select a small number of subjects when they enter the final years at school as they need three A-level grades to apply to university (Delaney and Devereux, 2019; Davies and Ercolani, 2018). Cavaglia *et al.* (2020) looked at patterns in the uptake of STEM subjects at primary, secondary and post-16 levels and found that female students consistently outperform their male peers at school, especially in English, but they are underrepresented in STEM. The authors argued that the uptake of STEM subjects among female students at degree level is unlikely to be influenced by improving academic achievement for girls at school, overall or subject-specific.

At degree level, in the UK, female students outnumber male students in most subject areas, including Medicine, Education, Veterinary Science and Languages. However, young women make up to less than 50% of students in Mathematics, Physics and Business, and they are much in a minority in Engineering and Technology, Computer science and Agriculture (Leathwood and Read, 2008). There are also differences within these broad categories. For example, in Medical Science, a majority of women graduate in Nursing while men mostly study Pharmacy or Psychology (Chevalier, 2002). Examining the choice of subject among US college students, Reuben, Wiswall and Zafar (2015) found strong and significant gender differences: Business and Economics were the most popular choices among young men - 48.1%, whilst Humanities and Other Social Sciences were preferred by 60.1% of women.

The gender differences in subject choice can be partially explained by the motivation that drives degree subject choice. Davies and Ercolani (2021) examined prospective students'

motivations in degree subject choice. They concluded that male students tend to focus on the instrumental value of their preferred subject by indicating that salary is important to them, while female students tend to see both the intrinsic value and instrumental value in their education by describing contribution towards society and occupational status as important to them. These differences in motivation reinforce gender differences in working experiences of men and women upon graduation as male students are more likely to choose to study high-premium subjects (Davies *et al.*, 2013).

Another factor that contributes to gendered choices is academic self-concept and performance. A study conducted among Spanish secondary school students showed that male students appeared to have a higher self-concept of ICT and Math abilities than their female peers did, while no gender-based differences in Math performance were observed (Sáinz and Eccles, 2012). Similarly, female school students in Germany were found to have a lower self-concept of Chemistry and Physics abilities than their male peers after controlling for their performance (Jansen, Schroeders and Lüdtke, 2014). In the US, children's perceptions of their academic abilities were analysed alongside teachers' ratings and parents' ratings. The researchers found that from 3rd grade (8-9 years old) onwards girls rated themselves lower than boys, so did their parents. Parent ratings of how their children did at school were a particularly strong predictor of children's self-concept of Math abilities (Herbert and Stipek, 2005).

Mullen and Baker (2018) argued that individual characteristics do not provide a full explanation to the existing gender differences. Their findings from US institutional data suggests that the structural and contextual institutional features also inform and shape HE students' choices. Factors such peer culture, institutional measures related to gender equality were found to be associated with levels of gender imbalance at these HE institutions. The institutional-level analysis showed that the UK, along with Australia and Portugal, have the highest "humanities bias" in their graduate population (THE Report, 2022). This THE report provides evidence for complex interaction of supply- and demand-side factors contributing to gendered patterns in HE choices.

To recap, the literature notes that the number of young women participating in HE has been growing, which had a positive impact on their earning potential. At the same time, male graduates still earn more than their female peers, with different subject choices at university contributing to the gender pay gap. There is some evidence that prospective students apply for different degrees because of differences in the subject choice motivation. This does not,

however, explain gender-based differences in earnings among students with similar education. Job-related factors as well as gender-based social norms provide partial explanation persisting levels of gender inequality. In this research, I will explore prospective students' financial expectations to see if there are any gender differences in the way young people think of the graduate labour market. The unique sixth form dataset allows me to examine not only how much young people hope to gain from obtaining a degree, but also what sort of expectations they have in relation to earnings distribution across different degree subjects. These financial expectations are relevant to human capital theory and market-driven policy on HE funding.

2.4.4 Student loan debt

Worries about the costs of studying for a degree and the student loan debt are greater among young people from lower socioeconomic backgrounds. These could be indicative of the lack of knowledge of the graduate labour market. Overall, these students appeared to be more concerned about more immediate costs of studying at university, such as accommodation, travel and food (Pollard *et al.*, 2019).

Information interventions showed to improve graduate prospects of prospective students. Abbiati *et al.* (2018) completed a personalised intervention where secondary school students were provided with information about costs associated with studying at university in Italy and students' occupational prospects. Providing secondary school students with personalised information related to their HE applications resulted in a rise in the number of students from families with less educated parents choosing to enrol in vocational programs and students with parents who attended university choosing more financially rewarding courses. The researchers concluded that their information intervention benefited students from various socio-economic backgrounds and that providing the same information to different groups of students had a different impact on their educational trajectories. Another intervention which provided secondary school students with information about graduate earnings for different subjects affected their consequent A-level subject choices. Students who received the intervention information were 40% more likely to choose Mathematics compared to those who received a control lesson. The researchers found no differences between genders and different socio-economic groups (Davies, Qiu and Davies, 2014).

The language of the student loans system seems to be confusing for some. Callender and Jackson (2005) pointed out that the impact of debt on access to HE was not systematically

researched in the UK, so they surveyed final year college students and students attending sixth forms. Participants were asked to reflect on statements related to debt aversion: 'owing money is basically wrong', 'there is no excuse of borrowing money', 'you should always save up before buying something'. The results showed that students from lower social class backgrounds tend to be more debt-averse, which the researchers concluded was rational. The fact that some students were inclined to agree with the debt-averse statements should not come as a surprise. These statements take a naive view of the debt and describe it in moralistic terms as being bad. The authors suggested that the way forward is to abolish "a model of student funding that acts as a disincentive to entry (Callender and Jackson, 2005, p.565)". Other researchers also concluded that student loan debt was deterring students from participating in HE (Pennell and West, 2005; Jones and Thomas, 2005).

Callender and Mason (2017) published a follow-on study that looked at how debt attitudes of students studying toward HE entry-level qualifications had changed after the publication of a study by Callender and Jackson (2005). Close to four-fifths, or 74%, of students in the 2015 survey held more favourable views about borrowing money to pay for university education compared to just 52% of similar respondents in 2002. The changes in attitudes were mainly observed among female participants and they were similar across social classes. There were no statistically significant differences in debt aversion between male and female students. The results showed that lower social class students are significantly more likely to hold debt-averse attitudes in both studies. In addition, students attending further education colleges and non-white participants were more likely to hold debt-averse views.

The use of consumer debt language can be confusing for some, but a recent study by Clark, Hordósy and Vickers (2019) where undergraduate students took part in a series of interviews throughout their studies suggests that students are well-aware of the differences between their student loans and commercial bank loans or mortgages. Student loans debt was frequently understood as a future concern and not yet real. Some students reported that they applied different strategies for reducing their student loan debt: some used part-time work, while others lived with their parents. Overall, students internalised the understanding of their student loans as a contribution towards their future. A few were not sure about their ability to pay off the debt, but this concern was not part of their immediate financial planning. The interview findings echoed earlier studies that concluding the market-oriented model of HE can operate effectively only when prospective students are well-informed about their options and proactive

in their decision-making (Jerrim, 2011). While a few interview participants had a career-centred approach to their university education, others seemed to share the view that obtaining a degree is beneficial to their future, but they did not know what they will be doing after university; for many of them entering HE was a path of least resistance.

A recent analysis by De Gayardon, Callender and Green (2019) showed that women are 2.5% less likely to take loans than their male counterparts. Importantly, social class did not appear to play any independent role in the decision to apply for a loan, instead, some other background factors such as homeownership and parents with a permanent job were found to be relevant to the loan uptake rates. Students from families who own a house were 8.0% less likely to apply for student finance. Similarly, higher family income was found to be negatively associated with the student loan uptake. Overall, students who stayed at home while study at university were less likely to apply for both tuition fee and maintenance loans. Such behaviour was interpreted as debt avoidance but seeking part-time employment while studying for a degree was not. The lower uptake of student loans among commuter students can also be explained by a misunderstanding of the student finance regime. There were differences in loan uptake between different ethnic groups, but these differences disappear once the researchers accounted for whether the student is a commuter or not.

A typology of debt attitudes among university students was developed by Harrison *et al.* (2015). The analysis of semi-structured interviews showed that students' attitudes toward debt are more complex than some researchers and commentators assumed previously. Overall, most students were described as debt-savvy and debt-resigned. Many students from lower social-class backgrounds held positive views on student loan debt because they saw it as a tool that enables them to access more financially rewarding careers. Those who held positive views about their debt strongly believed that their degree is an investment in their future and taking on debt is an integral part of being a student. Students with debt-positive attitudes were more likely to be ill-informed about the repayment conditions of their loans compared to those who were described as debt-savvy. Debt-anxious and debt-angry students viewed their student debt negatively. The debt-anxious type included a disproportionately high number of women. It is not clear from the report to what extent these students were informed about the student finance regime but one of them clearly adopted the debt-anxious attitude from her father who did not like personal debt. Debt-angry students had various reasons for being frustrated. Some were

angry because of administrative issues with their finance applications, while others were against the fee-based HE system.

The evidence presented so far supports the idea that many prospective and university students accepted the prospect of accumulating student loan debt. Some of them are worried, while others are not because they perceive their education as an investment, and they are ready to pay for it at some point in the future. Prospective students in Oxfordshire and Buckinghamshire also viewed their degrees as the tool that would help them to secure their position in a competitive graduate labour market. From a longer-term perspective, though, these students did not feel pressured to repay any of their future student loans because the student debt balance was perceived as a concern of the Treasury (Esson and Ertl, 2016). Esson and Ertl (2016) did not conduct a comparative analysis of views that their male and female participants hold, which makes it difficult to comment on whether there were any gender differences in financial beliefs among these prospective students.

In the UK, research that examines attitudes towards debt among young adults tends to focus on student loan debt, which is different from any other type of consumer debt. Robson, Farquhar and Hindle (2017) conducted a unique for the UK study which examined the impact of debt (personal loan, credit card, payday loan or loan between family and friends) on university students. The results showed that students tend to rely on these sources of money more as they progress further in their degrees. When asked about the impact of their indebtedness, many reported it was affecting their health more than their studies. The researchers found that when seeking advice, university students were more likely to rely on their family and friends and did not access better sources of advice like Citizens Advice. The relationships between students' debt attitudes and their background characteristics such as their gender, ethnicity and socio-economic status were not explored in that study.

Research from across the world showed that university students hold diverse attitudes toward debt. For example, Białowolski *et al.* (2020) found that university students in Poland tended to be debt-averse, with a higher proportion of respondents holding debt-tolerant attitudes compared with views of the general population. These findings were explained by the fact that university students are expected to accumulate a lot of debt in early adulthood. The researchers did not find any gender differences in debt attitudes or financial knowledge among Polish university students, which was attributed to the underdeveloped state of the financial market and cultural characteristics of the post-Soviet society.

In the US, however, gender was found to be an important factor in predicting young adults' debt attitudes. Beale and Cude (2017) found that the only background characteristic that was associated with holding negative attitudes toward was student's gender - being female. Other background characteristics such as a degree subject, parents' involvement in personal finance, and financial knowledge did not appear to influence students' debt attitudes. In another US-based study, university students were asked whether they had a student loan and how much they owed. The results showed that students who felt personally responsible for their loan had a 74% chance of not being confused about the amount that they owed compared to a 58% of students who expected their family to take care of their student loan debt. Overall, female students were more likely than their male counterparts to be confused about the borrowed amount. There were also differences between students majoring in different degree subjects. Students studying at the College of Design had a 12% chance to not know how much they owned compared to a 4% chance among students studying at the College of Engineering (Andruska *et al.*, 2014). It is important to note that people's attitudes do not automatically translate into behaviour. Robb and Sharpe (2009) observed no significant differences in credit card behaviour between university students based on their gender.

2.4.5 Consumer confidence and HE choices

Consumer confidence is an important aspect of the HE choice. This is because consumer expectations influence decision-making when decisions are made under uncertainty (Manski, 2004). Understanding consumer confidence helps to interpret consumer behaviour, however, it appears that this concept is difficult to measure. Dominitz and Manski (2004) discussed how consumer confidence was measured in the US and concluded that, to be useful, questions about consumer confidence should be specific and hypothetical scenarios should be clearly defined.

A seminal paper by Taylor and Brown (1988) suggests that positive self-evaluation and even overconfidence are normal and useful characteristics of human perception: "happy people are more likely to have positive conceptions of themselves, a belief in their ability to control what goes on around them, and optimism about the future (Taylor and Brown, 1988, p.200)". In other words, it is normal for people to have positive illusions about their skills and abilities when they are hopeful of a positive outcome. Dunning, Heath and Suls (2004) conducted a review of literature on self-assessment in health, education, and workplace. When dealing with health issues, people were shown to be overoptimistic about their own health risks and misdiagnose themselves. In other contexts, people tend to overestimate their skills and abilities.

For example, students' views of their academic performance and skill acquisition were found only moderately associated with teachers' evaluation.

Another study that examined students' confidence in future events was conducted by Perry, Davies and Qiu (2018). They examined the relationships between expected and actual GCSE results and found that more optimistic expectations of grades were associated with higher exam results. Students who considered going to university were one quarter of a grade more optimistic in their grade predictions than their classmates who had other plans. The findings of that study demonstrated that students' grade expectations, in a way, were a self-fulfilling prophecy: students expecting higher grades had higher grades. Similarly, a study by Chevalier (2007) showed that UK graduates who valued financial rewards associated with their degree earned 5% more than those who did not.

Several studies examined student confidence in the context of HE. Wiswall and Zafar (2016) asked US undergraduate students about their decision-making and expectations around their career and family life. Undergraduate students thought that holding any degree would improve their position in the labour market as well as would help them to find a potential spouse. When asked about different subjects, students predicted that studying for a degree in Science or Business rather than a degree in Humanities would increase their chances of working full-time at age 30 by 15% for men and 9% for women. The same respondents were contacted when they were around 25 years old. The researchers found that their expected graduate salaries were remarkably similar to the actual salaries that they predicted. The participants, however, were a bit too optimistic about their marriage prospects, which are beyond this literature review. Overall, the results indicate that earnings prospects are important for decision-making of both genders, with the authors pointing out that expectations about career and family should be considered together because looking at persons' own plans provides an incomplete picture. Men, for example, tended to choose higher-paying degrees such as Economics or Business, whereas women were concerned about their fertility and tended to opt for Humanities or Social Science degrees as a way of balancing their plans.

Previous research suggests that there is a gender gap in confidence that is expressed differently in different domains (Marianne, 2011). Moore and Healy (2008) conducted experiments where people displayed overconfidence. They found that people with imperfect knowledge about the consequences of their behaviour tended to be more confident in their responses in experimental settings; this was particularly true when people were asked about the accuracy of their own

beliefs. That study did not report gender-disaggregated data for comparative analysis (Moore and Healy, 2008). Applied to the context of graduate salary expectations, young people might be confident in their salary expectations despite having limited information about the reality of the graduate labour market.

In relation to confidence, the gender differences were observed when both women and men appeared to have extensive knowledge about the subject. Sarsons and Xu (2016) surveyed economists working in top US universities and found that, when asked questions related to economics, women were less likely to express judgment than their male colleagues. Women were also less likely to select extreme answer options - strongly agree or strongly disagree. Women were less confident in the accuracy of their answers when were asked about topics outside of their expertise, while men were consistently overconfident in their responses.

A study looking at the gender differences in competitiveness invited US undergraduate students to participate in a series of experiments focused on the job application scenarios (Samek, 2015). Compared to the flat rate job compensation scheme, women were 45.7% less likely to apply to the tournament compensation scheme, while the application rate of men was just 26.9% lower in the tournament scheme. The researchers attributed the differences in tournament participation to gender differences in the underlying confidence. Another study explored preferences and biases in educational choices and labour market expectations of undergraduate students attending a private university in the US. Similarly, higher levels of competitiveness and overconfidence among male participants were observed which was used to explain the difference in expected earnings within degree subjects and also differences in career choice. The observed gender differences in competitiveness and confidence did not, however, explain differences in degree subject choices (Reuben, Wiswall and Zafar, 2015).

Schnusenberg (2020) asked 287 US university students majoring in Finance about their expected salaries one year, five years, and ten years after graduation. His findings suggest that, on average, students expected that their salaries will rise by more than 35% 10 years after graduation, which was attributed to the overconfidence in salary progression. Contrary to previous research, women were slightly more confident than men in their future salaries one year after graduation, and the gender differences disappeared when students were asked about their expected earnings five and ten years after graduation. Students assumptions about the rapid growth of their salaries might be interpreted as confidence in the financial rewards associated with their degrees (Sheldrake, 2016).

Beliefs about graduate salaries and confidence in those beliefs could also be attributed to self-confidence. Confidence as a personality trait could affect student's financial beliefs indirectly through their schooling and approach to decision-making. Research in this area showed that middle-class parents tend to instil self-confidence in their children, whereas working-class parents do not, which affects working-class students' self-belief and worsens their disadvantage (Sullivan, 2006). Hence working-class students were less confident in their intentions to apply to university (Manstead, 2018).

Students' confidence in their mathematics abilities might also be associated with their beliefs about graduate earnings. Girls were found to be disproportionately affected by *maths anxiety*, the term referring to feeling anxious about the subject in general, math-related situations and tests. Importantly, maths anxiety did not affect students' performance (Miller and Bichsel, 2004). A recent study that was conducted using a representative sample of adults living in Sweden demonstrated that maths anxiety is negatively associated with financial literacy (Skagerlund *et al.*, 2018).

Callender and Mason (2017) reported that the number of prospective students that are confident in the positive impact of studying for a degree on their future earnings has increased between 2002 and 2015. This conclusion was drawn based on the responses to the statement: 'Students do not worry about their debts while at university because they will get well-paid jobs when they graduate'. Despite the positive trend, the findings should be interpreted with caution because this statement includes a built-in assumption that having a student loan debt could be worrisome for students who do not secure a well-paid job after graduation. This assumption is indicative of the irrational fear of debt that is associated with the misunderstanding around the student finance system. The response score that was measured on the 1-5 scale with the having increased from 2.26 to 2.62, which means that students tend to neither agree nor disagree with the statement. Put it simply, the research did not measure students' confidence in their future earnings, it asked the participants to express their attitudes toward debt.

Fernandes, Huber and Vaccaro (2021) asked Swiss undergraduate students about their salary expectations. Interestingly, when presented with new information about actual graduate earnings, female and male participants reacted differently. The researchers report that information intervention did not have any statistically significant effect on how much the participants expect to earn immediately after graduation. Neither did it affect women's expectations of their earnings three years after graduation. The intervention had an impact on

male students' beliefs, who appeared to be overconfident in their likely earnings and reported that they expect higher earnings three years after graduation after they participated in the intervention.

The lack of confidence should not be interpreted as something negative (Sarsons and Xu, 2016). Prospective students are expected to be aware of their likely financial gains from studying for a degree. They can also be aware of the discrimination that they are likely to face in the graduate labour market, which, in turn, can affect their financial beliefs about their future earnings (Blau and Kahn, 2017). Alonso-Borrego and Romero-Medina (2016) compared salary expectations of Spanish university students majoring in five subject areas with the actual average earnings of university graduates. The analysis showed that gender and prior achievement were important factors for the expected salaries. Women realistically predicted that they will be earning less than men. That might mean women expected that they will be paid less than similarly educated men because they are aware of the existing gender inequalities.

2.4.6 Graduate premium

Policymakers and commentators tend to focus on the instrumental value of participating in HE. The difference that exists between how much individuals with university education earn compared with those who only have secondary education is referred to as wage premium (O'Leary and Sloane, 2011; Strauss and De la Maisonnette, 2009) college premium (Walker and Zhu, 2011), graduate premium (Browne, 2010; Davies, Qiu and Davies, 2014), or premium (Chevalier and Conlon, 2003; Hersch, 2019). In this thesis and thereafter I use the term graduate premium in reference to the salary increase associated with holding an undergraduate degree.

When considering whether to go to university, prospective students might benefit from being aware of returns to university education. This topic has been extensively researched in the UK and worldwide. O'Leary and Sloane (2011) analysed the Labour Force Survey (LFS) data between 1997 and 2006 and concluded that the graduate premium relative to earnings of individuals with 2 or more A-levels remained stable. Blundell, Green and Jin (2016) explained this trend by the organisational change across industries. Some companies moved away from centralised to a decentralised structure which requires more managers in production, individual initiative, and control. Similarly to Walker and Zhu (2003), O'Leary and Sloane (2011) found

that women tend to enjoy higher returns to education than men. The researchers proposed that disaggregating data by different categories of graduates could provide a more complete understanding of the graduate premium. For instance, the analysis of sex- and subject-disaggregated data showed that while the graduate premium remained stable or modestly increased for men, there has been a downward trend in the size of the graduate premium for women.

Strauss and De la Maisonnette (2009) looked at the graduate premium in 21 OCED countries between 1991 and 2005. They found that, on average, the gross hourly wage premium per year was 10.6% for men and 11% for women. They also found that the duration of the university studies matters. Graduates in Australia and Ireland, countries with shorter than the average degree duration, enjoyed the highest graduate premium. Controlling for the duration of the university course, Switzerland and the United Kingdom also improved their position relative to other countries. Graduates in Austria, Germany, Greece, and Italy, countries with longer degree duration, fell behind.

A recent report by the Institute for Fiscal Studies (IFS) looked at returns to an undergraduate degree for English graduates who went to university in the mid-2000s. They found that the graduate premium grows after age 30 for both women and men. At age 30 male and female graduates are earning 25% and 4% more, on average, than their counterparts who opted for a different route after school. At age 40, the graduate premium reaches 40% for women and 30% for men. After that, the graduate premium fell to between 30% and 35% for women, whereas it continued to rise and reached around 35% at age 50 for men. The report pointed out that the graduate premium varied considerably by subject. Looking at 29 subjects, the authors described Nursing and Education as low return subjects, while Pharmacology, Business, Economics, Law and Medicine were described as high return subjects. The sex-disaggregated data showed that, overall, women receive positive returns on any subject. For men, the relationship between the degree subject and returns is more complex. Male graduates with a degree in Social Care or Creative Arts receive negative returns, while those who studied Medicine or Economics enjoy the highest returns. Returns for subjects such as Agriculture, English, Physical Sciences and Communication were close to zero for men. The type of university that graduates attended mattered for men, meaning those who attended more selective universities enjoyed higher returns, while the type of university did not make much difference to women's earnings. The researchers estimated that 85% of women and 75% of men achieve positive net lifetime returns.

In other words, one in five undergraduate students would have been better off financially if they chose not to go to university (Britton *et al.*, 2020).

Research on the graduate premium that was discussed in this section so far was focused on the analysis of the actual graduate premium. A few studies examined the expected graduate premium. Anchor *et al.* (2011) looked at how much first-year students in England and the Czech Republic expect to earn in their first job and 10 years in the job. Interestingly, the expected rate of return to university education was not found to vary in the English subsample: female students expected an 18.9% pay boost and males thought that they will be paid 18.1% more than non-graduate males. In contrast, the expected gender pay gap was significant in the Czech subsample: male students, on average, predicted that they will be paid 14.8% more than their non-graduate males, while among female students predicted their earnings to rise by 12.8%. Davies, Qiu and Davies (2014) examined relationships between the expected graduate premium and students' background, cultural capital and predicted GCSE grades. Attending a state school and being White were negatively associated with the size of the predicted graduate premium. Predicted GCSE grades and high motivation towards future salary were positively associated with the size of the expected graduate premium. No statistically significant differences were observed between male and female students in terms of the expected graduate premium. Another study looked at young people's expectations of the return to a degree in Cyprus (Menon *et al.*, 2017). The findings showed that secondary school students who intended to apply to university expected a higher graduate premium than those who planned to work right after school, 7.1% and 1.8% respectively.

2.4.7 Salary expectations and the expectation gap

The accuracy of salary expectations is at the heart of the instrumental value of HE. In other words, prospective students might choose to enter HE because they know that their decision would improve their position in the labour market. When graduate earnings are part of the HE choice, prospective students might benefit from having realistic expectations about the labour market implications of their choices, especially their potential earnings.

Davies *et al.* (2013) asked Year 13 students and first-year students about their motivation for applying to university and found that motivation towards salary was strongly associated with the belief that information about graduate salaries was important to the participants. At the same time, only about half of them reported looking for relevant information. The researchers

suggested that perhaps those who rated salary motivation as very important might think that they already know enough about their potential graduate earnings. In addition, Davies and his colleagues found that, controlling for university choice motivation, male and non-white students tended to choose high premium subjects i.e., Medicine, Maths and Computing, Law, and Business Studies. Whereas students from lower income families and female students tended to steer away from high premium subjects.

Views on future salaries vary within a subject area. Byrne, Willis and Burke (2012) examined the career-choice decisions of students majoring in Accounting and Finance in Ireland and found that financial rewards were more important to students who wanted to pursue a career in Accounting and Finance. Those who did not contemplate a career in Accounting and Finance valued work-life balance, good citizenship and self-fulfilment more. These findings are very important because they demonstrate differences in motivation with the same subject area.

Regardless of the motivation towards participating in HE, students might have some expectations about their graduate earnings. Brunello, Lucifora and Winter-Ebmer (2004) asked over 3,000 Business and Economics students across 10 European countries, including the UK, about their salary expectations at labour market entry and 10 years into the job. Female respondents, on average, expected substantially lower salaries and worse job prospects than their male counterparts. Having a parent with a college degree was associated with a more optimistic outlook on job prospects after graduation and future earnings. That means personal networks influence how university students perceive their graduate prospects.

Taylor (2007) asked around 1,200 university students studying Science or Engineering in the US about their salary expectations and found that, when asked about minimum salary, the respondents, on average, expected salaries that are comparable to actual graduate salaries. The subject-level analysis showed that students majoring in Environmental Engineering, Agricultural Sciences and Geosciences expected a minimum salary of \$50,000 or more, but only 6.3% of students studying Social Sciences and 13.2% of students studying Biological Sciences expected this minimum salary. Among different ethnic groups, Asian students (of oriental descent) consistently expected higher salaries than students from other ethnic groups. The comparison between women and men showed that women, on average, expected a minimum salary that was \$3,000 lower than the minimum salary that their male counterparts appeared ready to accept.

In Canada, the salary expectation gap that is twice as large as the gap in the US (Taylor, 2007) was observed among secondary school students. Female students predicted that they would be earning \$42,060 while men expected to earn \$48,860 immediately after graduation, a 16% difference. The expectation gap expanded to 27% when the respondents were asked about their earnings at the peak of their careers. Women predicted that they would be earning \$125,664 while men expected to earn \$171,035 (Schweitzer *et al.*, 2014).

Jerrim (2011) compared salary expectations of UK undergraduate students with actual salaries of similar graduates and found that full-time undergraduate students overestimate their starting salary by about 15%, or £2,400. His results suggest that university students' expectations were more in line with their likely graduate salaries as they progress through their studies. The subject-level analysis showed that students studying for a degree in Maths overestimate their starting salary, on average, by £1,300, while students studying a degree in Art, Social Science or Humanities, overestimated their starting salary, on average, by roughly £2,500. The differences between female and male students in terms of their salary expectations were outside the scope of Jerrim's study.

A recent Swiss study of salary expectations found that both female and male university students overestimate their starting salaries and salaries after three years in the job. Male students overestimated their starting salary by about 12.4%, while their female students did so by about 8.2%. The salary expectations gap widened from 4.2% to 7.4% when students were asked about how much they will be earning 3 years after graduation. Men overestimated how much they would be earning after three years by 38.0%, while women overestimated their future earnings by 30.6% (Fernandes, Huber and Vaccaro, 2021). In contrast, undergraduate students in Germany expect graduate salaries that were not drastically different from the actual graduate salaries (Frick and Maihaus, 2016).

2.4.8 Actual gender pay gap

Not only there is a gap in salary expectations between men and women, but the actual gender pay gap also persists. A recent analysis by the ONS suggests that the gender pay gap has narrowed from 9.0% in 2019 to 7.4% in 2020 for full-time employees. The gap was wider when part-time employees were included in the analysis; it was 15.5% in 2020, down from 17.4% a year before. Earnings of people with different levels of education were not compared as a part of this ONS report, however, earnings of people in nine occupational groups were compared.

In 2020, all but two groups saw the gender gap narrowing, with managers, directors and senior officials group seeing a dramatic reduction of the gap from 16.3% in 2019 to 9.9% in 2020. The gender pay gap widened for two groups: professional occupations, from 10.2% in 2019 to 10.4% in 2020, and administrative and secretarial occupations, from 4.9% in 2019 to 6.0% in 2020 (Office for National Statistics, 2020). In the US, for example, during the same time period, the gender pay gap narrowed down from 18.6% to 16.0% (Bureau of Labour Statistics, 2020).

Chevalier (2007) completed a decomposition analysis of the graduate earnings of 7,510 UK graduates and found that his base model that included labour market experience, age of the respondent at graduation, their ethnicity, and region of residence explained only 20.5% of the gender wage gap. The inclusion of controls for a subject that graduates studied increased the explained part of the gap to 50.4%. This result is important for the current study because subject choice clearly plays a role in graduate earnings. Job characteristics, occupation, and the number of jobs one had since graduation helped to understand the gender pay gap further, increasing the explained component to 69.5%. Character traits, including career break expectations, allowed to increase the explained component to 84.4%. Taking career breaks alone explained 10% of the gender pay gap which means that graduates are penalised for taking time off for childrearing or caring for elderly family members. Similarly, Chevalier (2007) found that differences in job characteristics and occupations provide explanations for the gender wage gap in the UK. A recent US study conducted by Blau and Kahn (2017) showed that the gap has been shrinking over the 1980-2010 period, with a smaller reduction at the top of the wage distribution.

Another study by Chevalier (2011) looked at subject choice and earnings of UK graduates that left university in 2002/03 and found that women and men are rewarded differently after they studied the same subject. Male graduates earn significantly more than their female counterparts if they graduated with a degree in Economics (+17%), Law (+12%), IT (+9%) or in subjects allied to Medicine (+8%). On the other hand, women earn significantly more than men if they studied Education (+22%), mixed subjects without science (0.21%), Linguistics (+14%), History and Philosophy (+9%) and mixed subjects with a Science (+9%). Importantly, the wage differential between all subjects except Medicine was found to be around 0.25 log points. The within-subject differential is much greater, 0.80-.97 log points, for subjects such as Maths, Law, Arts, IT, Economics and Finance. That is, the variation in earnings for graduates with the

same degree was found to be much greater than the variation in earnings between graduates with degrees in different subjects.

2.5 Conclusion

This chapter provided the reader with an overview of the HE funding reforms that formed the basis for the HE quasi-market in England. Along with the sections outlining the policy context and the theoretical framework, this chapter also discussed empirical evidence on the financial attitudes, beliefs and behaviours that relate to HE choices. Over the past thirty years, policymakers in England introduced market reforms in the hope that student choice will encourage competition between HE institutions and will improve provision in the sector. The literature, however, indicates that the quasi-market model of HE does not work the way it was intended. As consumers, prospective students are susceptible to biases and their understanding of their options is limited. These observations raise the question of whether prospective students can meaningfully influence the HE sector.

The literature review demonstrates that university students both in England and internationally tend to overestimate their likely graduate earnings, with male students expecting higher salaries than their female peers. In addition, men are far more confident in their responses than women when they are presented with a task or asked about their expectations. Differences between men and women were observed in other areas as well. Women tend to have lower levels of financial literacy than men, but, at the same time, women are equally good at managing money. In the context of fee-based education, women were found to be more debt-averse than men. In England, however, attitudes toward student loans have changed over time and a large proportion of students become tolerant to accumulating student loan debt and some saw student finance as a tool that enables them to access financially rewarding careers.

Some questions that have not been sufficiently explored. While the empirical research discussed in this chapter showed that university students in England (Jerrim, 2011) and other countries (e.g. Fernandes, Huber and Vaccaro, 2021) tend to expect graduate salaries that are not aligned with the market, very little is known about graduate salary expectations of prospective students. Chapter 4 addresses this gap by analysing salary expectations of sixth form students with a particular focus on the gender differences in salary expectations. Another question that did not receive enough attention is how prospective students perceive the graduate premium. To date, researchers in the UK published several studies on the actual graduate

premium (Hussain, McNally and Telhaj, 2009; O'Leary and Sloane, 2011; Walker and Zhu, 2003) but only two authors looked into how secondary school students (Davies, Qiu and Davies, 2014) and university students (Anchor *et al.*, 2011) perceive graduate premium. Chapter 5 examines A-level students' beliefs about the size of the graduate premium and their confidence in those beliefs. Finally, research into value for money in the context of HE was limited to exploring the notion on its own (Bates and Kaye, 2014b; Trendence UK, 2018; Which?, 2014). I consider it is important and timely to look at university students' perceptions of value for money in the context of the current student finance regime. Chapter 6 looks at first-year students' perceptions of value for money and probes into the extent to which young people understand student finance. The next chapter presents the design and methods used in this research project.

CHAPTER 3: RESEARCH DESIGN AND METHODS

3.1 Introduction

This chapter provides details of the research methodology and methods used to analyse overarching research questions in this thesis. First, this chapter gives an overview of the research strategy and design decisions that were made when planning this project. Next, this chapter discusses a multi-methods approach to the overall project which is followed by more in-depth consideration of each phase of the research and the corresponding methods. This study can be divided into two separate methodological parts. These are 1) secondary data analysis focusing on A-level students' perceptions and attitudes of future study and work with the UK LFS graduate earnings data that complements the analysis of salary expectations and 2) primary data analysis of focus groups with first-year students exploring their HE choice and attitudes towards their degree course. While each of these phases is dealt with separately in this section, they were developed to complement each other and build a fuller inquiry into the current perceptions and attitudes related to HE choices within the UK context.

3.2 Research Questions

Before continuing, it is useful to show the links between the research questions and the data used to answer each question. The research questions indicate an interest in students' perceptions (through their HE expectations and plans) and the realisation of those expectations (in relation to students' transition into HE). The overview is shown in Table 3.1.

Chapter 2 explored the introduction of a market into HE and highlighted some potential problems arising from the underlying assumption that student choice could drive the quality of HE provision up by giving students agency in their educational choices (Department for Business Innovation & Skills, 2011). Studies on university choices found that many students have limited capacity to make sense of financial matters and are uncertain about their educational choices (Davies, Mangan and Hughes, 2009; Reay *et al.*, 2001; Minty, 2015). This means that students are not able to strategically influence a choice-driven educational system because they are not fully aware of the differences in outcomes across degree courses and providers.

Table 3.1 Research questions and data collection methods

Stage	Research Questions	Data Collection	Data Analysis
0 (RCT)	The overarching question: Would students make better decisions (for themselves and society) if they were better informed about the labour market implications of studying different subjects?	Baseline questionnaire, post-intervention questionnaire; NPD data; Data on actual A-level subject choices requested from the schools	logistic regression analysis
1	1. What are factors associated with predictions of the graduate salaries? 2. Are there gender differences in salary expectations? 3. How do salary expectations of A-level students relate to the actual graduate salaries? 4. Is there an association between the preferred degree subject area and the accuracy of graduate salary expectations?	Sixth form questionnaire	an effect size analysis; OLS regression analysis
2	1. What expectations do A-level students have about the difference going to university would make to their annual earnings by the time they are 30? 2. What is the level of student confidence when they are asked about their earnings prediction? 3. What are the characteristics of those predicting the graduate premium of at least 20%? 4. What are the characteristics of those indicating high levels of confidence in their predicted graduate premium?	Sixth form questionnaire	frequencies and percentages analysis, logistic regression analysis
3	1. What sort of beliefs do students hold about the financial implications of graduating with a degree in England? 2. What do students know about student finance in England? 3. Focusing on the expected financial implications, how do students judge the value for money?	Questionnaire and focus groups with first-year students	frequencies and percentages analysis, thematic analysis

Returns associated with an undergraduate degree vary dramatically (Hussain, McNally and Telhaj, 2009; Naylor, Smith and McKnight, 2007; O'Leary and Sloane, 2011). Some degrees are associated with an increase in earnings after graduation, while others have been shown to have a negative effect on earnings of some graduates. According to a recent IFS study on early-career earnings of English graduates, men who studied Creative Arts, English or Philosophy on average earn less than people with similar characteristics who chose not to study a degree (Belfield *et al.*, 2018). An institution choice also appears to be important in determining the financial returns. Drydakis (2016) found that graduates from both the research-intensive institutions and Russell Group universities were invited to job interviews and offered higher entry-level salaries more often compared to graduates with a degree from a less research-intensive university, or a non-Russell Group university.

Moreover, having information is not enough. The information about graduate salaries and employment should be an important part of the HE choices in the context where HE providers are expected to deliver value for money for students and taxpayers (Department for Business Innovation & Skills, 2016b). However, investing in information for applicants only make sense if applicants indeed use such information when applying to university. The information is only useful if it is used to inform the HE choice.

The existing research on students' knowledge of labour market outcomes has focused on university students (Anchor *et al.*, 2011; Jerrim, 2011). Some university students appeared to feel financially powerless and uncertain about their future earnings and ability to repay their student loan debt (Clark, Hordósy and Vickers, 2019). Other students demonstrated overconfidence and unrealistic optimism in relation to their employability (Hanson and Burke, 2020). Yet, very little is known about the beliefs and perceptions of younger people. Esson and Ertl (2016) report that although A-level (Year 13) students were uncertain about specific salary figures, they tended to think that holding a degree is associated with more secure future employment and high financial returns.

Unlike the previous research on salary expectations among prospective students, this study uses a large and unique secondary dataset (N=1,574) which enables analysis of the relationships between students' financial beliefs, knowledge of the student finance system in England and their HE choices. The data were collected over the 2012/13 school year, as a part of a study led by Prof. Peter Davies (the Nuffield Foundation Ref. 39013). The main purpose of that study was to evaluate whether providing secondary school students with information

about graduate earnings can influence subsequent A-level subject choices. Several publications were produced based on the 2011/12 dataset (see Section 3.3). The 2012/13 dataset has never been analysed before. It contains detailed information about A-level students' expected grades, their financial beliefs, and graduate salary expectations. To understand the HE choice better, this study focuses on prospective students' beliefs about the financial implications of holding a degree. This is interesting in itself, but more importantly, there is a need to understand to what extent young people understand how the student finance system works. Studies focusing on student finances and debt in England demonstrated that while some students are well versed in financial matters, others are worrying about their finances, or prefer to not think about their financial future altogether (Esson and Ertl, 2016). For this reason, an analysis of prospective students' salary expectations and their beliefs about the financial returns to an undergraduate degree is deemed necessary.

This project is divided into three parts. The analysis first shows how salary expectations vary among prospective students. The study also compares the A-level students' salary expectations with the actual salaries of UK graduates. The most practical way to make such a comparison was to use the LFS data for the cohort of graduates with observable characteristics that are similar to those outlined in the questions around graduate salaries. I go into more details of how this has been done in Section 3.4.3. In the second part, the research explores the relationship between A-level students' confidence in financial returns to an undergraduate degree and their characteristics. The data for this part of the study was drawn from the same survey where the A-level students were asked about the size of the graduate premium and confidence in those expectations. In the third and final part, the views of first-year students were sought in an attempt to learn more about their decisions to study at university, the role of their degree in their future careers and the perceived value for money of their degree. This data was collected using both a questionnaire and focus groups with first-year students studying at a Russell Group University. The development and use of these instruments are discussed further in section 3.4. below.

3.2.1 A multi-method approach

Research questions define the focus of a study, linking the study's purpose to its design and methods. While some favour the idea that paradigms determine how studies are conducted, others moved away from this purist stance toward a more practical orientation. This project does not follow the guidelines established by the philosophical paradigm, which prescribes

how we know the truth or reality. Instead, the research questions and situation become a driving force for the study, not the personal preferences, skills or philological beliefs of the researcher (Gorard and Taylor, 2004). This perspective is described as pragmatic, where a researcher's preference for a certain philosophical position is secondary (Biesta, 2010). By shifting the emphasis from a philosophical stance to research questions, this research avoids the debate concerning incompatibility between the two research paradigms.

The current research was conducted in three stages, each linked to one of the research purposes. Data collection for the first two stages was completed by other researchers, before the start of this research project. These are secondary datasets from a project funded by the Nuffield Foundation 2011-2015 and from the LFS 2009-2011. While the first two stages stand independently and provide useful insight on their own, it is important to note that the HE landscape has changed since the 2012/13 academic year, when data for the Nuffield-funded project was collected. Therefore, it was felt that more up-to-date information was necessary. Data collection for the third stage of the study was completed in 2019/20. It consists of the questionnaire and focus groups with undergraduate students which probed more deeply and look at current issues and relevance to the current decision-making. Data that was collected in the third stage allows exploration of experiences and attitudes related to the HE choices which were not revealed in the secondary data analysis.

The mixed method research (MMR) became largely accepted as a valuable approach to scientific inquiry. Over the years, widely varying definitions of MMR have emerged. For example, the term *mixed method research* is used by Johnson, Onwuegbuzie and Turner (2007) to refer to a paradigm, whereas Creswell and Creswell (2017) describes it as a type of design. Some authors used mixed methods and multi methods as synonymous, while others view them as two distinct entities (Anguera *et al.*, 2018). Although there are many opportunities for discussion and debate within the field of MMR, the following nine key principles underpin the MMR inquiry logic: methodological eclecticism (selection and synergetic integration of most appropriate techniques); paradigm pluralism (adoption of a variety of paradigms); emphasis on diversity; an emphasis on continua (rejection of the either-or reasoning); iterative, or cyclical, approach; the dominance of the research question; use of signature terms (that set MMR apart from purely qualitative or quantitative research); strong sense of community; reliance on visual communication (Teddlie and Tashakkori, 2010). These principles demonstrate that this

approach is not a simple combination of different methods, but an attempt to integrate them so that the research questions are appropriately addressed.

3.3 Research Design

Design typologies have been an important point of discussion in the field of MMR. These discussions helped to develop a common language for the field, brought greater recognition to mixed method research as a third methodological movement (Gorard and Taylor, 2004) and provided guidance for those who are new to the field. However, there is an argument that this topic received too much attention, and other areas have been overlooked (Bazeley, 2009). Before going any further, it is important to note that I share the view that designs are not fixed entities and cannot be quantitative, qualitative or mixed methods as such. Instead, I take the approach that research design typologies offer "viable options to choose from and build on (Teddlie and Tashakkori, 2010, p 23)".

There are several prominent design typologies in MMR. The first one was developed by Morse (2010). In Morse's typology, research is characterised by three parameters: its theoretical drive, inductive or deductive, its components, core or supplementary, and time structure, simultaneous or sequential. Different components should be kept separately until the data analysis or results reporting phase. Morse introduced a system of symbols that describe the relationships between different components of a study. Upper case letters refer to the core component of a study, i.e. *QUAL* or *QUAN*; lower case letters refer to the supplementary one, i.e. *qual* or *quan*; the plus sign describes a study where two components are implemented simultaneously, while an arrow sign indicates that one component follows the other. Morse's system of symbols helps researchers to explain complex research designs.

This project can be described as *QUAN+QUAN→qual*. Although useful at first glance, this description does not capture some important characteristic of my research project. The first two stages of this research are concurrent, while the third step of this project is delayed in time. The two quantitative components of this study are based on the follow-up survey (hereafter the sixth form questionnaire) which is a part of the Nuffield-funded project that was mentioned earlier in this chapter. The Nuffield-funded project was developed by the Centre for Higher Education Equity and Access team at the University of Birmingham, and led by Professor Peter Davies. The RCT examined Year 11 students' A-level subject choice, students' intentions to go to university and their beliefs about graduate salaries in 50 schools located in England. The

baseline questionnaire was distributed before a classroom intervention lesson and a post-intervention questionnaire was conducted 3 months after the intervention lesson. Data on the actual subject choice was requested from the participating schools in 2012/13, when the students progressed from Year 11 into Year 12. The headline findings were:

- Providing Year 11 students with information about graduate salaries affected their actual choice of A-level subjects. Students in the intervention group were 39% more likely to study Maths in Year 12 than students in the control group. Biology and Computing were less popular among students in the intervention group, by 27% and 39% respectively. These results were described as surprising because the intervention lesson materials included information about a degree in Maths *or* Computing and did not mention a degree in Biology.
- Students' cultural capital and their salary expectations were positively associated with the intention to go to university. Also, there was a positive relationship between cultural capital and expected salaries.
- On average, student optimism in grades translated into higher GCSE grades.
- Year 11 students substantially overestimated graduate salaries and appeared to believe that variation in earnings was similar in each subject. The researchers found a strong association between the A-level subject preferences and their beliefs about their own likely salary in a related degree subject.

Based on the RCT evidence, the following papers were published:

- Davies, P., Qiu, T., (2016) **Labour market expectations, relative performance and subject choice**. Project Report, University of Birmingham. Available at: <https://www.birmingham.ac.uk/Documents/college-social-sciences/education/reports/labour-market-expectations.pdf> (Accessed: 12 June 2020).
- Davies, P., Qiu, T., & Davies, N. M. (2014) Cultural and human capital, information and higher education choices. **Journal of Education Policy**, 29(6), 804-825.
- Davies, P., Davies, N. M., & Qiu, T. (2017) Information and choice of A-level subjects: A cluster randomised controlled trial with linked administrative data. **British Educational Research Journal**, 43(4), 647-670.

- Perry, T., Davies, P., & Qiu, T. (2018) Great grade expectations? The role of pupil expectations in target setting. **International Journal of Educational Research**, 89, 139-152.
- Davies, P., & Ercolani, M. G. (2019) Hard and soft choices? Subject selection by schools and students. **Oxford Review of Education**, 45(1), 1-31.
- Davies, P., & Ercolani, M. G. (2021) Gender, motivation and labour market beliefs in higher education choices. **Higher Education**, 82(1), 127-144.

The RCT has some limitations. The intervention lesson materials that were designed to provide information about salaries of graduates from different subjects used different subject groups in Activities 1-3. That might have had a negative impact on retrieving new information. Medicine related degrees were excluded from the activities for no obvious reason. Activity 3 included graphs with a 3D effect which probably made it harder for the participants to interpret the information. Activity 3 requires an understanding of the graduate premium. It is not clear from the project report whether the concept was explained to the participants. Finally, one of the key findings of the RCT was that the Year 11 students considerably overestimated how much graduates earn at age 30. The report, however, did not include any information about the comparator group.

After the RCT, the participating schools were invited to take part in the sixth form questionnaire, and some volunteered to do so. In a way, the core components of this thesis are supplementary to the RCT (hereafter Davies' study). At the same time, describing them as supplementary to Davies' study is problematic because the sixth form questionnaire had not been analysed before. Also, the data for the first and second stages of this thesis is from the sixth form questionnaire, which contradicts Morse's stand that different components of the research project should be kept separately until the analysis or results phase. Finally, the scheme does not show that there are two secondary data sources in the first component. The LFS data is used as a benchmark for the expected salaries in the first phase of this project.

Teddlie and Tashakkori (2010) came up with a different design typology. There are four families of design based on the type of implementation, meaning the way different components relate to each other in terms of time and integration. These are three basic families - parallel, sequential and conversion - and the fourth one is fully integrated which is a combination of the other three. The authors argue that the research purpose is more complex than how Morse

defines it. A research project might have multiple purposes, from improving understanding of phenomena to enhancing one's career. In the context of this research project, I am looking to contribute to the growing body of research around HE choices and develop my research skills.

Greene (2007) developed a design typology that divides research designs into two groups based on how integrated different components are. These are component designs (convergence, extension) and integrated designs (iteration, blending, embedding, mixing for reasons of substance or value). In this project, a combination of methods is used in a complementary way so that prospective students' financial beliefs that emerge from the statistical analysis can be discussed in the light of the literature about HE choices. In relation to the data from first-year students, the focus groups and the accompanying survey extend the research further and probe the ideas and issues that arise from the first two stages of the project. Working as an extension, the third stage also attempts to bring the project up to date within a new context, where tuition fees are higher and the discussion around value for money is on the rise not only among researchers but also in the common public. This project moves beyond a traditional triangulation, where mutual confirmation and validation of findings are important (Berg and Lune, 2012) towards an approach where each stage is complete in itself and fits to address different stages of the overall project.

To recap, a study can be described through different design typologies which help to outline its structure. To get a deeper understanding of a research design the flexibility should be recognised as an inherent part of research discovery. "Research is an evolving puzzle (Morse, 2003, p. 198)", and some elements of the design have to be adapted due to time, recourse or access constraints. As the project was evolving, I applied for additional ethical review to allow me to explore the context beyond A-level students' perceptions and attitudes around future study and work. Further details of design elements are discussed in the remainder of this chapter.

3.3.1 Sequence of data collection and analysis

This project emerged as an extension to Davies' study that looked at how providing Year 11 students with information about graduate earnings affects their choice of A-level subjects. Davies' study took place in schools catering for students from the age of 13-18 or 11-18, with 30 state schools and 20 private schools assigned to treatment or control groups in the autumn and spring terms of 2011/12. The intervention was delivered by teachers within the normal

lesson time. Students from the control group were taught about A-level subjects that the Russell Group has described as 'facilitating' and 'soft', or 'not-facilitating' for HE entry (Russell Group, 2016). On the other hand, students in the treatment group were provided with information about varying earnings of graduates from different degree subjects. The emphasis was placed on the differences in earnings between male and female graduates across the board. The materials used in the treatment lesson were based on a study by O'Leary, N. & Sloane, P. (2005) The return to a university education in Great Britain, **National Institute Economics Review**, 193(75): 75-89.

After Davies' study, the participating schools were invited to complete the sixth form questionnaire. Twenty-five out of fifty schools agreed to do so; those were 11 state schools and 14 private schools. Schools that accepted the invitation were compared with those which declined to participate. The final number of responding Year 12 students was 1,574, of whom 1,102 (70.0%) participated in Davies' study. Of those who participated in Davies' study, 537 (48.7%) were allocated to the treatment group, and 565 (51.3%) were in the control group. This means that around one third (34.1%) of the surveyed A-level students participated in classroom activities focused on graduate earnings. A more detailed description of the sixth form sample is provided in the next section of this chapter. The return rate of the sixth form questionnaire is unknown because it was not included in the Davies study's report.

The sixth form questionnaire included questions about parental education, students' expected A-level grades, and intentions towards studying for a degree. There were two mathematical problems that the respondents were asked to solve. The students were asked which university courses they want to apply for and the names of universities or colleges they want to attend. They were also asked about the size of the graduate premium and their confidence in their predictions. Then the students were presented with a list of 11 degree subjects. They were asked for their salary expectations of the average, lower quartile, and upper quartile for graduates in each subject. In addition, the participants were asked to estimate their own salary for each subject. This set of questions was followed by a question about the expected student loan repayment. Finally, the respondents were presented with a series of questions about online resources that they considered while researching their HE options.

What makes Davies' sixth form questionnaire different from his earlier baseline questionnaire is that the sixth form questionnaire did not include any questions related to students' cultural capital or motivation towards studying a degree subject. New questions, including questions

about preferred university and course, loan repayment expectations, and the use of online sources were included in the sixth form questionnaire. The sixth form questionnaire data allows tracking patterns in Year 12 students understanding of, and attitudes towards, the financial implications of HE choices. The results, however, should be interpreted with caution for two reasons: (1) this is a convenience sample consisting of Year 12 students who achieve above average results in school; (2) the data was collected in 2012/13. Nonetheless, the data still provides a valuable insight into how A-level students perceive HE.

When I first enrolled in my PhD programme, I was tasked with building my research around the sixth form questionnaire data, which is not publicly available and has never been analysed before. Prof. Peter Davies, my first lead supervisor, shared with me an anonymised dataset containing the questionnaire's raw response data. The data file was originally saved in the SPSS format, which I then imported into Stata. The dataset was checked for coding errors and patterns in missing data (Section 3.3.2.3). This secondary dataset I then supplemented by another secondary data as detailed in the next paragraph.

In the first stage of this research project, I looked at how well the salary expectations of A-level students match the reality of the graduate job market. While Davies' study used students' A-level subject preferences as a proxy for students' degree subject preferences, I used A-level students' university and course preferences in my analysis. In addition, Davies' study did not describe the dataset that was used to compare Year 11 students' salary expectations with actual graduate earnings. I compared Year 12 students' salary expectations with the earnings of a well-defined group of UK graduates. I used the LFS datasets which contain quarterly estimates of key labour market measures such as employment, unemployment, hours of work, occupation, level of education and wages for the UK resident population. The data run from January 2009 to December 2011. The LFS data is accessible through the UK Data Service catalogue. It should be mentioned here that there are other ways in which the comparison of expected and actual graduate salaries could be made. These options are discussed in more detail later in the chapter.

The second stage of this research was focused on the A-level students' perceptions of the impact that going to university would be likely to make on their annual earnings by the time they are 30. Not only students' perceptions of the size of the graduate premium were examined, but their confidence in these predictions was considered as well. Data for this stage of the research project was drawn from the sixth form questionnaire. Davies, Qiu and Davies (2014) examined

student characteristics associated with feeling confident or very confident about predicted graduate premium using Probit model estimation. They found that White students and students attending state schools were less confident in their predictions. Expected GCSE grade in Maths and an aspiration towards a professional career and high motivation towards salary were positively associated with the confidence in graduate premium. These variables shared a common component - human capital. Students' cultural capital was also positively associated with the confidence in graduate premium. The researchers suggested that cultural capital helped students to interpret information about the graduate labour market. None of these variables except for the school type are available for the sixth form questionnaire sample.

A further stage of this research involved first-year students who recently started their undergraduate studies. The questionnaire and focus groups as part of this sequential study enabled me to probe more deeply and look at current issues given the date of the previous dataset and relevance to the current decision-making of prospective students. This study was necessary in the light of the findings from the first two stages that draw on the pre-HE data. The analysis of A-level students' expectations related to graduate earnings and the graduate premium revealed that these expectations were not aligned with the reality of the UK graduate labour market. While examining A-level students' expectations makes an important contribution to the debate around HE choices, the sixth form data did not provide information on whether these expectations play a role in their HE choices and to what extent these prospective students understand the student finance package that is available to them. Both aspects have relevance for human capital investment decisions and marketisation policy in the HE context.

The focus group data allowed to explore participants' experiences and attitudes related to their HE choices which were not revealed in the secondary data analysis. Specifically, students' perceptions of HE were analysed together with their understanding of the current student finance system. Due to practical reasons linked to time and access, it was decided to have one data collection point, during the autumn term of 2019/20. The purpose of both the questionnaire and focus groups was to gain an updated understanding of the university student's knowledge and perceptions in relation to the financial implications of studying for a degree.

The link between the secondary pre-HE data and the primary data that were collected at an HEI needs to be clarified. The Davies' study sample selection criteria favoured schools which were larger than average, with higher-than-average levels of achievement and lower than average

proportions of students from lower socio-economic backgrounds as detailed in Section 3.3.2.1. This sampling strategy meant that the surveyed A-level students are more likely to enrol at Russell Group universities, with almost two thirds (61.8%) of them planning to apply to a Russell Group university. Since conducting the pre-focus group questionnaire and focus groups with prospective students did not seem to be feasible during the remaining time until the end of my minimum registration, the decision was made to identify a group of young people who could give consent to participate in the study, have access to the student finance package as "home students" and be enrolled in a degree course. To reduce the potential for the University experience to influence the way these young people perceive the value of HE, only first-year students who had recently started their degree were invited to participate in the pre-focus group questionnaire and focus groups.

Similarly, Davies *et al.* (2013) and Slack *et al.* (2014) used data collected from prospective and first-year students. The authors did not disaggregate their data and the results on the pre-HE or HE status of their participants. Skatova and Ferguson (2014) took a different approach by asking prospective students and undergraduate students about the motivations influencing their degree course choice. When reporting the results, they compared these two groups.

3.3.2 Sampling strategy

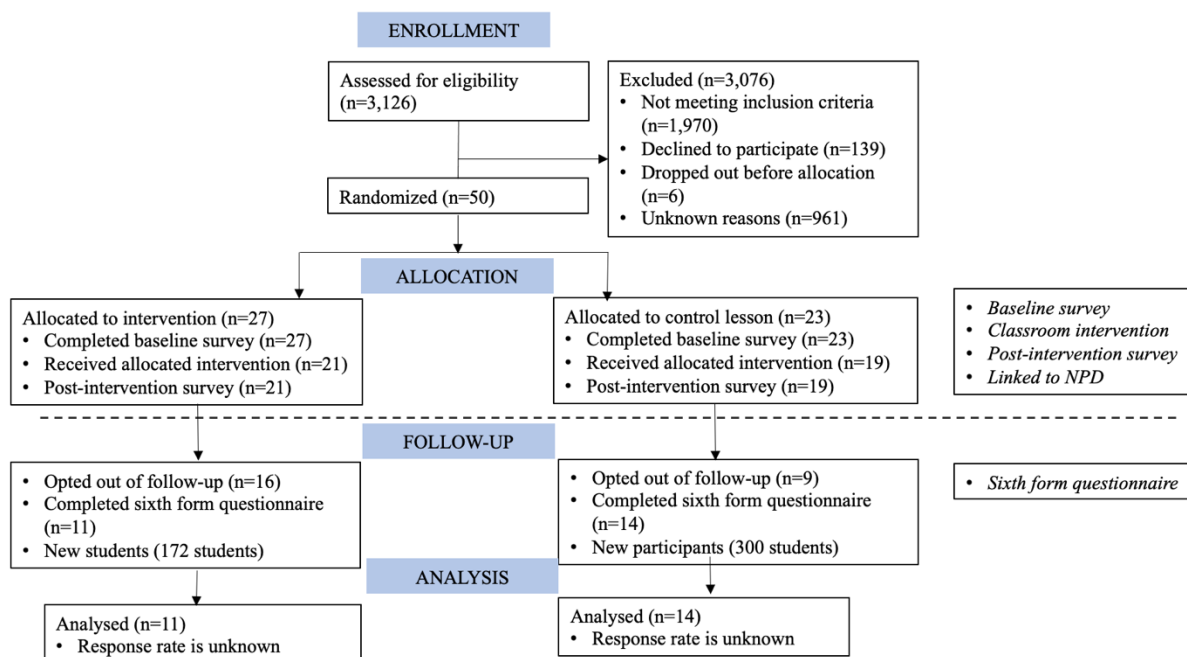
3.3.2.1 Sampling strategy for Davies' study

It is important to mention that Davies' study sampling procedure in this chapter because the sixth form questionnaire sample is directly linked to it. Davies' study sample is described as a single-blind cluster randomised controlled trial (Davies and Qiu, 2016). A single-blind means that the participating schools were masked to allocation, i.e. they were unaware of the nature of the intervention their students received. When using cluster sampling, researchers select intact groups of individuals rather than contact one individual at a time. Clustered sampling addresses the logistical issue of having to contact individual cases if one was to sample randomly. Oftentimes, cases occur in natural clusters, such as hospitals, schools, or communities (Gorard, 2013). Sometimes it is preferable to recruit groups of participants rather than individuals. Schools are more likely to agree to take part in research if their organisational structure is not disturbed (Gorard, 2021). Stratification is useful if one intends to study low-incidence groups. In the British educational system, only around 7% of students attend private

schools (Green *et al.*, 2018). In Davies' study, private schools formed 40% of the sample to capture a good variety of private schools.

Davies' study sample included 50 schools located in England. They were identified using the 2010 School and College Performance Tables. Not all secondary schools were eligible to take part. Figure 3.1 summarises Davies' study sampling steps. It is a CONSORT flow diagram adapted from this website (<http://www.consort-statement.org/consort-statement/flow-diagram>). Further education colleges, sixth form colleges and institutions with no name were excluded. Institutions with less than 100 students in KS5 were also removed. The cluster catchment area was restricted to 46 postcode areas. From that catchment area, 130 state schools and 60 private schools were contacted. A minority of schools expressed their concerns about providing students with information about graduate salaries. In the view of those schools, Davies' project unnecessarily emphasises pay as the primary reward associated with holding a degree. Davies study' report also suggests that 139 schools declined to participate in the study before any details of the study were discussed with them. Six schools that initially agreed to participate dropped out of the study citing workload as the reason for not being able to commit. In the end, 50 schools completed the baseline questionnaire (Davies and Qiu, 2016).

Figure 3.1 A flow diagram to record the school recruitment process



The described sampling strategy has some important limitations. It is unknown what happened with the remaining 961 schools that were eligible to participate but were not recruited in the study: was the recruitment stopped because the minimum desired number of schools had accepted the invitation or was the recruitment stopped for a different reason? There is clearly a trade-off between reducing the bias from having a smaller number of schools and having to spend more resources on reaching out to more schools. The researchers recognised that the chosen sampling strategy favoured larger schools, with higher-than-average levels of achievement and a lower number of students from disadvantaged households (Davies and Qiu, 2016).

3.3.2.2 Sampling strategy for the sixth form questionnaire

The 50 schools that participated in Davies' study were asked if they would be interested in participating in the follow-up study. Twenty-five schools chose to do so. Davies' study report does not describe the recruiting process for the sixth form questionnaire but there are numerous reasons why schools have chosen to opt in or out of the follow-up study. It could be the case that the schools who agreed did so because they found participating in Davies' study beneficial to their students in terms of informing their A-level choices and welcomed the opportunity to engage in more research activities. In contrast, schools that declined to participate may have done so for the opposite reasons. Davies and Qiu (2016) reported that some of the schools chose not to participate because they were disquieted by the prospect of providing students with information about graduate salaries. Perhaps schools that chose to participate in Davies' study opted out of the sixth form questionnaire because they noticed that their participation in Davies' study had some undesired impact on A-level subject choices and discussions around graduate earnings.

Participation in this follow-up phase of Davies' study was voluntary and this study reports on findings from schools that opted in. This sample can be described as a convenience sample. In total, 1,574 Year 12 students completed the sixth form questionnaire. Davies' study report does not describe how the surveyed students were identified within each school. Using the 2010 School and College Performance Tables I compared the number of students in KS5 in each school with the number of students that completed the sixth form questionnaire. Participating schools approached the survey differently with the survey participation rate ranging from 9.7% to 46.2 % across the schools. The random nature of this sample has been affected by the fact that only schools that participated in Davies' study were approached. Nonetheless, this is an

efficient design approach for the study that focuses on perceptions and attitudes of A-level students.

The outlined design decisions have important implications for this research project. The findings from the first two phases should be interpreted with caution because the educational attainment in the sample is above the national level and the participants took the traditional path into HE. Overall, 38% of students from English state-funded schools continued their education in sixth form school (Department for Education, 2015), which means that the sixth form sample can represent only a small subgroup of university applicants. When A-level students were asked about the degree course that they want to study 88.4% indicated that they thought of at least one degree course. In 2012/13, only 42.6% of 18 year-olds were enrolled in HE (Department for Education, 2019). Of students for whom information about their GCSE grades was available, 99.33% achieved grades A*-C in Maths and 99.33% achieved grades A*-C in English. In contrast, the national figures show that 70.9% of students achieved grades A*-C in Maths 67.5% achieved grades A*-C in English in 2011/12 (Department for Education, 2016).

3.3.2.3 Sampling strategy for the UK LFS graduate population

The first stage of this study contributes to the literature by comparing Year 12 students' graduate salary expectations with the actual salaries of graduates who live in the UK. The Year 12 students completed the sixth form questionnaire in 2012/13. They were asked to state how much they expect graduates from different degree subjects can earn by the time they are 30 and estimate how much they hope to earn if they were to study each of 11 subjects at degree level. A comparator group had to be identified to gain an insight into the kinds of salaries A-level students expect and understand whether these expectations match the reality of the UK graduate labour market.

There are three ways the comparison between the expected and actual salaries can be made. A comparison can be made between the predicted salaries and their realisations for the same cohort of graduates. In 2012/13, the surveyed students were around 16–17-years-old. This means they should be 23-24-years-old in 2020/21. Their expectations cannot be compared with their salary realisations because the cohort did not reach the age of 30. An alternative option was to compare the expected salaries with the projected graduate salaries for the same cohort. This requires some complex calculations. Though the price inflation might play a role in

forming students' salary expectations, the surveyed students were given no specific instructions on how to deal with inflation. Based on the existing literature on salary expectations of students (Brunello, Lucifora and Winter-Ebmer, 2004; Wolter, 2000), it seems safe to assume that the participants did not include inflation in their calculations, and thus report their salary expectations in real terms. Finally, secondary data can be used to look at the earnings of similar UK graduates.

Several data sources contain information about graduate earnings in the UK. Longitudinal Education Outcomes (LEO) dataset, managed by the OfS, is one of them. LEO was first published in 2016 and it follows university graduates one, three, five and ten years after graduating. Although LEO can inform wider debates around HE, it does not seem suitable for this project because it does not provide information about graduates who were around 30 years old, i.e. around ten years since graduating in 2002/3. The DLHE, run by the Higher Education Statistics Agency, is another data source that I have considered. Using DLHE data was ruled out because this survey did not collect graduate salary data at subject level for the time period that this study is focused on. In addition, the timescale of available data is limited, reaching at most three and a half years into graduation. In the end, UK LFS, conducted by the Office for National Statistics, was chosen for studying graduate earnings because it contains information about graduate earnings for the time period that this study is focused on.

The LFS collects data on graduate employment and salaries through a large-scale nationwide survey. This survey is conducted quarterly since 1992 and approximately 40,000 UK households and 100,000 individuals respond in each quarter. This survey measures many aspects of work, including education and training, jobs and unemployment, earnings, and benefits. Many researchers used LFS data for studying graduate earnings (e.g. Britton et al., 2019; O'Leary and Sloane, 2005; Walker and Zhu, 2011). For this study, the earnings of people who have an undergraduate degree were aggregated over three years from January 2009 to December 2011. The start date was chosen to provide the most recent estimates for which data were available at the time when the sixth form questionnaire was conducted. Data for 2012 were excluded because of changes in the subject degree classification being applied to the LFS. Several sample selection procedures were applied to ensure that the actual salary data fits into the framework of the question around graduate salaries that is included in the sixth form questionnaire. The sample selection procedure is summarised in Table 3.2.

The sixth form questionnaire asked students to estimate earnings of graduates at age 30. The LFS sample was restricted to people aged 28 to 32 who hold a first degree. This age range was used to make sure the LFS subsample is not too small. Only people who reported their gross weekly pay in the main job were included. Moreover, to limit potential calculation errors, I excluded people who worked part-time. Since the LFS has a degree subject classification that is different from the one used in the sixth form questionnaire, a mapping table was produced to identify comparable degree subjects (see Appendix G). I match 14 out of 19 the LFS subject areas to the subject classification used in the sixth form questionnaire, leaving the five subject areas and Combined degrees out of my sample. People who are in the top and bottom 1% of the salary distribution were excluded from my final dataset. The final LFS sample of 3,632 people included 1,688 men and 1,944 women.

Table 3.2 Sample selection procedure for young graduates (28-32 years old)

Sample selection	LFS sample (N)
Full sample	1,171,826
Aged 28 to 32 years	69,679
Full-time in the main job	50,784
Gross weekly pay in main job available	11,685
Studied a single subject degree and it is available	4,382
Subject is match to the sixth form subject classification	3,703
Top and bottom 1% of salaries excluded	3,632

3.3.2.4 Sampling strategy for the questionnaire and focus groups

The final stage of this project seeks to explore students' attitudes and opinions regarding the financial implications of studying for a degree, particularly in relation to the notion of value for money. Due to resource and time limits recruitment of A-level students was not feasible. Davies' study report mentioned that the researchers spent seven months on sample identification and recruitment. Their report also suggested that getting schools to sign up for the study was challenging because of perceived threats of participation. The fact that Davies' study was funded by the Nuffield Foundation helped in getting past the research gatekeepers (Davies and Qiu, 2016).

This is a self-funded project with no connections to reputable funding organisations, which is disadvantageous to building relationships with gatekeepers and securing access to research participants. The recruitment of participants had to be completed in 3 months. It was clear,

therefore, that a different approach had to be taken to complete the third stage of this project. The decision was made to focus on the first-year students attending a Russell Group University. This was a logical choice since six in ten A-level students (61.8%) that took part in the sixth form questionnaire wanted to continue their education at a Russell Group university. There were, however, some issues with gatekeeper cooperation, which will be discussed in more detail later in this section.

While it is true that students' attitudes and views evolve as they progress from school to university, first-year students hold views that are close to those of university applicants. One of the aims of this study was to explore what first-year students think about the costs and benefits associated with studying for a degree, particularly in relation to the notion of value for money. To minimise the impact of university-provided information on the participants' views, data collection for this phase of the project was completed early in the autumn term, at the start of the academic year. The timing of the data collection is critical because the primary focus of this analysis is on new university students and their views on HE.

Three eligibility criteria were used for recruiting first-year students. Students that are aged 18 or over were invited to participate in the study. This criterion was applied to minimise the delays associated with obtaining parental consent that is needed for younger students. Only students paying home fees (UK and EU nationals) were selected because, unlike international students, these two groups of students were eligible for loans from SLC. Finally, only those studying for an undergraduate degree were invited to participate. This has been done to exclude students enrolled in non-traditional programmes such as the foundation year programmes.

It is hard to comment on how representative the first-year student sample is because the Russell Group University provided access to very limited information about the 2019/20 first-year recruitment round. The summary statistics on intake by gender, by college and by domicile were available. Information about the first-year students was available on the top level which means the data does not allow to comment on, for instance, the proportion of females to males across the five colleges. The 2019/20 recruitment round included 59.9% female and 40.1% male students. The university intake was evenly distributed across five colleges, with 26.5% enrolled in a course at the Arts and Law college (CAL), 19.9% enrolled in a course at the Engineering and Physical Sciences college (EPS), 18.8% enrolled in a course at the Life and Environmental Sciences college (LES), 13.1% enrolled in a course at Medical and Dental Sciences college (MDS) and 20.4% enrolled in a course at the College of Social Sciences

(CoSS). The remaining 1.4% were registered with the Other Institutional Budget Areas. The term *domicile* refers to the declared area of permanent residence. A large proportion of students lived in the UK before they joined the university (83.8%), 3.5% were from the EU, and 12.8% were from countries outside the EU.

Comparing the focus groups sample with the University's intake data, some similarities were observed. In total, 51 students were recruited, and they participated in 14 focus groups. Table 3.3 illustrates the composition of these focus groups. To create a welcoming and safe environment, which would enable the focus group participants to share their views on HE in a small group setting, participants who knew each other before the study were invited to participate in the same focus group. If students came forward on their own, they were asked to join the group where other participants were based at the same college. During the recruitment process, I kept track of how many students participated in the focus groups and which colleges they were from. This helped to achieve a similar number of participants representing each of the five colleges.

The focus groups participants were asked about their gender, but the questionnaire used the free text rather than multiple-choice format. There are variations in gender representation. Female students constitute 76.5% of the study sample, male students are 19.6% and non-binary are 3.9%. Next, a balanced number of participants representing each of the five colleges was achieved (CAL=11, CoSS=9, EPS=11, LES=10, MDS=10). While I was not aiming to achieve the nationally representative sample, it was desirable make the focus groups sample comparable with the whole cohort of first-year students at this Russell Group university. Students enrolled on a course at the CoSS were challenging to recruit. This may result from Social Science students having less interest in the research topic. Perhaps students from the CoSS spent less time on campus compared with their peers from other colleges. The domicile group comparison is hard to make since the focus group survey included a question about the participant's nationality rather than the domicile group. In total, 90% of the sample are British and 10% are EU nationals. The proportion of EU nationals in the sample is three times more than the proportion of the first-year student declaring an EU country as their permanent residence. This does not necessarily mean that the EU nationals were oversampled in this study. The University intake data does not differentiate between the British nationals and EU nationals living in the UK.

The University did not provide information about the number of BAME students in the 2019/20 recruitment round despite numerous requests. The 2019-20 Access and Participation plan (University of Birmingham, 2019) suggests that in 2017/18 27% of their undergraduate population were from BAME backgrounds. In contrast, the proportion of this study sample identifying as BAME was 54.9%. That is almost twice as many as the report suggests. Black male students were relatively unresponsive. This affects the extent to which this first-year student sample represents the wider University's population. During "on-street" recruitment, there were a few Black male students who agreed to take the leaflet about the research project but none of them got in touch regarding the study participation. Finally, information about first-generation students was not available. Those who participated in the focus group questionnaire were asked whether their parents went to university. Based on the answers, it is calculated that 27% of the participants were first-generation students.

Table 3.3 Background characteristics of the first-year student sample (N = 51)

Group	Student	College	Gender	Ethnicity	First into HE
1	Jenny	CoSS	Female	White	No
	Katie	MDS	Female	White	No
	Laura	CAL	Female	White	No
	Peter	MDS	Male	White	No
2	Alex	CAL	Female	Black	No
	Gina	CoSS	Female	Black	No
	Nadia	CoSS	Female	Black	No
3	Becki	CoSS	Female	White	No
	Elliot	LES	Male	White	Yes
	Jane	CoSS	Female	White	Yes
	Joab	LES	Male	Asian	No
4	Chloe	CAL	Female	White	No
	Hubert	CAL	Male	White	No
	Rachel	CAL	Female	Mixed	No
	Rosie	CAL	Non-binary	White	No
5	Amelia	LES	Female	Asian	Yes
	Kate	LES	Female	Asian	No
	Lora	LES	Female	Asian	Yes
	Rihanna	LES	Female	Asian	No
6	Fiona	CAL	Female	White	No
	Lisa	LES	Non-binary	White	No
	Nina	CoSS	Female	White	No
7	Alice	EPS	Female	Asian	No
	Ami	EPS	Female	Asian	No
	Holly	EPS	Female	Asian	No
	Nicole	MDS	Female	Asian	No
8	Alexandra	LES	Female	White	No
	Ingrid	MDS	Female	Black	No
	Jason	LES	Male	Mixed	No

	Yasmin	MDS	Female	Black	No
9	George	LES	Male	White	Yes
	Hope	CoSS	Female	Asian	Yes
	Karina	CoSS	Female	White	No
	Paul	EPS	Male	White	No
10	Lydia	CAL	Female	White	No
	Monica	CAL	Female	Asian	Yes
	Sabina	CAL	Female	Asian	Yes
11	Abi	CoSS	Female	Asian	Yes
	Leah	CAL	Female	Mixed	No
	Leyla	MDS	Female	Asian	No
12	Daria	MDS	Female	White	Yes
	Lola	MDS	Female	White	No
	Toni	MDS	Female	Asian	No
	Vera	MDS	Female	Black	No
13	Anna	EPS	Female	White	Yes
	Harry	EPS	Male	Asian	Yes
	Matt	EPS	Male	White	Yes
	Ryan	EPS	Male	Asian	Yes
14	Claudia	EPS	Female	White	No
	Gloria	EPS	Female	Asian	No
	Sarah	EPS	Female	Black	No

The focus group sample can be compared to the larger university population. The recent UCAS data (UCAS, 2020) suggests that in 2019, overall, the female application rate was 57.6%, and the male rate was 42.4%. This means that female students are oversampled (76.5% compared with 57.6%). The proportion of BAME students in the focus groups sample is higher than in the UK (54.9% compared with 25.9%). So the generalisability of the findings is limited by the observed differences between the study sample and the wider university population.

The focus groups were audio-recorded to fully document all responses. The focus groups allowed participants to share their experiences of the choice process and their views on the financial implications of studying for a degree. The respondents were encouraged to share their attitudes to the current student finance system, whether positive or negative, to help the researcher to understand how those attitudes relate to students' decision-making. The focus group schedule included questions about resources that the students used to inform their decision-making, including their knowledge of the student finance system, their career aspirations, and their views on value for money. To ensure confidentiality and anonymity, respondents' names were replaced with pseudonyms. The next section explains how each method was developed and applied in detail.

3.4 Methods

3.4.1 Combining methods in this project

This research project uses a mixed method approach which enables the researcher to obtain different levels of data. The two large-scale datasets, namely the sixth form questionnaire and LFS, make it possible to explore general patterns in students' expectations and attitudes related to the financial implications of studying for a degree. This is then followed by the third phase of the project where a questionnaire and focus groups are used to gain a deeper understanding of the topics that were explored earlier, bringing the discussion up to date. The three phases together provide a richer, more complete picture than either would alone.

The third phase of the project is delayed in time, leaving a gap of 7 years between the sixth form questionnaire and focus groups. Considering the time lapse between the first two and the third phases of the project, this project recognises that the comparability of the results is reduced. It was felt justified, however, to examine the relevance of earlier findings to the current decision-making of university applicants.

Caution needs to be exercised in bringing the results together because they might not be on the same level of abstraction. The findings of the first two phases can be argued to have a broader application for the HE choice, whereas the focus groups study is primarily useful for bringing the project up to date and providing information about the perceptions of those who study at a Russell Group University. Unfortunately, it was impossible to secure access to a new group of A-level students in the time that was available. Instead, it was felt appropriate to identify the group of research participants who recently started their degree course. Finally, there is a misconception among social scientists that statistical analysis is more objective and judgement-free (Gorard and Taylor, 2004). This is not always true. The researcher needs to use their judgement all the time, drawing on the academic literature and their research experience. I used my judgment in bringing the three stages of the project together.

3.4.2 Sixth form questionnaire

The first phase of this research project was focused on exploring salary expectations of A-level students. This has been done to identify the variability of expectations among students and assess how their salary expectations relate to the reality of the UK graduate job market. The topic of salary expectations is important because those who consider going to university could

benefit from having more accurate expectations about the labour market implications of their choices. This is relevant only when future earnings indeed play a role in applicants' decision-making. It was also necessary to identify a dataset that can be used for the comparison of the expected salaries with actual graduate earnings. Several datasets were considered for this type of analysis, and the LFS data was selected in the end.

The second phase of this project explored A-level students' beliefs around the size of the graduate premium at age 30 and their confidence in the predicted graduate premium. These questions are also important for those who consider going to university. A recent study conducted by the IFS compared earnings of those who do and do not attend HE. On average, at the age of 30, men who graduated from university earn around 5% more than men who did not attend university. The difference is even more pronounced when the comparison is made between two groups of women: on average, women who graduated from university earn 25% more than those who did not (Britton *et al.*, 2020).

3.4.2.1 Variables of interest

The analysis here is based on data from the sixth form questionnaire which was administered to Year 12 students in 25 schools across England. The sixth form survey included 15 questions about students' background, their study plans, expectations related to the graduate premium, graduate salaries, and student loan repayment. Some of the questions included in the sixth form questionnaire were copied directly from the baseline questionnaire that was used in Davies' study, namely gender, whether their parents had ever been to university, plans for going to university and expected graduate salary. There were some issues with missing cases and values in this dataset, but the benefits of having such a unique data outweighed its limitations.

At the beginning of the sixth form questionnaire, the respondents were asked to write down their full name and date of birth. This information was needed to match up the survey responses with the information on the National Pupil Database (NPD) and UCAS. The 93.4% of surveyed students consented for their answers to be matched up to their NPD records and 88.6% consented to be linked to their university choices held by UCAS. The students' records were never matched to their records on these databases which limits the extent to which the respondents can be followed during their HE choice.

Respondents were asked to indicate their gender (male=1, female=0). In this dataset, the researchers did not cater for non-binary students. Then respondents were asked whether their father and mother had ever been to university. There were three response options: (1) yes, (2) no, (3) don't know. Unfortunately, the responses to these two questions were lost and these background factors cannot be accounted for in this project. The issue of missing data is discussed more in the next section.

The sixth form questionnaire included the section focusing on A-level subjects that the respondents studied. The respondents were asked to list A-level subjects that they studied and write down their expected grade for each subject. Some students listed more than three subjects, but my analysis is limited to the first three subjects because normally applicants need to achieve three A-levels (or equivalent qualifications) if they want to study at university in the UK. Students' expectations of A-level grades were converted into a numeric scale (F=1, E=2, D=3, C=4, B=5, A=6, A*=7). Following this, respondents were presented with five statements about each A-level subject. These were whether they (1) have been as successful as they expected; (2) teaching suited them well; (3) subject prepared them for the course they intend to study at university; (4) subject has been good for helping them to get into the type of university they want (5) have some regrets about the selected A-level subject. Each of the five statements had to be rated using the Likert 5 choices scale, with options coded as (5) strongly agree to (1) strongly disagree.

Next, there was a section focusing on respondents' financial literacy. The respondents were presented with a real-life situation and asked to calculate the real value of debt. There were four options to choose from with one correct answer. It is possible that some respondents were not familiar with the concept of the real value of debt because around 40% of respondents thought that the real value of debt would increase in 5 years when inflation is positive. The responses were conflated into a dummy variable where the correct answer was equal to 1 and 0 otherwise. Following that, the respondents were presented with a choice of immediate or delayed rewards: four pairs of money sums that could be given to them today or in a year. If the respondents chose to receive money today in all four scenarios. Responses to these questions were excluded from the analysis because they do not offer a reliable measure of time preferences.

Students were asked two questions related to the graduate premium. The first question was focused on the size of the expected graduate premium. The original question in Davies' study

includes seven response options, ranging from 'at least 10% less' to 'at least 20% more', with a 5% interval between the two options. In contrast, the question in the sixth form questionnaire had nine response options, ranging from 'at least 20% less' to 'at least 20% more', with a 5% interval between the two options. This may have been done to give a more balanced set of response options with 'no difference' being placed in the middle. When presenting the response options this way, the questionnaire implicitly suggested that going to university might have a positive impact, negative impact, or no impact at all on respondents' future earnings. The wording of this question emphasised the difference that going to university would make to the respondents' annual earnings by underlining the word 'your' in the question.

The next question prompts the respondents to indicate how confident they were: "How confident that your earnings prediction is accurate?". The response scale had five options: (1) very unsure, (2) not confident, (3) quite confident, (4) confident, and (5) very confident. The responses were conflated into a dummy variable where 'confident' and 'very confident' were equal to 1 and 0 otherwise. Students' confidence in the expected graduate premium is explored in detail in the second empirical chapter of this thesis. It is important to note that a paper by Davies, Qiu and Davies (2014) looked at the relationships between students' background characteristics, cultural capital, and confidence in the graduate premium predictions. That study was based on the data from Davies' study. Data from the sixth form questionnaire have not been analysed before and contains a different set of variables.

One of the objectives of the first phase of this study was to explore to what extent students' salary expectations vary based on gender. The questionnaire asked: "The average university graduate earns roughly £30,000 by the time they are 30. Using this figure as a benchmark, what difference do you think the subject of a degree makes?". The questionnaire also explained what the salary average, lower quartile and upper quartile values mean. In addition, the following example is given: "An average graduate in Subject 1 would earn £40,000, with someone just in the top quarter earning £50,000 and someone just in the bottom quarter earning £30,000. I think I would earn £35,000". The question itself was presented in a table format where 11 subjects are listed vertically, on the left side of the table, and space for salary expectations is on the right side of the table. The table header specified the range from 15 to 65 (representing thousands of the British pound), with an interval of 5 between two points. The respondents are asked to record their expectations of average, lower quartile, upper quartile for graduates in each of 11 subjects using letters AV, L, and H. The last row on the right was reserved for the

respondents' own salary that they think they could earn if they were to study each subject at degree level. This row is outside of the table header row and has a different format.

Several assumptions were built in this question about the expected salaries. The statement containing the question was written in a gender-neutral language, and it also implicitly worked as a benchmark for the salary expectations. The same applies to the example statement. Although it was not explicitly stated in the question, the respondents were asked about the annual earnings of those who are in full-time employment. Next, the space where the respondents can record their responses was broken down into boxes with specific values assigned to each box. This means respondents are limited to the salary range that these boxes included. The respondents, however, were not restricted to these boxes when they were asked to record their own salaries.

Some other studies of graduate salary used a different approach. For example, Taylor (2007) asked students in Science and Engineering to state their expected annual earnings and their responses were grouped into five categories. Similarly, Alonso-Borrego and Romero-Medina (2016) asked university students living in Madrid to report their expected gross monthly salary and then grouped their responses into five categories. Brunello, Lucifora and Winter-Ebmer (2004) mention that the salary expectations of students in Business and Economics were converted in Euro for cross-country analysis, but do not report the format of the salary data.

There was a set of questions focused on respondents' plans for participation in HE. The respondents were asked whether they intended to study for a degree and given four options to choose from: (1) definitely not study, (2) unlikely to study, (3) probably but not straight away, and (4) definitely study. Then respondents were asked to think about how much student debt they will be able to repay. The response options differed from one another in terms of the proportion of the loan that a respondent hopes to repay and the time they think it will take them to do so. This question is important in the context of salary expectations and graduate premium. Importantly, the question instructions did not specify which loans the respondents need to think about. Therefore, it was assumed that this question was about student loans that are provided by SLC. The responses were conflated into a dummy variable where paying off the full amount was equal to 1 and 0 otherwise.

Students were asked about courses they intended to study at degree level and where they wanted to do that. The responses were recorded in the table format where the first column was

reserved for the course title, the second column was for the name of University or College and the third column was for the respondents to indicate which option they prefer. My analysis was limited to the preferred option. The preferred courses were first coded according to the LFS degree subject classification, including the Combined degree category, then those courses that match with the sixth form subject classification were saved in a separate variable. The name of the university or college where the students want to study was coded as a binary variable where the Russell Group university was equal to 1 and 0 otherwise. It was important to distinguish between the Russell Group and universities in general because previous studies have shown that graduates from Russell Group universities earn more, on average, than graduates who went to less prestigious universities (Belfield *et al.*, 2018; Zwysen and Longhi, 2018).

The final section of the questionnaire was focused on the use of two online resources, namely Unistats and Money Saving Expert. First, respondents were asked whether information on Unistats about the salaries of graduates from different courses affected their choice of course. There were four response options which were conflated into a dummy variable where 'reading about graduate salaries' was equal to 1 and 0 otherwise. Respondents were also asked to indicate how they used information available on Unistats. There were three options describing different ways in which Unistats could be used and the fourth option indicating that the respondent did not use Unistats. The final question related to Unistats was focused on the usefulness of the information. Only the first question about Unistats was analysed in this project. In the final question, respondents were asked whether information on Money Saving Expert about university loans and repayments affected their choice of course. There were four response options, but responses were conflated into a dummy variable where 'reading about university loans and repayments' was equal to 1 and 0 otherwise.

Most of the language used throughout the questionnaire was clear and explanations were provided where it was assumed the respondents might need some help. However, the answers to the question about the real value of debt suggest that not all respondents were familiar with the term. There are three typos in places where researchers made references to different parts of the questionnaire. This might have deterred some respondents from engaging with the questions. Pronouns *you* and *your* were used in the instructions, which, hopefully, may have encouraged respondents to relate the content more and focus on their own perceptions where needed.

3.4.2.2 Handling missing data

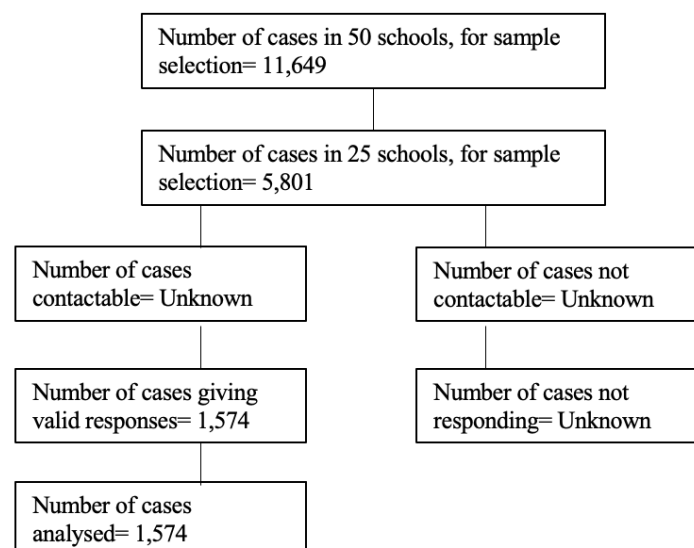
The sixth form sample can be described as a convenience sample. As mentioned earlier in this chapter, only 25 schools that participated in Davies' study agreed to fill out the questionnaire. The preliminary analysis also showed that the proportions of students who answered the questionnaire varied from school to school. There are problems with the opt-in convenience sample. Coverage bias is one of them:

There are proven systematic differences between people who tend to take part in research and those who refuse – in terms of leisure, attitudes, education, income, social class, age and so on.

(Gorard, 2021, p.136)

Coverage bias occurs when some respondents are more likely to volunteer than others. For example, schools that found Davies' study beneficial to their students in terms of informing their A-level choices might have been more inclined to accept the invitation to complete the sixth form questionnaire. To understand the scale of the problem, I analysed the missing data. Figure 3.2 is a flow diagram, adapted from Gorard (2021), summarises missing cases.

Figure 3.2 A flow diagram to record missing cases in the sixth form dataset



There were 11,649 KS5 students in 50 schools that were invited to complete the sixth form questionnaire. There were 5,801 KS5 students in 25 schools that opted in. It remains unknown

how each school approached the distribution of the sixth form questionnaire. The proportion of students that completed the questionnaire varied from 9.7% to 46.2% from school to school, which might be explained by the self-selection of respondents. It is also possible that some students were not contacted, and their number is unknown. Some students might have been invited to complete the questionnaire, but they refused to do so or dropped out after agreeing to participate. Again, their number is unknown.

The data were examined on any observable differences between the schools that agreed to participate and those who opted out. I compared means for the percentage of students gaining 5 grades A*-C at GCSE and average point score per student. Davies' study participants were asked if they give permission to access their NPD records, including information about free school meals eligibility. Not everyone gave their permission and information is also missing for those students who did not participate in Davies' study. I used POLAR4 as a proxy for disadvantage. POLAR4 is a measure of disadvantage that classifies local areas across the UK according to the HE participation rate among young people. Caution must be exercised when POLAR4 is used in defining disadvantage because POLAR4 is an area-based measure, which characterises a neighbourhood where the school is located, not individuals who attend the school.

Schools that agreed to complete the sixth form questionnaire had a higher percentage of students gaining 5 grades A*-C at GCSE (83.6% compared to 72.5%) and a higher average point score per student (917.3 compared to 788.4). At the same time, 8.0% of schools that opted in and 8.3% of schools that opted out were located in areas with the lowest young HE participation rate (POLAR4 Quintile 1). According to UCAS 18-year-old application rate data for 2012, 14.3% of applicants were from POLAR4 Quintile 1 areas, which is slightly higher than the proportion of schools that were in the lowest-participation areas and agreed to answer the sixth form questionnaire (UCAS, 2020).

The sixth form dataset included a variable indicating whether a respondent participated in Davies' study. Two-thirds of the surveyed students (70%) did. The sixth form dataset also contain self-reported dates of birth. The vast majority of the students were born between 1995 and 1996, which means the participants were 16-17 years old at the time they completed the questionnaire. Considering these sample characteristics, it is reasonable to suggest that the sixth form questionnaire was distributed among Year 12 students only. If that was the case, it would

be difficult to estimate the number of contactable cases because only the total number of KS5 students is known.

Next, I examined item non-response for the sixth form questionnaire. The length of the survey, types of questions asked, and characteristics of respondents may help to understand why some of the questions were skipped. The average item non-response rate was 11.2%. Two questions about parents' education were excluded from the calculation of the average item non-response rate because data were missing from the dataset.

The observed item non-response rate is not uniformly distributed across the survey, but rather some questions have a systematically higher non-response rate. Not surprisingly, those who did not provide information about the university course and provider that they are interested in were also less likely to indicate that they intend to study for a degree. When asked whether they intend to study for a degree, only 43.0% of the respondents who did not answer the question about the preferred course and HE provider indicated that they definitely want to study for a degree. This is less than half the rate, 93.5%, of similar responses among those who provided information about the university course and HE provider.

Another question with a relatively high non-response rate of 6.3% was the confidence in the expected graduate premium. Overall, only 1.7% of respondents skipped the question about the size of the expected graduate premium, however, almost one in five (18.2%) students who did not answer the question about confidence skipped the question about the expected graduate premium. I also looked for patterns in the responses to questions around the real debt value and student loan repayment expectations but did not find anything that stood out.

Some students skipped questions about the graduate salaries. Here I only comment on the expected average salaries and the salaries that the respondents think they would have as these two items were used in the further analysis. When asked to estimate the expected average salary for each of 11 subjects, on average, 13.4% of respondents did not provide an estimate. When asked to estimate their own salary for each of 11 subjects, around 33.0% of respondents did not provide an estimate. Perhaps by not answering the question about their own likely salary for some subjects the respondents wanted to indicate that they did not consider studying that(those) subject(s) at degree level. The test burden might be a problem here (Morse, 2003). To answer all questions about graduate salaries, that is the average, lower quartile and upper quartile and one's own expected salary, the students were required to provide 44 answers, which

is somewhat exhausting. Only 1,271 (80.7%) students provided estimates for how much they think the average graduate earns for all subjects and only 896 (56.9%) reported how much they think they would earn if they were to study each subject at degree level. The summary table of missing values can be found in Appendix H. If cases containing missing data were eliminated, the dataset would shrink to 416 cases.

When asked about their own salary for each of the 11 graduate subjects, some A-level students reported that they expect to earn £0. Perhaps the respondents meant that they do not think that they would be able to find a job after graduation or they wanted to indicate that they do not consider studying that subject at degree level. Whatever their motivation was, the £0 responses were coded as missing. It was felt appropriate because otherwise it is assumed that some would be unemployed after graduation. This decision increased the average expected salary. To keep cases with missing salary values, I replaced the missing values by a reasonable default value - the overall mean value for each degree subject. The original values were saved in a separate variable and a new binary variable indicating whether replacing with default values happened was saved in the same dataset.

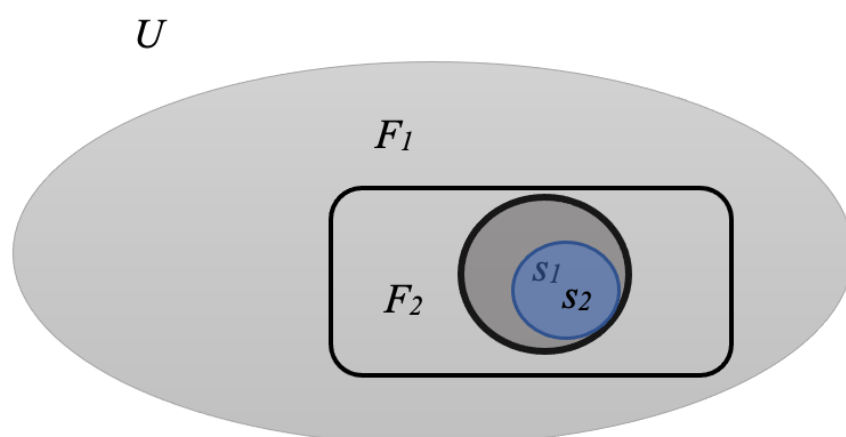
In the case of the categorical variables, a different approach has been taken by creating a new category of 'missing'. Coding missing responses this way made it possible to explore non-response patterns in each item. Where the items were transferred into binary variables, they were recorded as yes=1 and otherwise=0. For example, a dummy variable for the real debt value question was coded so that the 1 represented correct answer and 0 otherwise, i.e. not the correct answer. As it was done for the real number variables, I saved the original values separately and created a new binary variable specifying whether the original item was missing or not.

I decided not to use the multiple imputation procedure in my research. This procedure generates multiple full datasets, with the missing values replaced by plausible values. The software completes analysis using each complete dataset and then combines the results to produce the overall estimate. Some authors have encouraged researchers to become more familiar with multiple imputation procedure and invited academic journals to stimulate the use of more "modern", "sophisticated" techniques (Peugh and Enders, 2004; Manly and Wells, 2015). Others have been sceptical about the use of multiple imputation procedure (Gorard, 2020). Proponents of multiple imputation believe that there are three distinct mechanisms of missing data: missing completely at random and missing not at random. These mechanisms are based

on whether the observable data can be used to interpret the patterns of missing data. The assumption that unobserved data is missing completely at random or missing at random has to hold true for the multiple imputation to be applied (Haukoos and Newgard, 2007). A serious weakness with this assumption, however, is that full randomisation is unrealistic in real-life settings. In the case of the sixth form questionnaire, the participating schools have not been selected at random, instead, researchers contacted schools that participated in their research in the past. Only half of them agreed to distribute the questionnaire among their students. Students, in their turn, completed the questionnaire only if they were willing to do so. Next, the multiple imputation procedure relies heavily on the variation introduced in the imputation. The variation is limited because it is restricted to values that are already present in the dataset. In other words, this complicated procedure has the same limitations as more simple approaches like replacing missing values with default values (Gorard, 2020).

The option of adjusting for non-response has been considered for this research project. Figure 3.3 describes how the sixth form sample fits within the population of those who are enrolled in post-16 education. This diagram is adapted from Valliant and Dever (2018, Figure 1.1). The population of students enrolled in post-16 education is denoted by U . The 2010 School and College Performance tables provide institution-level data about this population. The frame F_1 represents Davies' study where three inclusion criteria were applied. The sample s_1 includes schools that were eligible to participate in Davies' study and agreed to do so. The frame F_2 completely covers s_1 because all schools that participated in Davies' study were invited to complete the sixth form questionnaire. Half of the approached schools agreed to participate. They are referred to as s_2 in Figure 3.3.

Figure 3.3 Illustration of the sixth form sampling frame.



Using weights in the analysis could help to adjust the results so that, the findings are more representative of the population of interest. The population of interest can be defined as all schools that offer post-16 education. This definition is based on the assumption that individuals enrolled in post-16 education might want to study for a degree. Unfortunately, introducing weights does not seem to be practical because the 2010 School and College Performance tables only provide institution-level data. Applying weights based on the school's characteristics would do more harm than good because the composition of Year 12 cohort is unknown. Alternatively, the population of interest can be defined as 50 schools that agreed to take part in Davies' study. The population can be defined that way under the assumption that randomisation was achieved in Davies' study, and these schools represent a wider population of schools preparing students for HE. Even if the population is defined this way, weights cannot be created based on information that is available from the Davies' study report.

3.4.2.3 Analysing the data

The analysis of the sixth form questionnaire data was completed in the first two phases of this research project. The first phase of the project attempted to answer the following questions (see Table 3.2 for more details):

1. What are factors associated with predictions of the graduate salaries?
2. Are there gender differences in salary expectations?
3. How do salary expectations of A-level students relate to the actual graduate salaries?

4. Is there an association between the preferred degree subject area and the accuracy of graduate salary expectations?

The first question examines relationships between the salary expectations and students' characteristics. I used ordinary least squares (OLS) regression to assess which of students' characteristics are important in predicting how much they think (1) the average graduate earns and (2) how much they believe they will be earning after graduating from university. In the first instance, the dependent variable was the logarithm of the expected average salary, measured in thousands of the British pounds. In the second instance, the dependent variable was the logarithm of the expected salary of the surveyed students. I did not report *t*-statistics because, as mentioned earlier, the sixth form sample is a convenience sample. The *t*-statistics cannot have a meaningful interpretation because the sample is not random.

The remaining three questions were addressed using the effect size. The effect size can be used to look at the variation between the two groups. The effect size refers to standardised "differences accounting for both the scale and variability in the numbers involved (Gorard, 2021, p.58)". There are many different definitions of effect size, with Cohen's *d* considered the most common standardised difference. Cohen describes benchmark values of *d* of 0.2 representing small, 0.5 medium and 0.8 large effect size. The simplicity of the scale is attractive but researchers should exercise caution and use their judgement when interpreting the effect size (Bakker et al., 2019).

An effect size is more useful than *p* values because not only does it inform the researcher about the difference between groups, or an association between variables, but it also provides a measure of the magnitude of the difference. Aguinis, Vassar and Wayant (2021) commented on the usefulness of effect sizes: "a *p* value without an effect size is like peering into a pool of murky water: one cannot determine the depth, just say that it is likely that a pool exists (p.39)". Others rejected the use of *p* values in social science research advocating for the use of effect sizes. The main weakness of *p* values is that they require full randomisation, which is unrealistic in social science research (Gorard, 2021). This point is very relevant to my research where the sixth form sample can be described as a convenience sample.

Effect size should always be interpreted in the context of the study. Cheung and Slavin (2016) reviewed 645 studies in Education and found that methodological factors such as researcher-made measures, sample size, research design, and published/unpublished reports have an

impact on effect size. The sample size is an important consideration since effect size tends to be smaller in the studies with large samples. The researchers found that studies with less than 250 participants reported twice the effect size of larger ones. The difference was even more pronounced, a ratio of 3.5 to 1, when comparison was made between studies with less than 100 participants and those with over 2,000 participants. Comments made by Cheung and Slavin (2016) about research design are not relevant to this study because they mainly discussed the observed differences between experimental and quasi-experimental designs. Comments about researcher-made measures are also not relevant in the context of the salary expectations because salaries are measured in the British pound sterling.

To see whether the gender gap in salary expectations exist, I first compared the average graduate earnings that female students expect with the average graduate earnings that male students expect. The question about the average graduate salary was written in a gender-neutral language, so it was expected that the students' estimates would not be considerably different. Following that, I compared how much females and males hope to earn by the age of 30. Based on the literature around the gender pay gap it was expected that, on average, females would expect to earn less than their male peers. Next, I looked at how the expected salaries relate to the actual salaries of UK graduates using earnings data from the 2009-11 LFS. In several existing studies, the relationships between the expected salaries and their realisations vary, so it was difficult to predict the results of this analysis. A-level students may know more about graduate earnings for subjects that they want to study at degree level. To see the extent to which students' subject preferences influence their responses, I repeated the analysis focusing on respondents' preferred subjects. Effect sizes are reported as the mean difference between males and females in the standardised unit of d .

The second phase of this project looks at the graduate premium expectations and confidence in those expectations. I examined to what extent students' expectations of the size of the graduate premium vary using frequencies and percentages. The graduate premium expectations of students planning to study high premium subjects and low premium subjects were analysed side by side and I also compared the expectations based on the respondent's gender. To examine factors associated with the graduate premium expectations I also used logistic regression analysis, in which expecting a graduate premium of 20% was coded as 1 and 0 otherwise. Following that, students' confidence in the predicted graduate premium was analysed using frequencies and percentages. Again, I examined male and female students'

confidence in their beliefs about the size of the graduate premium. I also looked at what sort of expectations students with high levels of confidence have. To examine factors associated with being 'confident' or 'very confident' in the predicted graduate premium I used logistic regression analysis. Again, *t*-statistics were not reported for the same reason as in the first phase of this study.

In Stata 15, the *surveyset* command was used to tell the software about characteristics of the dataset where data were collected using a complex sampling design, including multistage sampling, stratification, finite population correction and sampling weights. Once I told Stata about the dataset characteristics, it automatically adjusted parameter estimates to account for sampling design.

3.4.2.4 Limitations

Whilst the sixth form data gives a clear overview of what A-level students think about salaries of graduates from different courses, findings should be interpreted with caution. First, the sample was limited to those schools that agreed to participate in the follow-up part of Davies' study. Some institutions never had the opportunity to get involved because they were excluded from Davies' study, namely further education colleges and sixth form colleges, institutions with no name, schools that have less than 100 students on their A-level courses and schools that are not located in the specified postcode catchment area. Importantly, this sample comprises of students who have high aspirations: 61.8% of respondents reported planning to apply to a Russell Group university. A recent report by Sutton Trust (2019) suggests that only 6% of the UK population have an undergraduate degree from the Russell Group. Students with high educational aspirations may not be representative of the wider population of students intending to study at university. Despite these concerns, it was still interesting to look at salary expectations of A-level students attending the sixth form schools even though they represent only part of the university applicant population. In 2012/13, 38% of KS4 students in state-funded mainstream institutions continued their education in sixth form school (Department for Education, 2015).

There is a lack of information about the training that teachers received before administering the sixth form survey to their A-level students. Davies and Qiu (2016) reported that the implementation of the sixth form questionnaire varied across the schools. In some schools, students that did not participate in Davies' study constitute the majority of the surveyed

students, but they represent a minority in others. Related to this point, some questions might have been misinterpreted by participants or skipped altogether if they contained unfamiliar terms. Terms like the real value of debt, average, lower quartile and upper quartile values were used in the questionnaire. It is difficult to say whether the surveyed students were able to interpret them correctly.

A major drawback of the sixth form data is that its subject classification does not seamlessly match any of the widely used subject classifications. There are 23 subject areas in the LEO subject classification including the Combined subject area, while the LFS subject classification includes 19 subject areas plus the Combined subject area. The sixth form questionnaire uses the classification which includes 11 degree subjects. The apparent mismatch makes it difficult to compare the expected and actual graduate salaries without losing some of the cases. For example, when comparing the expected salary for the subject that respondents wanted to study with the actual salaries of similar graduates, I had to exclude 231 (16.6%) out of 1,392 students who reported which subject they want to study because their preferred subjects fell outside the sixth form subject classification. This could have been easily avoided if researchers who designed the sixth form questionnaire had chosen one of the commonly used degree subject classifications.

Clustering introduces non-independence between observations which means standard errors can be artificially low. If, for example, people live in the same household, they can be too similar to each other. This limitation is insignificant compared to the points mentioned earlier in this subsection. Clustering at the classroom level had been ignored and not part of the sixth form dataset following the example of Zhu *et al.* (2012) who concluded that clustering at the classroom level had very small and restricted implications for their study.

3.4.3 Labour Force Survey (LFS)

To assess how the salary expectations of A-level students relate to the reality of the local labour market, this study used data from the 2009-2011 LFS. For this purpose, I consider graduate salaries of female and male respondents, between 28 and 32 years old, working full-time in the four UK nations. The sample was restricted to respondents who hold a single subject degree and provided information about their gross weekly earnings in the main job. Some respondents were excluded from the analysis because their degree subject could not be matched to the degree subject classification of the sixth form questionnaire. The gross annual salary was

calculated by multiplying the gross pay weekly pay by 52. The top 1% and bottom 1% in each subject area were excluded from the comparison.

3.4.3.1 Variables of interest

The LFS is a quarterly survey which means that data covering 2009 - 2011 consists of twelve datasets that were downloaded and combined in one file. Since this project is interested in the earnings of people who hold a degree, a large number of respondents had to be excluded from the analysis. Respondents that are willing to be interviewed for the LFS are contacted over the course of five quarterly waves. Some questions are not asked every quarter, including the type of employment and gross weekly earnings, and some respondents are not contacted in successive quarters.

The LFS collects information about respondents' gender, and age (calculated based on the date of birth). The LFS education and training section contains questions about qualifications that the respondents already have and qualifications that they are currently working towards. Those respondents who hold a degree are asked whether they hold a degree in a single or combined subject. The survey offers a degree subject classification that includes 19 subjects. The LFS also collects information about the type of employment in the main job, full-time or part-time, and gross weekly pay in the main job.

3.4.3.2 Handling missing data

Six sample selection steps were applied to the 2009-2011 LFS dataset. They are summarised in Table 3.2 (Section 3.3.2.3). Since questions about respondents' earnings are not asked in each wave of the data collection, it was appropriate to drop cases where the variables of interest had missing values. Overall, the item non-response rate is negligible. For example, among respondents who filter through the first three steps of the sample selection process, namely they were between 28-to-32-years olds, worked full time in their main job and answered the question about their gross weekly earnings, only 5 respondents (0.1%) did not report whether they studied a single subject or combined subject degree. The question about weekly gross earnings was an exception to the rule. Information about one's earnings is a sensitive topic, and it is common in social science to see participants who are not willing to share sensitive information about themselves. In the 2009-2011 LFS dataset, 18.2% of respondents who met the above selection criteria and were asked about their gross weekly earnings did not answer

the question. These cases were dropped because replacing them with default values was not useful.

3.4.3.3 Analysing the data

The LFS data were used in the first phase of this research project to explore how the A-level students' salary expectations relate to the actual salaries of UK graduates. Since the sixth form questionnaire contains questions about annual earnings, the LFS salary data had to be transformed into an annual format by multiplying the reported gross weekly pay by 52 (the number of weeks in a year). Also, the degree subject classification that was included in the sixth form questionnaire does not match the LFS subject classification, which meant that 679 (15.4%) cases had to be left out of the analysis because the LFS respondents hold a degree that falls outside the sixth form subject classification. Respondents who are in the top 1% and bottom 1% of gross earnings in each subject were excluded as typically done in this field.

3.4.3.4 Limitations

Although the LFS has been widely used by researchers who are interested in various aspects of the labour market, Britton, Shephard and Vignoles (2019) sceptically pointed out that the LFS is less reliable than administrative tax records. The researchers found that, in the LFS earnings data, the gender differences are considerably larger compared to the observable gender pay gap in the earnings data from the UK Government administrative sources. Overall, the self-reported weekly earnings are higher than the UK Government administrative sources suggest.

3.4.4 Pre-focus group survey and focus groups

A focus group may be defined as a group of variable size, with an interviewer or, a moderator, asking questions about a specific topic. In social science research, various definitions of a focus group are found. Hennink, Hutter & Bailey (2011, cited in Hennink, 2014) describe focus groups as group discussions: "an interactive discussion between six to eight pre-selected participants, led by a trained moderator and focussing on a specific set of issues (p.136)". Such discussion is different from natural discussions because they happen in a specific, research context.

In the focus groups, a group is a unit of analysis. Groups consist of 6 to 8 participants but can vary in size depending on the purpose of the study. It is recommended to reduce the size of the group when sensitive topics are discussed because that would make participants more comfortable. Participants are selected to represent a homogenous group, for example, students on the same course, patients with a similar condition (Smithson, 2008). The third phase of this project is focused on the perceptions and experiences of first-year students who recently started their degrees. Since the focus groups discuss sensitive topics such as value for money, career aspirations and future earnings, it was appropriate to have smaller groups of 3-4 students. This method can unpack the complexity of the students' perceptions of HE and give a voice to individuals, or opinions, which are often ignored. Some people naturally speak openly about their experiences, while others need encouragement. The group environment holds the space for a range of insights and perspectives. In addition to the focus group, the participants were asked to complete the pre-focus group questionnaire. The questionnaire was used to collect background information about the participants and set the scene for the focus group.

When focus group participants interact with each other they generate ideas collectively. This is possible because of the discussion component of this method. In doing so, one can discover normative understandings that "groups draw upon to reach their collective judgments (Bloor *et al.*, 2000, p.12)". That being said, disagreements, silences and omissions are an important part of the interaction (Smithson, 2008). To encourage more open discussion, those participants who knew each other before the study were invited to participate in the same group. If students came forward on their own, they were asked to join the group where other participants were based at the same college.

An activity-oriented question was included in the focus group schedule. It was introduced to facilitate a discussion around graduate earnings. The focus group participants were given a list of degree subjects and asked to estimate how much graduates earn 5 years after graduation. When all participants recorded their answers, they were given a copy of the same table with actual earnings data. Participants were encouraged to compare their answers with actual earnings and discuss the results with each other in terms of patterns that they observed, things that they found interesting and ask questions if they had any. Respondents were also asked if they considered information about graduate salaries during the HE choice process.

The researcher's impact needs to be considered at all stages of the research process. Before the start of each focus group, I reminded participants of the purpose of the group and handed out

the consent form and then the pre-focus group questionnaire. When I introduced myself to the participants, I made it clear that I completed my first degree abroad and that I was interested in the participants' views and experiences as someone who had gone through the HE choice in a very different context. I have tried to be mindful of my background throughout the work on this project.

3.4.4.1 Developing the pre-focus group survey

The survey was designed to be distributed among the focus group participants, prior to the start of the focus groups. The survey started with some demographic questions, including the participant's name, course title schools and college. The name was required to ensure that it is possible to contact the participant after the focus group, for example, if some questions were not answered or handwriting was unclear. The questions about the course, school and college were asked to ensure that each college received equal representation in the focus group sample. The question about the school survived the pilot stage but during the implementation stage it became clear that new students were not familiar with the University's structure.

A series of questions about students' background was asked with the plan to look at subgroups of participants when the focus group data is ready to be analysed. For the questions included in the survey, the survey format was chosen over the focus group format because it felt that these are sensitive questions, and some participants might not feel comfortable about discussing these questions within the group. To give the participants flexibility, the survey used free text boxes for questions about gender identity, nationality, and ethnicity. It is commonly known that the ethnicity question was difficult to handle in terms of data collection. Most recently questions about gender and nationality received more consideration. The question about respondents' age had five answer options, including the group 'under 18', which was ineligible to participate. This answer option was added to double-check that all respondents can consent to take part in the study.

Next, the respondents were asked about their parents: whether respondents' parents had ever been to university (yes, no, prefer not to say, don't know), type of employment (working full-time, part-time, looking for job, other) and main job (free text). These questions provided more information about the context in which the respondents made their decision to go to university.

After that, the survey asked the respondents whether they applied for any financial support from the SLC, including the tuition fee loan, maintenance loan and maintenance grant. These were multiple-choice questions (yes, no, prefer not to say, don't know). The question about the maintenance grant was included on purpose to check if the students are aware of their student finance options. It was expected that all students will respond 'no' to this question because maintenance grants were replaced by loans in 2016/17 for the new students. To my surprise, 9 students (18%) indicated that they received the maintenance grant.

Finally, the respondents were asked to estimate how much they hope to earn in their first job after graduation and what they expect to earn by the time they are 30. Both questions were accompanied by an example of £20,000. These example statements were not designed to work as benchmarks for students' salary expectations. They were included to suggest the format for answers.

There is no missing data in the pre-focus group questionnaire. The students were willing to provide additional information about their situation. For example, when answering the question about the main job of each parent, a student reported that their parent fell ill and could not return to full-time work. When answering a question about the maintenance loan, two students specified that they received larger amounts because they chose to live away from home.

The first-year students were given the participant information sheet to read before they were asked if they would like to complete the consent form. The project was presented as a study exploring students' perceptions and attitudes towards the financial implications of HE choices and relationships between students' financial beliefs, knowledge of student finance and choices in the context of the English HE. The participant information sheet also contained information about the benefits and disadvantages of participating in the study, information about how data will be handled and how to withdraw from the study. It was felt that the participants could benefit from the contact information of different departments within the Russell Group University that offer advice on student finance and student wellbeing. Those were added at the end of the document. In addition, contact details of organisations based outside the University were included. If the students did not have any questions about the information sheet and wanted to continue, they were asked to complete the consent form.

3.4.4.2 Developing the focus group schedule

The focus group schedule included questions about information sources that the students considered during the HE choice process, perceptions of value for money, career aspirations and understanding of student finance. To ensure confidentiality, respondents chose their pseudonyms before the focus groups; their pseudonyms were used in coding and presentation of findings.

The focus groups started with engagement questions where the participants were asked to introduce themselves and tell everyone about the course they study. Once the introductions were completed, the discussion moved on to the factors that influenced their HE choices. These questions were outside of the primary focus of this project, but they worked well creating a sense of shared experience. The participants were asked about the sources of information that they considered during the HE choice process. It was found that many participants talked to their families, sought advice from teachers and accessed online sources, such as UCAS.

After the general discussion of HE choices, the participants were asked to what extent they considered the costs of studying for a degree. This is an important topic because it is often assumed that applicants consider the costs and benefits of studying for a degree. This study seeks to test it. The discussion has helped to understand to what extent students are familiar with student finance and how their knowledge of the system relates to their attitudes towards the financial side of going to university. The participants were also introduced to the concept of the value for money. They were asked to discuss their perceptions of this concept and share their views on value for money in the context of HE choices. I was looking to understand how the participants define value for money and how they judge it. I hypothesised that participants' perceptions of value for money might differ depending on how much thought the participants gave to the costs of studying for a degree. In addition, students were asked about the role of career aspirations in their decision to study for a degree. In the quasi-market context of the English HE, it was expected that university students consider the impact of their decision to study at university on their future, specifically their career. This topic is not new, but this research project contributes to the overall discussion by inquiring about *both* students' understanding of the student finance regime and their perceptions of value for money,

The participants also took part in the activity-based discussion around graduate salaries. They were given a table with different degree subjects and asked to write down how much they think

graduates from different subjects earn five years after graduation. The participants were given time to complete the table and then were asked to compare their responses with the actual graduate earnings data from LEO. I was interested to find to what extent the participants considered information about graduate earnings before starting their degree course and how, if at all, it affected their choices. I expected that students' salary expectations and their level of engagement with this activity would vary depending on whether the financial return to a degree was important to them.

3.4.4.3 Piloting the focus group survey

The questionnaire was first tested on acquaintances who had been through the UK HE system. People who volunteered their time completed either an undergraduate degree or postgraduate degree in the UK. After that, a pilot study took place at the same Russell Group University during the summer term of 2018/19. I was working with first-year students on a project-based extracurricular activity. Unfortunately, I could not get permission to start the recruitment for this project during the summer of 2019. Instead, I asked ten students, who I worked with if they could complete the focus group survey and tell me what they think about it. All ten students agreed to complete the questionnaire. They indicated that the questions were clear, and it did not take them too long to complete the survey. Looking back, I understand that these students spent a year at the University and, one way or the other, they learnt about the organisational structure of the University. Because of that, they did not have any issues with answering the question about their School or College. Now, if I have had the chance to change the survey, I would have removed the questions about the School and College. One student commented that a list of ethnic groups similar to the one that can be found on a medical form could work better than free text, but I decided, on balance, to use a free text option which allows respondents to express their identity more precisely.

3.4.4.4 Piloting the focus group discussion

The focus group was tested on four out of ten first-year students who volunteered to complete the questionnaire. One student was not familiar with the concept of value for money. The other three tried to explain the concept to her using two different degree courses as an example and by comparing two laptops in terms of their price and productivity. It was noted that the explanation of the value for money concept might be needed in case some focus group participants are not familiar with the concept. During the main phase of the data collection, the

focus group participants offered several different definitions of value for money after the concept was explained to them. In the pilot phase, the volunteers found the activity-based discussion around graduate salaries interesting and appeared to be very engaged in the task. Therefore, I did not expect that some of the focus group participants in the main phase of data collection will experience fatigue during the activity-based discussion.

3.4.4.5 Distribution of the focus group survey and the participants

The study recruitment campaign consisted of online and offline activities. The online campaign was less effective than the offline on-campus campaign. Invitation to participate in the study was published on the student portal, the place where students access their timetable, university email and library resources. During the three months of active recruiting, only one eligible student got in touch indicating that they learnt about the study through the student portal. The Student Union was contacted with the request to publish information about the study on their online platforms, but that request remained unanswered. Another department that was asked to help with sharing information about the study was the Student Engagement Office, which has a designated team in each of the five Colleges. Two Student Engagement Officers from two different Colleges agreed to include information about this study in their freshmen week information pack. However, there were no study participants who indicated that they learnt about the study from their Student Engagement Officers. The Student Career Services were approached with the request to publish information about the study on their online platforms. They agreed to publish information about this study on Twitter. Again, nobody indicated that they learnt about the study through the Career Services' Twitter.

It was surprising at first that the online recruitment campaign was not effective even though young people tend to be active online. Talking to students who volunteered their time has helped me to understand the situation better. Many students reported that they felt overwhelmed by the amount of new information they had been receiving from the University. Many struggled to access their university email and found it challenging to navigate their way around the campus. It is possible that while adjusting to a new environment, many of them narrowed down their focus to essential things related to their course, like completing the module registration, and did not pay much attention to anything else.

While it was clear that the online recruitment campaign did not deliver the expected results in terms of attracting potential participants, offline recruitment was much more effective. Leaflets

about the study were printed out and left in the high traffic areas such as the Student Union Lounge, Library Cafeteria, and Study Spaces across the campus. Conveniently, the University run plenty of welcome week activities outdoors. First-year students were given a freshmen welcome pack which, among other things, included a distinctive lanyard. The lanyard made first-year students very visible on campus. That brought the opportunity to apply “on-street” recruitment. First-year students were approached with information relating to the study and were asked about the degree course they are on. Students were offered a leaflet about the research project and were invited to get in touch if they would like to take part in the focus group. Some students were very keen to take part in the study so the practical arrangements for joining a focus group were discussed on the spot.

When students arrived at the agreed location, they were invited to read the information leaflet and were asked to complete the consent form. Following this, the students were asked to complete the pre-focus group survey and return it to me. The returned surveys were immediately checked for any missed questions. Since the survey included participants' names and their courses, I did not check whether I can read all answers because it was possible to contact the students later if need be.

In total, 51 respondents completed the pre-focus group survey. All of them indicated that they were willing to participate in the focus group. It was felt that the number of respondents is sufficient for the study looking at the experiences and attitudes of first-year students who had chosen to study at a Russell Group University. There was a balanced representation of different colleges as well as students from different backgrounds. As a part of the focus groups, the students were asked to take part in the activity exploring the respondents' beliefs about salaries of graduates from different courses. After completing the worksheet, the respondents were encouraged to discuss their answers and compare them with a table listing the actual graduate salaries. This table was based on the LEO data that included the median earnings of 2009/10 UK degree graduates five years after their graduation. These data were published in 2018, a year before the focus group participants started their degree course.

All three methods of recruiting participants - on street recruiting, the online campaign and printed leaflets - attracted first-year students who volunteered their time because of their desire to share their experiences of applying to university, whether positive or negative. As a researcher, I must be aware of the possible implications this sampling approach has on the collected data and analysis.

3.4.4.6 Data coding and analysis entry of pre-focus group survey

The coding of multiple-choice questions was straightforward. I did not need to add a new category for missing values or change the pre-planned coding because there were no missing items. Where students had to answer open-ended questions, their answers were assigned a number. For example, when asked about their nationality, some students wrote UK or EU. Others used a different format, for example, one student wrote Spanish, while another wrote English. For this question, I used two numbers and coded UK as 1 and EU as 2.

The data was saved in Stata 15.1 In addition to the survey questions, I added a variable 'first into HE' to see if there are any differences between the respondents who were first in their family to go to university and the others. Details of students who also agreed to participate in the focus group were also transferred in NVivo and linked to the transcripts of the focus groups discussions.

3.4.4.7 Data coding and analysis of focus groups

After transcription of the focus groups, I followed a six-phase procedure suggested by Braun and Clarke (2006), I carefully read the transcripts several times to familiarise myself with all aspects of the data. The first phase - immersive reading - involves a repeated reading of the content. During that process I actively searched for patterns and made notes, summarising my impressions of the data. Following that, I identified 132 interesting features of the data that become the basis for preliminary codes. Coding was done using NVivo. It was important to code as many patterns as possible. In the process, I coded different pieces of text, uncoded some of them and assigned multiple codes to the same chunks of text if that seemed to be appropriate. Braun and Clarke (2006) advise coding surrounding text to preserve the context, but it was felt excessive when coding is completed using NVivo. The software has an option to see the original context around the coded text. In the third phase, my focus shifted from individual codes to themes in the data. I looked at the initial codes trying to establish relationships between them: some could have been combined under the overarching theme; others became sub-themes. By the end of the third phase, the hierarchical coding system began to emerge, with a few codes not being integrated yet. The next phase was to review themes. I first read the content for each theme to see if the text formed a coherent summary of each theme. When I found pieces that had to be relocated, I coded them using a new code 'code again' and looked at where they could be moved. If I could not find a new place for the coded

text, I thought again about the overall coding systems and how I could change it to accommodate the 'code again' chunks of text. Once I found a solution the 'code again' code was removed. For the next phase - defining and naming themes - my focus zoomed back out at the overall theme structure. I looked at each large theme and the story around it; I decided what should be included in themes and what is not relevant for the current analysis. Appendix K presents the process of refining the thematic map. The final phase of the process is writing up a cohesive analysis of the data. It is presented in Chapter 6.

3.4.4.8 Limitations

The findings of the third phase of this project can be relevant to contexts that are similar to the one in which the focus groups were completed. First-year students who recently joined a Russell Group University were invited to share their views and perceptions. The views expressed by these students might not be generalisable to a broader HE context, but they might represent the views of students who started their degree at this university. Therefore, it would be problematic to generalise the results to a broader HE context. At the same time, the university is located within diverse communities surrounding the institution. I attempted to account for this by ensuring that the transcribed data is linked to the participants' background characteristics.

The original plan was to have two points of data collection. It was envisioned that during the summer term of 2018/19 first-year students who completed their summer exams will be invited to participate in the study and then, in the autumn term of 2019/20, new students will be approached. Permission to recruit potential participants during the summer term was not granted, which meant that this project had to focus on the views and perceptions of first-year students. In hindsight, the fact that the summer fieldwork was cancelled was beneficial for the study because having one wave of data collection preserved the homogeneity of the focus groups sample.

I facilitated the focus groups discussions at the Russell Group University. To shift the focus away from my connection to the University, it was explicitly mentioned to the participants that I completed my first degree in a different country and was interested in learning more about the views and perceptions of first-year students as someone who does not have a first-hand experience of applying for an undergraduate degree in the UK.

3.5 Ethical considerations

To safeguard the data, electronic copies of both primary and secondary datasets had to be stored securely on the University approved storage system. The password was updated regularly. The physical data such as consent forms and pre-focus group questionnaire were stored separately during the data collection phase. Any identifiable data, except for information on the consent form, was removed using a black marker. The participants' names were replaced with their pseudonyms. The questionnaire and focus group activity answers were saved in Stata soon after the last focus group.

During data collection for the third stage of the study, it was made clear to the first-year students that their participation is voluntary, and they have the right to withdraw from the project verbally during the focus group itself, or afterwards by contacting the researcher. This information was included in the information sheet, alongside other details of the study. After reading the information sheet, the participants were asked if they had any questions and then asked if they would like to participate in the study. Once the written consent was obtained from the participants, they were reminded that they can withdraw from the study without giving a reason.

The anonymity of the participants was be protected at all times, both during and after this study. Following receipt of the pre-focus group questionnaire, each participant was assigned a pseudonym. The focus group were audio-recorded with permission from the participants. All focus group notes referred to participants' pseudonyms rather than their names; names were replaced with pseudonyms in the focus group transcripts.

Issues around graduate earnings, career planning and value for money in the HE context are perceived to be sensitive by some people. At the beginning of each focus group, the participants were informed that there are no right or wrong ideas, and the experience of each research participant is valuable. To overcome any possible resistance, the questions focusing on sensitive topics such as graduate salaries were moved away from the beginning of the to allow the participants some time to settle in and feel more comfortable with other focus group participants. The warm-up discussion consisted of questions about the participants' degree courses and how their decisions to study at university were made.

In the following three chapters, Chapters 4, 5, and 6, I am going to report on the separate analyses that I did to answer my research questions. Chapter 4 examines graduate salary expectations of A-level students using data from 1,574 Year 12 students from 25 schools. The gender gap in the expected salaries was evaluated using the effect sizes as they are indicative of the magnitude of observed differences. I also used effect sizes to evaluate the extent to which A-level students' expected salaries are in line with the actual graduate salaries. To complete this analysis, I compared A-level students' expectations (sixth form questionnaire) with the actual salaries of young graduates (UK LFS). Prior to familiarising myself with the sixth form data, I thought it would be interesting to explore how students' beliefs vary based on other background characteristics such as family and ethnic backgrounds. The sixth form dataset does not include such information. I used OLS regressions to model the relationships between the A-level student salary expectations and their background characteristics. Chapter 5 examines A-level students' beliefs about the size of the graduate premium and their confidence in those beliefs. This chapter also uses data from the sixth form questionnaire. I analysed frequencies and percentages data for the variables of interest. I used logistic regression analysis to explore the relationship between the expected graduate premium and students' background characteristics. I also used logistic regression analysis to analyse the relationship between students' confidence in the predicted graduate premium and their background characteristics. Chapter 6 explores financial beliefs and perceptions of first-year students who attend a Russell Group University, using focus groups discussions that are centred around value for money, career aspirations and student finance. The supplementary pre-focus group questionnaire was used to contextualise students' responses.

CHAPTER 4: GRADUATE SALARY EXPECTATIONS OF A-LEVEL STUDENTS

4.1 Introduction

This chapter presents findings from the analysis of the graduate salary expectations of A-level students in 25 sixth form schools located in England. It aims to answer the following questions:

1. What are factors associated with predictions of the graduate salaries?
2. Are there gender differences in salary expectations?
3. How do salary expectations of A-level students relate to the actual graduate salaries?
4. Is there an association between the preferred degree subject area and the accuracy of graduate salary expectations?

The literature on the gender gap in salary expectations (Section 2.4.6) illustrated that undergraduate students in England and other countries tend to overestimate their future salaries. A study by Jerrim (2011) looked at pre-career salary expectations of undergraduate students in England but the variation in salary expectations based on respondents' gender was outside of the scope of his study. Davies and Qiu (2016) found that Year 11 students in England tend to overestimate graduate salaries. Again, that study was not focused on the differences in the salary expectations between male and female students. Evidence from other countries suggest that male participants tend to expect higher graduate salaries than their female counterparts.

This chapter used the sixth form questionnaire data to explore salary expectations of A-level students (see Section 3.4.2 for more details). What is unique about this dataset is that unlike others, it contains variables related to both expected average graduate salaries and salaries that respondents hope they will earn. In addition, data on degree subject preferences is available. Combined, these data provided an opportunity to examine A-level students' beliefs about the graduate labour market, where they see themselves in relation to the average graduate and how their subject preferences affect their perceptions of graduate salaries. The effect sizes are used to report the findings. The OLS method is used to model the relationships between the expected salaries and background variables. The data and discussion here also give an overview of the extent to which A-level student salary expectations coincide with the reality of the graduate labour market. This is done by comparing A-level students' salary expectations with the actual

salaries of UK graduates. Data on the actual graduate salaries is discussed in more detail in Section 3.4.3. This analysis is intended to provide an overview of how salary expectations vary among the A-level students and consider whether the surveyed students have realistic expectations.

This chapter consists of four main sections. First, an overview of the A-level student sample is given. It is important to describe the sample characteristics and suggest, based on the previous research, how they could be important for the upcoming results. I then explore the relationships between the expected salaries and students' characteristics. I focus on the gender differences in salary expectations that appear to be present at the subject level. Next, I introduce the actual salary data that are discussed in relation to the expected salaries. I also examine how the degree subject preferences relate to the expected salary. This is done to understand whether students have more accurate salary expectations for the subjects that they are more interested in.

4.2 A-level students' characteristics

This section describes the A-level student sample. Student characteristics are summarised in Table 4.1. This information is important for providing a context for the results of this study. Data on salary expectations are drawn from the sixth form questionnaire that was completed by Year 12 students attending 25 secondary schools across England. Data were collected in 2012/13, which means the findings might not be reflective of the most recent trends in A-level students' salary expectations. Despite this, a unique combination of questions around students' background and their financial beliefs makes the questionnaire worth studying.

In total, 1,574 students completed the sixth form questionnaire. Of these students, 988 attended a private school (62.8%). This is nine times greater, as a proportion, than the national figures for private school attendance in Britain, which is around 7% in the UK (Green *et al.*, 2018). The overall figure of 62.8% privately educated students may suggest that the majority of the surveyed students came from affluent families, and, by extension, they might have salary expectations that are higher than salary expectations of A-level students from other schools. In relation to the research questions, however, it is important to examine the reported salary expectations in a wider context of student background characteristics. A little more than half, 58.4% of the sample were male students. The participants were asked whether their parents had been to university. As discussed in the previous chapter, the responses to these questions were lost.

The participating students were also asked to reflect on their learning experiences. When asked to predict A-level grades, on average, students expected AAA (5.6, 5.7, 5.6 on a 7-point grading scale). In the UK, university applicants need three A-level qualifications or other equivalent qualifications. For the analysis, the expected A-level grades were combined into one variable to create a continuous scale. Students were asked to indicate whether (a) they feel successful in each subject; (b) think that teaching suited them well; (c) subject prepared them well for the kind of course they intend to do at university; (d) subject prepared them well for the type of university they intend to apply to (e) they would not have chosen if they had known more. Table 4.1 shows that in respect to three A-level subjects 40.7%, 63.3% and 60.4% of the participants agree or strongly agree that they were successful. As for the perceived suitability of teaching, these rates were 73.8%, 72.9%, and 70.0%, respectively. The majority of students (68.2%, 69.3%, and 59.9%) thought there was a good match between the A-level subjects and university courses they intended to do. Similar proportions of students (74.0%, 71.8%, and 63.7%) agreed that there was a good match between the A-level subjects and the type of university they wanted to study at. Relatively small proportions of A-level students, 8.9%, 10.8%, and 13.0%, reported that they would not have chosen their A-level subjects if they were better informed. Overall, high proportions of students seemed to be satisfied with teaching and their study programme.

Students were asked to estimate how the real value of debt changes in 5 years' time. A third of the students were able to provide the correct estimate. Answers to this question were used as a proxy for their financial literacy. The questionnaire did not provide a definition of the real value of debt, and it is possible that some of the surveyed students were not familiar with the term.

Responses to the question about the size of the graduate premium were converted into a binary variable with the expected graduate premium of at least 20% being coded as 1 and 0 otherwise. A large proportion of students, 43.5%, hoped that they would earn at least 20% more by the time they are 30 if they attend university. When prompted to indicate how confident they are in their predictions, almost a third of the surveyed students, or 28.9%, reported being either confident or very confident in their expectations.

Among the surveyed students, 87.4% planned to study for a degree and 8.2% thought they will probably study for a degree but later. The UCAS portal suggests, in 2014/15, the 18-year-old entry rate was 31.3%. The intended HE participation rate in this sixth form sample is almost

three times higher than the actual participation rate among 18-year-old applicants during the year when the surveyed students were expected to apply to university. The majority of students knew which subject they intend to study at university (88.4%) and where they want to study (88.1%). More than half of the respondents (61.8%) thought of applying to one of the Russell Group universities.

The surveyed students were asked about their use of online sources such as Unistats and Money Saving Expert. These questions were used as a proxy for how informed the survey participants were about the financial implication of studying for a degree. Almost half of the students (48.8%) considered information about the salaries of graduates from different degree courses on Unistats and around a third of the students (31.5%) considered information about university loans and repayments on the Money Saving Expert website.

Table 4.1 Background characteristics of the A-level student sample

	(%)
Male	58.4%
Private school	62.8%
Graduate mother	32.8%
Graduate father	35.9%
A-level Subject 1	Mean
	(SD)
Expected grade	5.6 (1.49)
Feel successful	40.7%
Teaching suited well	73.8%
Good match with course	68.2%
Good match with university	74.0%
Regrets the choice	8.9%
A-level Subject 2	Mean
	(SD)
Expected grade	5.7 (1.18)
Feel successful	63.3%
Teaching suited well	72.9%
Good match with course	69.3%
Good match with university	71.8%
Regrets the choice	10.8%
A-level Subject 3	Mean
	(SD)

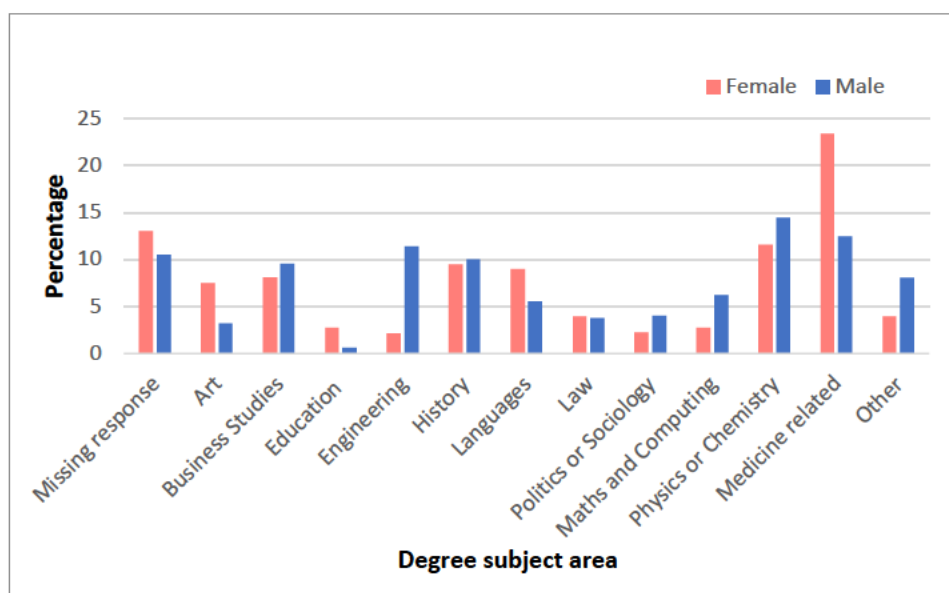
	Expected grade	5.6 (1.35)
	Feel successful	60.4%
	Teaching suited well	70.0%
	Good match with course	59.9%
	Good match with university	63.7%
	Regrets the choice	13.0%
Debt value calculated		33.3%
Money given today		21.7%
Graduate premium of at least 20%		43.5%
Confident/very confident in graduate premium		28.9%
Definitely study for a degree		87.4%
Repay student loans in full		11.9%
First choice course		88.4%
First choice university		88.1%
Applying to Russell Group		61.8%
Read about salaries		48.8%
Read about student finance		31.5%
<i>N</i> =1,574		

As discussed in the previous chapter, the sixth form questionnaire included the degree subject classification that does not match with any of the widely used subject classifications. This adds some difficulty to the coding of the courses that the surveyed students intend to apply for. In total, 231 responses (14.7% of the sample) could not fit into the questionnaire's subject classification.

Figure 4.1 shows the percentages of students planning to study each subject at degree level. A simple comparison between female and male students allows us to explore whether there were any substantial differences between these groups of students in terms of the degree course preferences. The Medicine related area was the most popular choice among female students (23.4%), while Physics or Chemistry (14.5%) was the most popular choice among male students. Both groups of students seemed to be equally interested in Business Studies, History and Law. There were some subject areas where preferences were widely different. For example, 7.5% of female students planned to do a degree in Art, whereas only 3.3% of male students intended to do so. Similarly, 23.4% of female students wanted to apply for a Medicine related degree, while only 12.5% of male students thought of a career in Medicine. The opposite trend was observed in Engineering. While one in fifty female students (2.1%) wanted to study for a degree in Engineering, nearly one in ten male students (11.4%) planned to do so.

Since some degree courses fall outside the sixth form survey degree classification, they are described as Other in Figure 4.1 The Other category includes Combined degree courses, along with Biological Sciences, Veterinary Sciences, Agriculture, and related, Architecture, Building and Planning, and Mass Communications and Documentation.

Figure 4.1 Percentages of A-level students who reported their preferred degree (N=1,392)



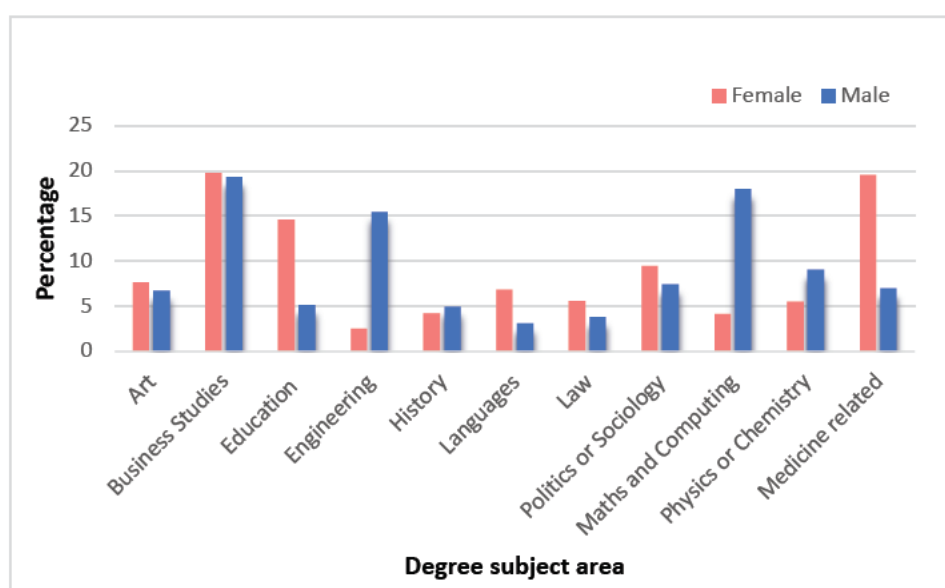
Students were also asked about their expectations of graduate salaries across 11 subject areas. These salary expectations were measured as the salary average, lower quartile and upper quartile values for each subject area. The students were also asked to indicate the expectations of their salary for each subject if they were to achieve a degree in each subject. This set of questions was preceded by a statement informing the participants that the average university graduate earns roughly £30,000 by the time they are 30.

To answer research questions 3 and 4, salary expectations must be compared with actual graduate salaries. Data on graduate earnings were drawn from the UK LFS. The LFS provides quarterly estimates of key labour market measures such as employment, unemployment, hours of work, occupation, level of education and wages for the UK resident population. Salary estimates of people who have a first degree were aggregated over three years from January 2009 to December 2011. The start date was chosen to provide the most recent estimates for which data were available at the time the sixth form questionnaire was conducted. Data for 2012 were excluded from this study because of changes in the LFS subject degree classification. I applied several sample selection procedures to ensure that the expected (sixth

form questionnaire) and actual (LFS) salary data are focused on comparable groups. The LFS does not gather information about the type of school, or university, that people attended, so it was not possible to account for these background factors in the sample selection.

The LFS survey sample includes 3,632 young graduates. I analysed the composition of the LFS sample with respect to the gender divide in degree subjects. The results are summarised in Figure 4.2. The figure shows that some subjects have similar proportions of both genders, while others have higher proportions of male or female graduates. For example, 14.6% of female graduates hold a degree in Education. This proportion is nearly three times as high as the proportion of male graduates with a degree in Education (5.2%). For comparison, the difference in the percentages of female and male students planning to do a degree in Education was four-fold (2.8% vs. 0.7%). This means that the gender composition in the LFS sample was more balanced than it was in the A-level student sample in relation to a degree in Education. Another subject area that stands out is Maths and Computing, with 4.2% of female graduates and 18% of male graduates with a degree in this subject area. This means the proportion of men is nearly three times as high as the proportion of women with a degree in Maths and Computing. In contrast, 2.8% of female students and 6.2% of male students wanted to do a degree in Maths and Computing. One more subject area that is worth drawing attention to is Medicine related, with 19.5% of female graduates and 7% of male graduates holding in this subject area. This means there were almost three times more women than men among graduates with Medical degrees. In contrast, 23.4% of female students indicated that they want to study a degree in Medicine related, and 12.5% of male students did the same, meaning the actual gender divide was less balanced compared with the gender divide in the student's subject preferences for Medicine and related subjects.

Figure 4.2 Percentages of young graduates holding a degree in one of the 11 subjects (N=3,632)



This chapter reports the results of the analysis, addressing each question in turn. First, I run a series of regressions to explore factors associated with students' salary expectations. Then, I examine students' expectations about their graduate salaries and salaries of graduates from different courses, with a particular interest in the gender gap. Next, I compare the beliefs about one's graduate salary and salaries for the average graduate with the actual salaries that UK graduates earn. Then, I restrict the sixth form sample to the students who reported a subject area that they would like to study at degree level and compare their salary expectations with actual graduate salaries. This is done to understand how the salary expectations relate to the reality of the graduate job market when respondents asked about the subject areas that they are interested in.

4.3 Factors associated with predictions of the graduate salaries

The analysis here focuses on the relationships between the predicted graduate salaries and the background characteristics of A-level students. The dependent variable in the first part of this section is the logarithm of the average expected salary reported in the sixth form questionnaire. In the second part of this section, the dependent variable is the logarithm of one's own expected salary. Drawing on the theoretical perspectives that informed this research (consumer choice and human capital theory), the following variables were considered as predictors in regression models:

(1) Background predictors: student's gender; Previous research suggested that the gender pay gap can be observed in actual pay between women and men (Chevalier, 2007; Blau and Kahn, 2017), but also can be found in salary expectations that women and men hold (Taylor, 2007; Hogue, Dubois and Fox-Cardamone, 2010).

(2) Academic predictors: predicted A-level grades; a type of school that the respondent attends (state/private), and a type of university at which they want to study (Russell Group/ non-Russell Group). The predicted grades variable was included here because those who hold high educational aspirations might also have high career aspirations or think that studying for a degree is a good investment decision (Maringe, 2006). Macmillan, Tyler and Vignoles (2015) found that 40% of privately educated graduates enter a high-status occupation compared to 28% of graduates who attended a state school. The differences in salary expectations between students attending private schools and those attending state schools may exist before they enter the graduate labour market. Previous studies suggested that those who graduated from Russell Group universities have an advantage in the UK graduate labour market compared to those who graduated from other universities (Hussain, McNally and Telhaj, 2009; Sutton Trust, 2019).

(3) Financial literacy predictors: confidence in the predicted graduate premium (confident or very confident/ otherwise); calculated the real value of debt (correct answer/ otherwise); students expect to repay their student loan in full (yes/not yes). These correlates were included under the assumption that students with higher levels of financial literacy might hold beliefs about graduate salaries that are more in line with how much graduates earn. Those who expected to repay their student loan in full should be expecting to earn more than the average graduate. Ercolani *et al.* (2015) found that medical graduates on an average salary are unlikely to repay their student loan debt in full. It is important to note that the confidence in the predicted graduate premium can be rational, based on students' knowledge of the graduate labour market, or irrational, associated with optimism. It is impossible to differentiate between the two using data from the sixth form dataset.

(4) Online information predictors: whether read about the salaries of graduates from different courses on Unistats (yes/ not yes); whether read about university loans and repayments on Money Saving Expert (yes/ not yes). These correlates were included under the assumption that those who considered information about graduate salaries on Unistats should be better informed about the state of the graduate labour market. Those who read about the student loans

and repayments on Money Saving Expert could expect higher graduate salaries because they might assume that student finance was designed so that graduates tend to pay off their debt.

First, the logarithm of average expected salary was the dependent variable. In Stata 15, the forward stepwise model selection was used, meaning the software started with an empty model (constant only) and then variables were added one by one based on whether they make any meaningful difference to the model. The forward selection was completed, adding terms with significance values greater than 90% (p -values <0.1). There is some subjectivity in how strict the model can be when it comes to including new variables. Results are presented in Table 4.2. Standard error, t and p are not reported because this is a convenience sample. The first model includes only one variable, 'calculated debt value', which predicted around 0.7% of the variation in the average expected salaries. The second model included two variables and adding 'read about student finance' increased the predicted variation to 1.4%. Inserting a dummy variable for 'being a male' increased the predicted variation by 0.3%. Overall, the observable characteristics offer very little insight into the way the surveyed students thought about the average graduate salaries. In Model 3, 'calculated debt value' was associated with a reduction of the average expected graduate salaries by about £604. Reading about student loans and repayments was associated with an increase of £702 in the average expected salaries. Finally, male students, on average, expected a lower average salary than their female counterparts.

Table 4.2 Regression of Log average expected salaries against A-level student characteristics (forward stepwise selection)

	Model 1	Model 2	Model 3
Calculated real value of debt	-765.75	-733.52	-604.20
Read about student finance		714.94	702.37
Male			-467.86
Constant	35967.86	35731.36	35965.66
R^2	0.007	0.014	0.016
Increase in R^2	0.007	0.006	0.003
$N=1,574$			

In addition to the stepwise method, I selected variables manually. The control variables were added, step by step, in four blocks. The results are presented in Table 4.3. Block 1 includes of one variable - 'being a male'. It increased the explained variation to around 0.6%. Block 2 consists of the academic predictors. When adding these variables one by one to Model 1, I

checked how the predicted variation changes. Adding the 'predicted A-level grades' increased the explained variation by 0.08%. When the 'private school' variable was added, the predicted variation increased by 0.03%. Adding 'applying to a Russell Group university' made little difference, so I excluded the academic predictors from the analysis because they do not make much of the difference. The same steps were repeated for variables for Blocks 3 and 4.

Table 4.3. Regression of Log average expected salaries against A-level student characteristics (manual selection)

	Model 1	Model 2	Model 3
Male	-646.19	-485.88	-467.86
Calculated real value of debt		-630.86	-604.20
Read about student finance			702.37
Constant	36090.14	36206.86	35965.66
R^2	0.006	0.010	0.016
Increase in R^2	0.006	0.005	0.006
$N=1574$			

Model 1 includes the explanatory dummy variable for 'being male'. There is a negative association between this explanatory variable and the expected average salary. Since the question about the average graduate salary was formulated in such a manner so that the average graduate does not have a gender, it is possible to assume that the male respondents assigned a lower value to the average salary because they expected that they will be earning more than the average graduate. When interpreting the question this way, the male respondents would have naturally given a lower estimate for the average salary than their female peers. In addition to variable from Model 1, Model 2 includes the variable indicating whether the respondent gave the correct answer to the question about the real value of debt. Those students who were able to calculate the real value of debt estimated the average graduate salary which was, on average, £631 lower. In other words, their salary expectations were more in line with the salaries of graduates from the LFS dataset. In Model 3, 'reading about student loans and repayment' was added. On average, students who read about student finance on Money Saving Expert expected average graduate salary to be £702 higher compared with those who did not read this information.

In the second part of this section, the dependent variable was students' own expected salary. As in the first part of this section, the forward stepwise method was applied, adding terms with

significance values greater than 90% (p -values <0.1). Results are presented in Table 4.4. Standard error, t and p are not reported again because we are working with a convenience sample.

Table 4.4 Regression of Log A-level students' expected salaries against their characteristics (forward stepwise selection)

	Model 1	Model 2	Model 3
Confident in graduate premium	3028.05	2697.05	2525.08
Predicted A-level grades		399.94	364.86
Male			964.96
Constant	34049.80	27123.08	27224.90
R^2	0.032	0.045	0.048
Increase in R^2	0.032	0.013	0.004
$N=1,574$			

The variable representing whether a student is confident in the estimated graduate premium was added first. Model 1 explained around 3.2% of the variation in expected salaries, and those who are confident in the graduate premium expected a higher graduate salary (£3,028). Those students who are confident in their graduate salaries might believe that studying for a degree is a good investment, and, consequently, they expect higher salaries. Perhaps the surveyed students were more informed about the situation in the graduate labour market and, therefore, expected high returns, or they were optimistic about their future salaries without having considered any information about graduate earnings. In Model 2, with the addition of predicted A-level grades, the predicted variation rose to around 4.5%. The A-level grades were positively associated with the expected salary. This means that a one-point increase in predicted A-level grade was associated with an increase of £400 in the expected salary. In Model 3, the effect of being male is small. The predicted variation reached only around 4.8%. On average, male students expected a graduate salary that was £965 higher than what their female students predicted they would be earning.

In addition to the stepwise method, I also selected variables manually. Starting with an empty model, I added and removed variables one by one, looking at how they affect the predicted variation. The 'being a male' variable was added first. That increased the predicted variation to 1.2%. Then I moved onto Block 2. As expected, adding the predicted A-level grades increased the predicted variation by 1.5%. Inserting the 'private school' variable made little difference,

so it was removed. I repeated the same steps with the variable indicating whether the student intends to apply to a Russell Group university. The result was positive but negligible (+0.02%). In the end, three variables were included in Model 3, which predicts 4.8% of the variation in the expected graduate salary.

Table 4.5 Regression of Log A-level students' expected salaries against their characteristics (manual selection)

	Model 1	Model 2	Model 3
Male	1734.81	1350.20	964.96
Predicted A-level grades		432.87	364.86
Confident in graduate premium			2525.08
Constant	33913.05	26536.99	27224.90
R^2	0.012	0.028	0.048
Increase in R^2	0.012	0.015	0.021
$N=1,574$			

4.4 The gender differences in salary expectations

This section presents the findings in relation to the gender differences in salary expectations. A-level students were asked to estimate the average graduate salaries for 11 subject areas. These expected average salaries will be compared with the average actual salaries of UK graduates later in this chapter. Gender-specific comparisons of expected average salaries were not possible because the question was written in gender-neutral language. Despite this, I was interested to know whether male and female A-level students hold different beliefs about the average graduate salaries. The effect size using Cohen's d for each degree subject was calculated to determine whether any sizeable differences between the two groups exist in relation to the expected average salaries. The results are presented in Table 4.6.

Table 4.6 Comparison of the average expected salaries predicted by A-level students, by gender

Subject area	Male (N=920)		Female (N=654)		Difference	Cohen's d
	Mean (£000)	SD*	Mean (£000)	SD*		

Art	24.98	5.63	26.32	5.81	-1.34	0.23
Business Studies	33.97	6.80	35.26	6.38	-1.30	0.19
Education	29.88	5.76	30.96	5.86	-1.08	0.18
Engineering	39.38	6.92	39.40	7.32	-0.02	0
History	31.44	6.52	31.88	6.60	-0.45	0.06
Languages	31.61	6.95	33.31	7.03	-1.69	0.24
Law	43.09	8.29	42.96	7.19	0.14	-0.01
Politics or Sociology	34.68	7.75	35.35	7.59	-0.67	0.08
Maths and Computing	38.96	8.35	39.10	6.96	-0.14	0.01
Physics or Chemistry	37.96	7.82	38.18	7.35	-0.22	0.02
Medicine related	43.94	8.57	44.28	7.95	-0.33	0.04

* SD of the complete cases is used for computing effect sizes

Across all subjects, except Engineering, gender differences in the expected average graduate salaries were found. The differences were relatively small but consistent - female students expected higher average graduate salaries compared to their male counterparts. Observed differences in the expected average salaries were larger for subjects such as Art, Business Studies, Education, and Languages. This is important for the further results that are discussed in this chapter.

Next, I focused on how much, on average, female and male A-level students thought they would be paid if they were to achieve a degree in each of 11 subjects. Table 4.7 reports the estimated effect sizes for the comparison of one's own expected salary by gender. Overall, female students expected to be earning 6.7% less than what male students hoped to be earning. The subject-level analysis revealed that female and male students expected to be earning similar amounts if they were to study Art, Education, History, or Languages at degree level, but female students thought they will be earning less than their male counterparts if they did a degree in any other degree subject.

There was variation from subject to subject, with effect size remaining relatively small (d ranging from -0.05 to -0.36). Engineering, Maths and Computing, and Physics or Chemistry were the top three subject areas where the large gender gaps in students' expected salaries were observed. For instance, male students thought that if they were to study for a degree in Engineering, they would be earning around £39,690, while female students expected that they would be earning around £34,770 if they did a degree in the same subject. This means that female students expected that they will be paid about 12.4% less than their male counterparts

by the time they are 30 ($d = -0.36$). Similarly, differences favouring male students were observed in expected salaries for degrees in Maths and Computing (£39,960 vs. £34,980, $d = -0.34$) and Physics and Chemistry (£37,760 vs. £33,760, $d = -0.28$). The gender gap in expected salaries for Maths and Computing was 12.5%, while for Physics and Chemistry it was 10.6%. Overall, the gender gap was consistently larger for STEM subjects. In subject areas with traditionally high proportions of female students, including Politics and Sociology and Medicine related, female students still expected they will be earning less than their male counterparts did. These results are consistent with some past research showing that young women have lower salary expectations than their male peers, both for entry-level and top-level positions (Schweitzer *et al.*, 2014; Hogue, Dubois and Fox-Cardamone, 2010; Reuben, Wiswall and Zafar, 2015).

Table 4.7 Comparison of A-level students' expected salaries, by gender

Subject area	Male (N=920)		Female (N=654)		Difference	Cohen's d
	Mean	SD*	Mean	SD*		
	(£000)		(£000)			
Art	23.37	15.70	22.61	9.61	0.76	-0.05
Business Studies	36.95	19.43	33.19	11.70	3.76	-0.22
Education	30.88	9.52	30.79	8.41	0.09	-0.01
Engineering	39.69	14.05	34.77	12.88	4.92	-0.36
History	30.44	11.37	29.33	9.81	1.12	-0.1
Languages	29.27	13.32	30.68	13.82	-1.41	0.1
Law	46.54	23.22	41.59	17.39	4.95	-0.23
Politics and Sociology	34.93	17.23	32.54	12.04	2.39	-0.15
Maths and Computing	39.96	15.36	34.98	13.46	4.98	-0.34
Physics or Chemistry	37.76	16.11	33.76	11.22	4.00	-0.28
Medicine related	45.45	20.84	41.91	16.53	3.54	-0.18

* SD of the complete cases is used for computing effect sizes

Interestingly, both female and male students expected that they will be earning similar amounts if they were to study a degree in Art, Education, History, or Languages. Perhaps under the right educational environment, the gender gap in pre-career salaries can be eliminated. A more probable explanation is connected to the expected average salaries. As Table 4.6 demonstrated, male students expected lower average graduate salaries for these subjects, so when they were

asked to estimate their own likely salaries for the same subjects, they might have thought that studying for a degree in one of these subjects will not lead to a financially rewarding career.

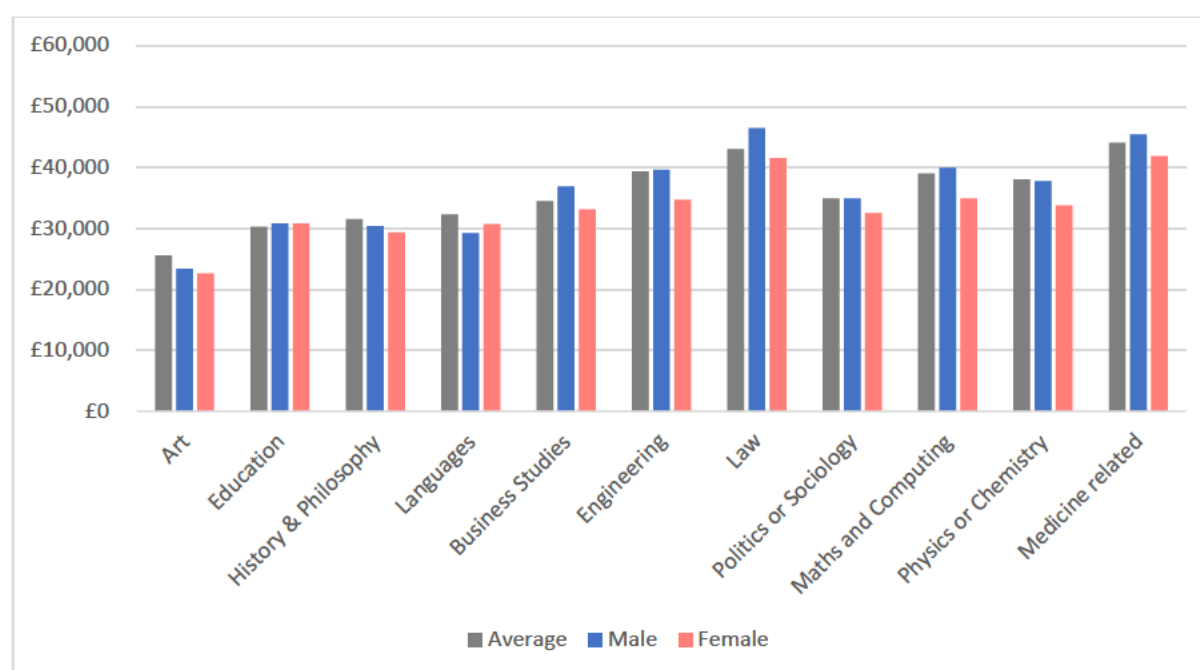
Next, I examined how students' beliefs about their salaries relate to the expected average salaries in each of 11 subjects. Results are provided in Figure 4.3. There were sizeable gender differences in how beliefs about students' graduate salaries relate to the expected average salaries in most subject areas. Both male and female students believed that if they were to study Education at degree level, they would be earning slightly more than the average graduate. As for Art, History and Physics or Chemistry, both female and male students expected salaries that were below the expected average salaries, and, at the same time, male students expected to be paid more than female students thought they would be paid. For example, when asked about their salary expectations for a degree in Arts, male students predicted that they would be earning around £23,300, which was 8.5% ($d = +0.20$) less than the predicted average salary for this subject. Female students predicted that if they were to study a degree in Art, they would be paid around £22,500, which was 11.5% ($d = +0.41$) less than the predicted average salary for this subject. For Languages, both groups expected salaries that were lower than the predicted average salary for this subject (£32,310): female students thought that would be earning around £30,680, while male students thought they would be earning around £29,270.

Male students appeared to believe that their earnings will be higher than the average ones if they studied Business Studies ($d = -0.18$) or Law ($d = -0.22$). In other words, they expected £2,450 (+7.1%) and £3,500 (+8.1%) more than the average salaries for the respective subjects. In contrast, female students tended to expect that they would be earning below the average if they studied Business Studies ($d = +0.15$) or Law ($d = +0.12$) at degree level. In other words, they expected £1,320 (-3.8%) and £1,440 (-3.4%) less than the average expected salaries for the respective subjects. In subject areas such as Engineering, Maths and Computing, and Medicine related, male students also thought that they would be earning above the average, though the differences between their expected salaries and the expected average graduate salaries were not as large as for degrees in Business Studies or Law.

There was considerable variability in beliefs that female students held about their salary and the average salary (ranging from $d = -0.06$ to $d = +0.50$), with STEM subjects having a wider gap between the expected average and students' expected salaries. Some of the largest differences between the two were found for Engineering ($d = +0.50$), Physics and Chemistry ($d = +0.48$), and Maths & Computing ($d = +0.41$). Perhaps, the most interesting finding is that

female students tended to expect salaries that were lower than the expected average salaries for subjects that are not regarded as male-dominated, namely Art ($d = +0.41$), History ($d = +0.30$), or Politics or Sociology ($d = +0.20$). For example, female respondents predicted they will be earning 11.5% less than the average graduate if they studied for a degree in Art. This is problematic because analysis here showed that, on average, female students expected higher average graduate salaries compared to their male peers. This means that female students in this sample tended to think that if they went to university, they would be earning less than the average graduate in all scenarios except if they graduated with a degree in Education.

Figure 4.3 Comparison of A-level students' expected salaries with the expected average salaries



To explore the relationships between one's expected salaries and the average expected salaries further, I repeated the analysis that was summarised in Figure 4.3, focusing on A-level students who reported which subject they plan to study at university. Results are provided in Figure 4.4. Overall, the gender gap in salary expectations among students who wanted to study one of the 11 subjects was larger, 10.4%, compared to the gender gap of 6.7% in the general scenario, where all responses, regardless students' subject preferences were compared. The gender gap in salary expectations among students who wanted to do one of the 11 degrees at university varied considerably from subject to subject, with Cohen's d ranging from -0.84 to $+0.50$. For comparison, when all students reported how much they expected to earn in each of 11 subjects, the gender gap in salary expectations was smaller, with Cohen's d ranging from -0.36 to $+0.10$.

In all subject areas, except Art and Languages, male students thought that they would be earning more than what the female students thought they would. For example, male students who planned to study Art at university expected they would be earning around £21,660 whereas their female counterparts expected around £26,090. That is the difference of 20.4% ($d=+0.50$). In addition, Art is the only subject where male students thought that they would be paid less than the average graduate.

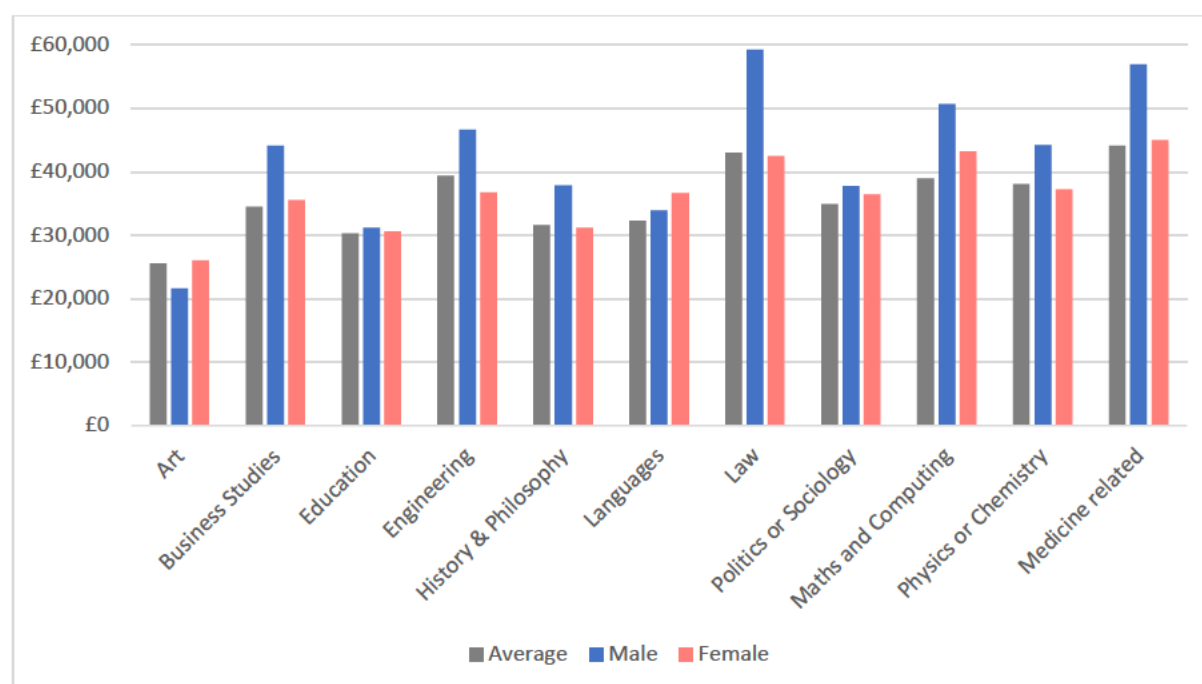
The gender gap in salary expectations was narrow among students who planned to study a degree in Education ($d = -0.10$) or Politics or Sociology ($d = -0.09$). Both groups of students predicted that if they studied one of these subjects, they would be earning more than the average graduate. As for Education, male students expected they would be earning around £31,180 whereas female students expected they would be earning around £30,640. That is the difference of 1.7%.

The biggest gender gap in expected salaries was observed among students who plan to do a Law degree ($d = -0.84$). The effect size can be interpreted as large. Male students expected they would be earning £59,230, while female students thought of around £42,470, which is 28.3% less than what their male counterparts hoped they will be earning. In addition, female students predicted that their salaries would be slightly lower, -1.3%, than the expected average salary of Law graduates, whereas males aimed for a salary that was 37.6% higher (+£16,190) than the expected average salary for this subject. The second biggest gender gap in salary expectations was observed among students who planned to study Engineering ($d = -0.70$). While male students thought they would be earning around £46,670, female students predicted they would be earning around £36,760, which is 21.2% less than their male counterparts predicted. Again, female students predicted that their salaries would be 6.6% lower than the expected average salary for this subject.

The Medicine related subject area stood out in terms of the observed gender pay gap. The effect size was -0.51. Male students who were interested in studying for a medical degree expected that they would be earning around £56,960, whereas their female counterparts predicted that they would be paid £45,070. Compared to the expected average salary for Medicine related, female students thought that they would be earning 2.3% more than the average graduate, while male students believed they will be paid 29.2% more. These results are particularly interesting in the UK context where women comprise the majority of students in subjects related to Medicine, Education, Veterinary science and Languages (Leathwood and Read, 2008). The

observed difference in the expected salaries among students who planned to study Medicine might be due to different careers that these respondents had in mind for themselves. Unfortunately, the sixth form questionnaire did not collect any information about A-level students' career aspirations.

Figure 4.4 Comparison of A-level students' expected salaries with the expected average salaries, the preferred course only



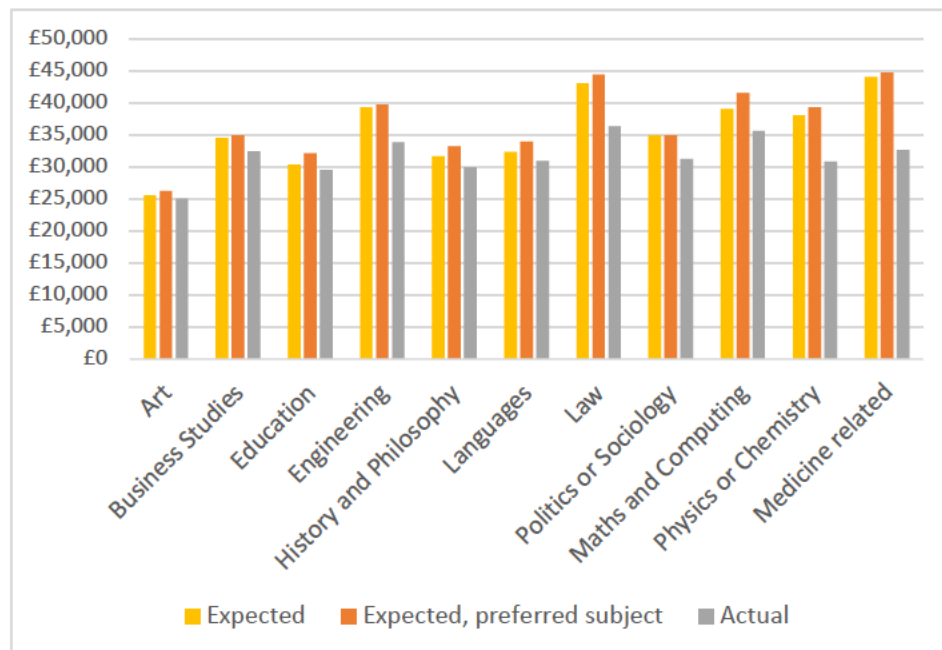
4.5 Students' expectations about earnings and actual graduate salaries

While the regression analysis in Section 4.3 provides useful information about patterns in expected salaries, it does not explore how the salary expectations relate to the actual graduate salaries. This section was needed to fill this gap. I first explored how the expected average salaries relate to the average actual graduate salaries. It was not possible to compare the expected average graduate salary for females and males separately because the sixth form questionnaire did not collect any gender-disaggregated data for the question about the average earnings. Then I compared the salary that the surveyed students hoped they would be earning by the time they are 30 with actual graduate salaries of people who are about the same age. In addition to the question about their own expected salaries, A-level students were asked which degree course they intend to apply for. This allowed the comparison of the expected salaries with actual ones, selecting A-level students who were interested in one of the subject areas.

First, the expected average salaries were compared with actual graduate salaries. Figure 4.5 presents the results. The first bar represents salary expectations of all surveyed A-level students, while the second bar represents only those who planned to do a degree that falls into the respective subject area. The third bar represents the actual self-reported salaries of UK graduates. Overall, the expected average salaries were 12.3% higher than the average actual salaries. When the salary expectations of students that planned to major in one of the subject areas were compared with actual salaries of similar graduates, the gap increased to 15.9%.

In subject areas such as Art, Business Studies, Education, History, and Languages the average expected salaries were slightly higher than the actual average salaries, with Cohen d ranging from +0.07 to +0.23. Among students interested in studying one of these subjects at university the effect size was in a range of +0.13 to +0.32. The difference between the expected and actual graduate salaries was the largest for the Medicine related subject area. On average, A-level students predicted the average salary that was 35.1% ($d = +1.20$) higher than the actual average salary of someone who holds a degree in Medicine. The significant differences were observed between the expected and actual salaries in Engineering (+16.2%, $d = +0.69$), Law (+18.5%, $d = +0.73$), and Physics or Chemistry (+23.5%, $d = +0.85$). When comparing the salary expectation of those students who planned to study one of these subjects at degree level with actual graduate earnings, the observed differences were even greater, reaching 37.0% for Medicine related, 27.5% for Physics or Chemistry, 17.2% for Engineering, and 22.3% for Law. Thus, the subject-level analysis showed that the surveyed A-level students consistently overestimated the average graduate salary. They tended to be more optimistic about the size of the average salary if they planned to study that subject at degree level.

Figure 4.5 Comparison of the average expected salaries predicted by A-level students with actual average salaries of young graduates



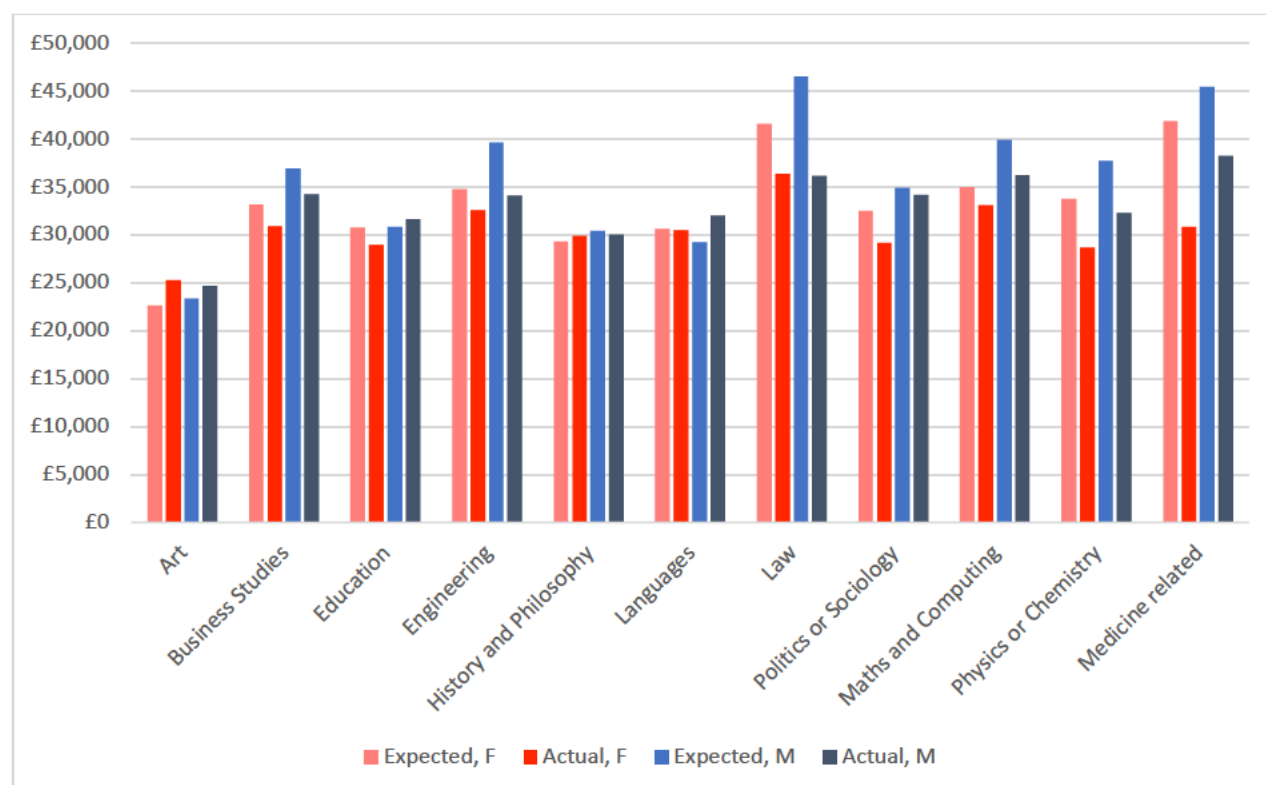
Following this, I compared the salaries that A-level students hoped they would be earning if they studied each subject at degree level with the actual graduate salaries. Figure 4.6 gives an overview of the results. Overall, there was considerable variation across the subjects and genders. The top-level analysis showed that male students expected salaries that were 7.8% higher than the average salaries of similar male graduates. Similarly, female students expected salaries that were 8.5% higher than the average salaries of similar male graduates. There is substantial variation in expected salaries across subjects. Female students expected salaries that were lower than the actual salaries of female graduates for subjects such as Art and History. For example, female students thought they would be earning around £22,610 by the time they are 30 if they studied Art at university. That was 10.8% ($d = -0.28$) less than what similar female graduates were paid. Similarly, male students also expected salaries that were 5.4% ($d = -0.08$) lower than the actual wages of similar male graduates. In addition to Art, male students expected salaries that were lower than the actual salaries of male graduates for subjects such as Education and Languages.

Female students thought that if they studied Languages at university, they would be earning £30,680, which was very close to the actual average salary of £30,510 for female graduates with a degree in Languages. Male students expected they would be earning around £34,930 if they did a degree in Politics or Sociology, which was close to the actual average salaries of

similar graduates, £34,180 ($d = +0.04$). History ($d = +0.03$) was another subject where the expected salaries of male students were similar to actual average ones. Although, for the subjects discussed in this paragraph, both groups of students predicted salaries that were more or less in line with actual earnings of UK graduates, this pattern was not universal.

Apart from Art, History and Language, female students expected graduate salaries that were higher than the average earnings of female graduates in respective subject areas. For example, female students thought that if they did a degree in Physics or Chemistry, they would be earning £33,760, which was 17.5% higher ($d = +0.44$) than the average salary of £28,720 among women who hold a degree in Physics or Chemistry. Among women, the largest gap between the expected and actual salaries was observed in the Medicine related subject area. Female students' expected salaries exceeded the actual salaries of similar graduates by 35.8% ($d = +0.74$). The findings should be interpreted with caution because Medicine related is a relatively broad area, and it is unknown what kind of jobs the surveyed female students had in mind when they provided these estimates.

Figure 4.6 Comparison of A-level students' expected salaries predicted with actual average salaries



Interestingly, when male students were asked to estimate their salary for each degree subject, their predictions were more or less in line with the actual salaries that men earn for several

subjects, including Art, Education, History, and Politics or Sociology. In general, the observed differences were not as large as the differences observed between the expected and actual salaries of women. For example, male students expected that if they did a degree in Engineering, they would be earning around £39,700, while the graduate men with a degree in Engineering reported being paid around £34,100. That means male students' expected salaries exceeded the actual salaries of similar graduates by 16.4% ($d = +0.41$). Male students predicted that if they did a degree in Law, they would be earning around £46,500, while men holding a degree in Law, on average, earned around £36,200. That is a difference of around 28.6% ($d = +0.45$). In the case of Physics and Chemistry, male students overestimated their salaries by 16.9% compared with the actual salaries of similar male graduates. This expectations gap is slightly narrower than the gap between female students' expected salaries and actual salaries of women in Physics and Chemistry. That was 23.4% vs. 16.9%. Both female and male students overestimated their graduate salaries for the Medicine related subject area, but the difference between male students' expected salaries and the actual salaries of male graduates was only 18.7%, almost half of the expectations gap among women (35.2%).

Next, I limited the expected salaries to subjects that the surveyed students intended to study at university and compared these with the actual salaries of UK graduates. Figure 4.7 presents the results. Across all subject areas, female students tended to expect that they would be earning more than what graduate women earned in the respective subject areas. Overall, female students expected salaries that were 19.0% higher than the average salaries of similar female graduates. The effect size was in the range of +0.08 to +1.19. Female students' expected salaries were more in line with the actual graduate salaries of graduate women in subject areas such as Art ($d = +0.08$) and History ($d = +0.13$).

Interestingly, when all female students reported how much they think they would earn if they did a degree in Languages, their expected salaries were in line with the actual salaries of women who have a degree in Languages. However, a new pattern emerged when the subsample of female students was narrowed down to those who planned to do a degree in Languages. Female students' expected salaries exceeded the actual average salaries of female graduates by 20.2% ($d = +0.38$).

Female students intending to apply for STEM subjects tended to expect salaries that exceeded the actual average salaries of women in STEM. A small number of female students who planned to study Maths and Computing expected salaries that exceeded the actual average

salaries of female graduates by 30.7% ($d = +0.90$), whereas, when all female students were asked about their expected salaries for the same degree subject, they reported salaries that exceeded the actual salaries of female graduates by only 5.7% ($d = +0.14$). Similarly, female students that planned to study Physics or Chemistry thought that they will be earning around £37,240, which was 29.6% ($d = +0.82$) higher than the actual salaries of similar female graduates. When all female students reported the expected salary for Physics or Chemistry, their expected salaries were 17.5% ($d = +0.44$) higher than the actual salaries of similar female graduates.

Finally, those young women who planned to do a degree in a Medicine related subject expected that they would be paid considerably more than what women holding a degree in Medicine reported they earn. The expected salaries exceeded the actual salaries of female graduates by a staggering 46.1% ($d = +1.19$). For comparison, when all female students were asked to estimate their likely earnings in this subject area, they expected to earn, on average, 35.8% ($d = +0.74$) more than similar female graduates. That means that the gap between the expected and actual salaries increased by one third in the choice-sensitive scenario. Without information about female students' career aspirations, these findings should be interpreted with caution. Nevertheless, it seems fair to suggest that female students were optimistic about their salaries.

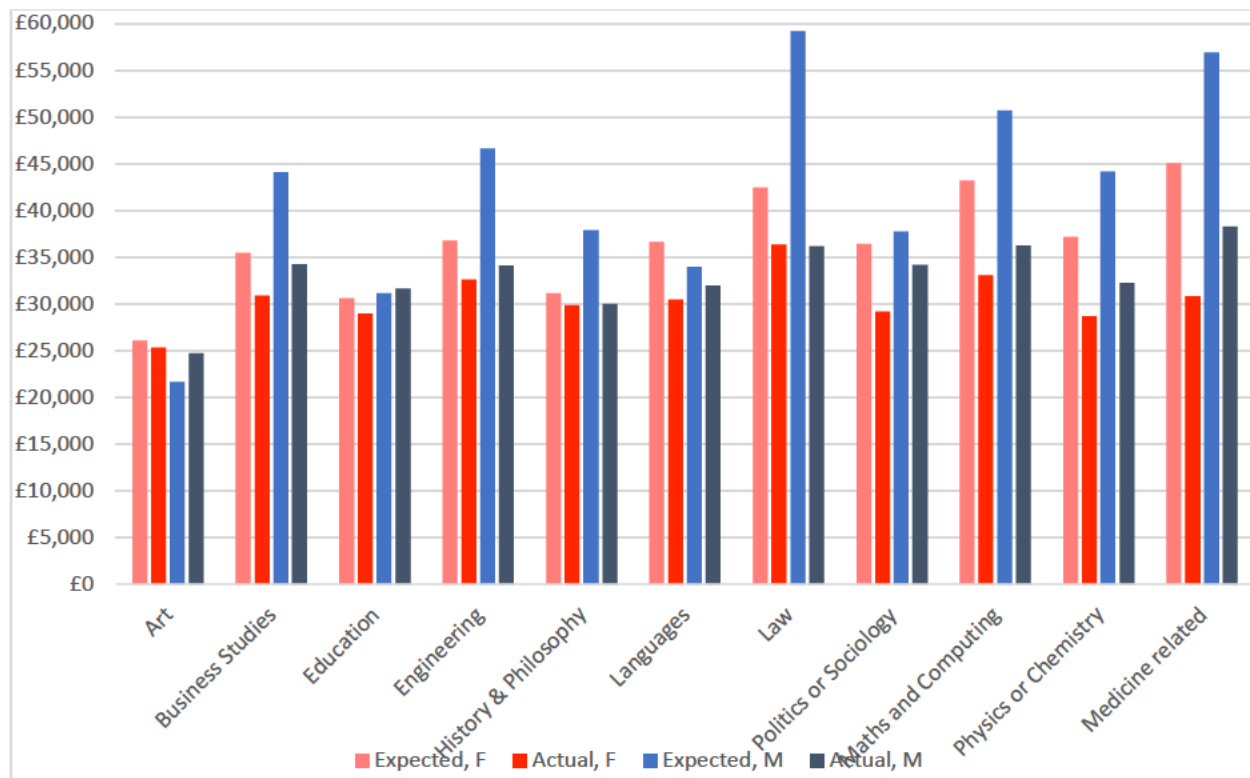
The overall picture was somewhat different for male students who planned to study one of the degree subjects. A small number of male students was planning to do Art at university. Their expected salaries were below the actual salaries of similar graduates by 12.3%. The effect size was -0.35. Likewise, those who planned to study Education expected salaries that were lower than the actual salaries of male graduates with a degree in Education. Male students that were planning to study any other subject falling into the sixth form subject classification expected salaries that were higher than the actual salaries of similar graduates. Those who planned to do Business Studies at university expected that they will be paid £44,120, which exceeded the actual salaries of similar graduates by 28.7%. The effect size was +0.53. For comparison, when all male students reported their expected salaries for this degree subject, the difference was only 7.8% ($d = +0.14$). That means that the gap between the expected and actual salaries more than tripled for Business Studies in the choice-sensitive scenario. Similarly, male students who planned to study Law expected salaries that exceeded the actual ones of similar graduates by 67.7% ($d = +1.17$). Interestingly, when all male students were asked about their expected salaries in Law, they thought they would be paid 28.6% ($d = +0.45$) more than what male Law

graduates reported they earn. This means the gap between the expected and actual salaries doubled when only those who were interested in Law were asked about their expected salaries.

Similarly to female students who were interested in STEM subjects, their male students consistently expected high graduate salaries. In subjects such as Engineering, Maths and Computing, and Physics or Chemistry male students' expected salaries exceeded the actual average salaries by 36.8%, 39.8 and 36.9% respectively. It is clear from these findings that the surveyed A-level students associate STEM subjects with high earnings.

Male students considering applying for a Medicine related degree thought that they would be earning around £56,960 on average, which was 48.7% ($d = +0.83$) more than the average male graduate earns at 30. When all male students were asked to estimate their salary for Medicine related work, the gap between the expected and actual salaries was about 18.7% ($d = +0.35$), which illustrates those male students tend to be more optimistic about their future earnings in the choice- sensitive scenario.

Figure 4.7 Comparison of A-level students' expected salaries predicted with actual average salaries, the preferred course only



4.6 Conclusion

The variation in the expected average salaries was difficult to explain using the OLS regression analysis. The regressions models were able to explain only 1.6% of the variation in the logarithm of the average expected salaries. The results show that male students and those who were able to calculate the real value of debt tend to expect the lower average graduate salaries. Reading about university loans and repayments on Money Saving Expert was associated with the higher expected average salary. This might mean that students' knowledge about student finance helps them to understand information about graduate salaries and adjust their expectations accordingly.

Alongside variation in the expected average salaries, the variation in respondent's own expected salaries was examined. Only 4.8% of the variability in the students' expected salaries was predicted using the available variables. Three variables were included using the forward stepwise method and the manual selection of the explanatory variables. They are being a male, being confident in the predicted graduate premium and predicted A-level grades. In line with previous studies, male students' expected salaries exceeded female students' expected salaries. Those who were confident or very confident in the predicted graduate premium tended to expect higher salaries compared to their peers who displayed less confidence in their predictions. There are at least two probable explanations for this. Students' confidence in the predicted graduate premium can be described as informed optimism, which translated into higher salary expectations. It is also possible that respondents simply assumed that holding a degree will significantly increase their future earnings. This type of belief can be described as uninformed wishfulness (Svanum and Bigatti, 2006). Finally, the predicted A-level grades were positively associated with the expected salaries. This might be because students who were optimistic about their A-level grades also had an optimistic outlook on their future earnings.

In line with previous studies, I found strong evidence for a gender pay gap in expected graduate salaries. Across 11 degree subjects, the expected average salaries and salaries that the participants expect they would earn if they were to study each subject at degree level were compared. The observed variation in salary expectations based on the participants' gender has important implications for value for money assessment that prospective students are expected to complete. When patterns in the A-level students' salary expectations were examined on their own, it became evident that female students consistently expected average salaries that were slightly higher than average salaries that were predicted by their male counterparts. The effect

sizes were in the range of -0.01 to +0.24. This means that female students tend to believe that university education offers higher personal financial gains compared to the expectations of male students. Importantly, female students' own expected salaries were lower than male students' own expected salaries for most of the subjects. The differences were much smaller for subjects such as Art, Education and History. Languages was the only subject where female students' expected salaries were higher than male students' expected salaries. It seems that the observed gender gap is smaller for subjects with traditionally higher proportions of female students.

The sixth form questionnaire contains information about the degree course that the surveyed students were planning to study at university. This made it possible to explore whether subject preferences affect the relationships between gender, the expected average salaries and the salaries that the students think they would be paid. When students were asked about their beliefs related to their graduate salaries, some interesting gender-specific patterns were observed. All male students, except those who were planning to study for a degree in Art, predicted salaries that exceeded the expected average graduate salaries by 16.4%. The largest gap of 37.6% ($d=-1.91$) between the expected average salaries and students' own expected salaries was observed among male participants who wanted to study Law. When female students were asked about their own expected salaries for the subjects that they planned to study at university, those who planned to study Engineering, History, Law, and Physics or Chemistry thought that they would be earning below the average. There were several subject areas where female students expected that they would be able to earn more than the average graduate but the differences between the expected average salaries and salaries that female students thought they would be earning were much smaller compared to the corresponding differences between the expected average salaries and salaries predicted by male students. On average, the female students' salary expectations exceeded the expected average salaries by only 2.3%, with the largest gap of 13.5% ($d=-0.53$) observed among female students planning to study Languages.

Expected salaries were compared to actual salaries of similar graduates using the LFS data. First, I compared the expected average salaries with the average actual salaries for each subject. Unfortunately, the sixth form questionnaire did not collect any sex-disaggregated data about the average graduate salaries. On average, the expected average salaries exceeded the actual salaries by 13.4%. The effect size was in the range of +0.07 to +1.20. The largest gap of 35.2%

was observed between the expected average and actual salaries in the Medicine related subject area. The effect size was +1.20. Law was another subject area where the expected average salaries were higher than the actual ones. The difference was 18.5% ($d=+0.73$). The surveyed students believed that STEM graduates were paid considerably more than the STEM graduates actually did. Depending on the subject area in STEM, the expected average salaries were 16.3% to 23.4% higher than the actual graduate salaries.

Next, I focused on the salaries the A-level students expected if they were to study each subject at degree level. The data allowed to look into the salary expectation of female and male students separately. Overall, the female students' expected salaries were more in line with the actual average salaries of female graduates. Female students thought that they would be earning less than what similar graduates did if they were to study Art or History. The salaries were 10.8% and 1.9% lower respectively. Similarly to the patterns in the average expected salaries, female students expected that if they did a degree in Law or Medicine they would be earning around £41,590 or £41,910. These expected salaries exceeded the actual average salaries of female graduates by 14.3% and 35.9% respectively. When female students were asked to think about their likely salaries in STEM subjects, including Engineering, Maths and Computing and Physics or Chemistry, their expected salaries exceeded the actual average salaries of female STEM graduates by an average of 9.9%. Male students, on the other hand, were more optimistic in their salary beliefs. On average, their expected salaries for STEM subjects exceeded the actual salaries of similar graduates by an average of 14.5%. Male students thought that if they major in subjects that traditionally have a higher number of female students, such as Art, Education, or Languages, they would be earning less than the average graduate. It seems that the gender stereotypes are deeply rooted in the students' perceptions of graduate salaries. Male students thought that if they did a Law degree, they will be paid around £46,540 which was 28.6% higher than how much Law graduates reported they earn. Similarly, the Medicine related subject area was associated with very high earnings, with the average exceeding the actual salaries in this subject by 18.7%. Similar patterns were observed in female students' salary expectations. In the context of the UK, both careers in Law and Medicine related are regarded as prestigious. These cultural expectations are reflected in the expected salaries of A-level students.

Since the sixth form survey contained information about the participants' preferred course, it was possible to see how the intention to study a subject at degree level affects their salary

expectations. Overall, when female students asked about their expectations for the subject that they want to study at university, their expected salaries consistently exceeded the actual salaries of female graduates on average by 19.0%. Compared to the results where all female students were included, the gap between the expected and actual salaries almost doubled, increasing from 8.5% to 19.0%. The observed patterns in male students' salary expectations were somewhat different. Those male students who planned to study Art or Education expected that they will be earning less than what the male graduates in similar subjects reported they earn. Apart from these two subject areas, male students' expected salaries on average exceeded the actual salaries of similar graduates by around 25.8%. Compared to the results where all male students were included, the gap between the expected and actual salaries among men increased approximately threefold, from 7.8% to 25.8%. It seems that the intention to major in a given subject was not associated with more realistic salary expectations. On the contrary, it was associated with over-optimism in the salary expectations. These findings are important for understanding how prospective students might calculate value for money of their university choice. Both male and female students tended to expect salaries that were higher than actual salaries of similar graduates with male students having more optimistic expectations than their female peers. When asked about their own likely salaries for subjects that the respondents are interested in, both groups reported salaries that were higher than expected salaries of students who were not interested in a given subject. This can be interpreted as prospective students' tendency to believe that they will receive high financial returns on the degree of their choice.

The A-level student sample was purposefully selected to exhibit the diversity of students who are planning to enter HE, with students at private schools being oversampled. The national estimate of students in private schools remains close to 7% (Green, Henseke and Vignoles, 2017), while privately educated students constitute 63% of students in the sample. This was done to include a variety of private schools that exist in England. Over-sampling of students attending private schools might have contributed to the optimism in salary expectations. Also, partially linked to the first point, information about A-level students' career aspirations is not available, therefore, it is difficult to interpret the relationship between how much the students think they would earn and the average graduate salary in the subject area of their interest. Finally, the students' limited knowledge about the graduate labour market is perhaps the main reason why students' salary expectations appeared to diverge from the actual graduate salaries. The data on students' knowledge about the topic is sparse.

CHAPTER 5: GRADUATE PREMIUM EXPECTATIONS OF A-LEVEL STUDENTS

5.1 Introduction

In recent years, the rate of return to an undergraduate degree in the UK has been widely discussed by policymakers and commentators. This chapter considers how A-level students perceive the graduate premium and what influences their confidence in their assessment of the size of the graduate premium by addressing these four research questions:

1. What expectations do A-level students have about the difference going to university would make to their annual earnings by the time they are 30?
2. What is the level of student confidence when they are asked about their earnings prediction?
3. What are the characteristics of those expecting the graduate premium of at least 20%?
4. What are the characteristics of those indicating high levels of confidence in their expectations of the graduate premium?

To answer these research questions, I use data from the sixth form questionnaire. The survey data in question is moderately large with 1,574 A-level students and I use ten variables that measure students' background characteristics, their study plans and their beliefs about their likely graduate outcomes. Questions 1 and 2 are first addressed using descriptive analysis of frequencies and percentages. Questions 3 and 4 are addressed by multivariate logistic regression analysis. The research presented here seeks to explore the factors associated with expecting a graduate premium of at least 20% and confidence in the predicted graduate premium (see Section 3.4.2 for more details).

Understanding what influences student's financial beliefs, including the level of confidence in the financial returns to education, is important because the decision to study towards an undergraduate degree might be influenced both by knowledge and learning that university offers but also by the lifetime returns in terms of future earnings (Section 2.4.5). The difference in earnings potential might be a part of the value for money calculations made by prospective students. According to the Department for Education and Skills, by the age of 16, young people should be able to take financial considerations into account when making decisions about the future (Department for Education and Skills, 2003). This is an important learning outcome for

several reasons. Although men tend to be guided by the financial returns to education more often than women (Chevalier, 2002), both female and male applicants can benefit from having more accurate expectations about the financial returns on their educational choices. Another reason is that the HE sector is heavily subsidised by the taxpayer via the student loan system, and it is therefore in the interest of the government to make sure that prospective students understand the lifetime financial implications of their decisions.

Students' confidence in the accuracy of their own expectations about the returns to an undergraduate degree is particularly important in the education system that requires students to specialise in a few subjects in the final two years of their secondary education. Students' confidence in the size of the expected graduate premium is taken to indicate their ability to interpret information about graduate earnings and understand the potential financial impact of studying for an undergraduate degree. Confidence in potential earnings received little attention in the context of the HE choices. To date, only Davies, Qiu and Davies (2014) examined the relationship between Year 11 students' confidence in the graduate premium and their background characteristics such as family background, cultural capital and expected GCSE grades. In this chapter, I analyse the graduate premium expectation of young people studying towards A-levels.

5.2 Graduate premium expectations

A-level students were asked: 'How much difference do you think going to university would be likely to make to your earning by the time you are 30?'. The respondents were given nine options, ranging from at least 20% less to at least 20% more with a 5 points distance between the two options. These responses were coded on a 9-point scale, where at least 20% less was coded as 1 and at least 20% more was coded as 9. The majority of female and male students expected positive returns to HE. Table 5.1 shows that, on average, female students predicted their earnings will rise by at least 15% by age 30. For male students, the average also was at least 15%. This means students expect similar returns to an undergraduate degree. Similarly, Anchor *et al.* (2011) also did not find any differences between female and male students when they were asked about the expected returns to an undergraduate degree immediately after graduation and 10 years after graduation.

Britton *et al.* (2020) found that holding a degree has a different impact on different types of students in terms of their earnings. Britton and his colleagues reported that men enjoy a 5%

increase in salary compared to non-graduates at age 30, while women enjoy a 25% rise at age 30. The causal effect of degrees then tends to increase with age, and over graduates' lifetime the returns are close to 32.5% for women and 23.3% for men. That means female students in the sixth form sample, on average, expected lower than the actual returns to an undergraduate degree, whereas male students expected returns were much higher than the actual returns that male graduates tend to enjoy at age 30.

What is perhaps more interesting, however, is that some students reported that they expect negative returns to an undergraduate degree, 3.1% of female students and 2.4% of male students responded that way. There was a small group of students, 4.1% of female students and 3.7% of male students, who believed that going to university would not make any difference to their future earnings.

Table 5.1. A-level students' perceptions of the size of the graduate premium, by gender

	% of male students (n=920)	% of female students (n=654)
At least 20% less	0.7	0.2
At least 15% less	0.5	0.8
At least 10% less	0.3	0.9
At least 5% less	0.9	1.2
No difference	3.7	4.1
At least 5% more	4.2	3.4
At least 10% more	15.9	23.6
At least 15% more	22.7	30.6
At least 20% more	49.6	33.3
Missing	1.5	2.0

Perhaps unsurprisingly, there were some differences in the post-school plans between students who believed that going to university would have a negative impact on their future earnings and those who had different expectations. Only 78.6% of those who thought that studying for a degree would have a negative impact on their future earnings and 60.7% of those who thought that it would make no difference indicated that they will definitely go to university. In contrast, 89.5% of students who expected that going to university would have a positive effect on their future earnings said that they definitely intend to apply. The simplest and most likely explanation for this is that the participants who expected negative or no effect of holding a degree on their future earnings were less likely to think that going to university is the best option for them.

Table 5.2 shows how A-level students thought going to university might affect their future earnings. Those who were planning to apply for a course that offers high average returns such as Medicine, Maths and Computing, Law and Business Studies (Davies *et al.*, 2013) appeared to hold more optimistic views about the size of the graduate premium.

Table 5.2. A-level students' perceptions of the size of the graduate premium, by the type of preferred course

	% of low premium (n=1,146)	% of high premium (n= 428)
At least 20% less	0.4	0.5
At least 15% less	0.7	0.5
At least 10% less	0.5	0.7
At least 5% less	1.0	1.2
No difference	3.9	3.7
At least 5% more	4.4	2.6
At least 10% more	20.2	16.1
At least 15% more	27.8	21.0
At least 20% more	38.9	53.3
Missing	2.2	0.5

A little more than half, 53.5%, of students who planned to study a high premium subject expected that going to university would increase their annual earnings by at least 20% by the time they are 30. Those who planned to study a low premium subject were less optimistic with 38.9% reporting that they hoped for the same returns.

5.3 Confidence in the graduate premium expectations

A-level students were asked to indicate how confident they were about their predicted graduate premium. The respondents were given five options (very unsure, not confident, quite confident, confident, very confident). For regression analysis, their answers were conflated into a binary variable where 'confident' and 'very confident' were coded as 1 and zero otherwise. Table 5.3 shows the proportions of A-level students appearing to be confident in their responses to the question about the size of the graduate premium at age 30. In line with previous research, female students tended to be less confident in their responses than their male counterparts (Reuben, Wiswall and Zafar, 2015). In this study, 12.2% of male students reported being 'very confident' about their earnings prediction compared to only 3.7% of female students. Overall, one in three boys (36.3%) and nearly one in five girls (18.7%) reported being 'confident' or 'very confident' in the predicted graduate premium. That means female students in this study

sample were half as often as their male counterparts to report being 'confident' or 'very confident'.

Table 5.3. A-level students' perceptions of their confidence in the predicted graduate premium

	% of male students (n=920)	% of female students (n=654)
Very unsure	7.1	10.4
Not confident	17.1	32.0
Quite confident	33.6	32.3
Confident	24.1	15.0
Very confident	12.2	3.7
Missing	6.0	6.7

Previous research showed that students' confidence in their future earnings might become a self-fulfilling prophecy where optimistic salary expectations translate into higher earnings after graduation (Chevalier, 2007). It seems that this is also the case in relation to A-level students that participated in this study. I compared graduate premium expectations of those who reported being 'very confident' or 'confident' with those who chose a different option. Table 5.4 shows that 73.3% of confident male students expected to be earning at least 20% more at age 30 compared with just 35.6% of male students who were less confident in their earnings predictions. Similarly, 63.3% of confident female students expected to be earning at least 20% more at age 30 compared with just 26.2% of female students who were less confident in their responses.

Table 5.4 Percentage of students reporting being 'confident' or 'very confident' in the predicted graduate premium, by gender

	% of confident male students	% of other male students	% of confident female students	% of other female students
At least 20% less	1.5	0.2	-	-
At least 15% less	0.6	0.2	-	1.0
At least 10% less	-	0.4	0.8	1.0
At least 5% less	0.6	1.1	0.8	1.4
No difference	2.1	4.9	3.3	3.7
At least 5% more	2.1	5.5	0.8	4.3
At least 10% more	7.2	21.3	9.0	28.5
At least 15% more	12.0	30.3	23.0	32.8
At least 20% more	73.3	35.6	63.3	26.2
Missing	0.6	0.4	-	1.2

5.4 Factors associated with predictions of the graduate premium

The analysis here focuses on the relationships between the predicted graduate premium and the background characteristics of A-level students. Students' beliefs about the graduate premium represent their assumptions about the financial (instrumental) value of a degree. The dependent variable was the premium of at least 20%. It was coded as 1 and 0 otherwise. Drawing on the previous research, the following variables were considered as predictors in regression models that seek to explain the variation in the size of the graduate premium.

Predicted A-level grades can be an important factor for the expected graduate premium. A-level students were asked to predict their grades for three A-level subjects. Most universities in England require that applicants achieve three A-levels (or equivalent qualifications) at specified grades. In line with the research by Davies, Qiu and Davies (2014), it is anticipated that expected grades are positively associated with graduate premium expectations. Davies and his colleagues suggested that students' academic ability helps them to interpret information related to the instrumental value of their education.

The type of university the students planned to attend might also be related to their graduate premium expectations. In this study, 61.8% of students wanted to apply to a Russell Group university. The type of university that graduates attended did not affect returns to education for women but it had an impact on men, with men receiving higher returns if they went to a selective university (Britton *et al.*, 2020). The type of school that A-level students attended might also be associated with students' financial beliefs. Privately educated graduates tend to earn more than those who attended a state school. Although research evidence in the area of financial beliefs of private school and state school students is limited, it is reasonable to assume that privately educated students display more confidence in their financial beliefs as their parents pass down their knowledge and confidence to their children.

Data on students' gender are also included in the analysis. Previous research suggests that going to university affects graduate earnings differently with women enjoying higher returns to HE (Dougherty, 2005; O'Leary and Sloane, 2011). The gender pay gap is larger among younger graduates, specifically graduate women, on average, who are paid 25% more at age 30 than women who did not go to university, whereas men are paid only 5% more at age 30 than their non-graduate peers. It is therefore expected that male graduates are less likely than their female peers to expect a graduate premium of at least 20% by age 30. In contrast, Table 5.1.

demonstrated that male students were twice as likely to expect a graduate premium of at least 20% as female students.

Confidence in the graduate premium also matters. As explained in the literature review, people's confidence in their beliefs tends to translate into more optimistic beliefs about future outcomes in different areas of life, including work (Dunning, Heath and Suls, 2004). About one third, 28.7%, of the surveyed students reported feeling 'confident' or 'very confident' about the accuracy of their graduate premium estimates. Table 5.4 shows that these students are more likely to expect a graduate premium of at least 20%, which supports the previous findings.

Another question related to A-level students' beliefs about their likely financial circumstances is focused on their student loan repayment expectations. It is reasonable to expect that those who plan to repay their student loan in full also think that their degree education would have a greater impact on their future earnings. One in ten students (11.9%) reported that they expect to repay their student loans in full. The latest available government data suggests that one in four undergraduate students will repay their student loans in full (Bolton, 2021)

The sixth form questionnaire also included a question related to students' financial literacy where A-level students were asked to calculate the real value of a hypothetical debt. About one third, 33.4%, of the respondents calculated the real value of the debt correctly. Perhaps those students were able to interpret information about the labour market outcomes associated with the degree of their choice more accurately than their counterparts who did not complete the task correctly. Finally, there were two questions related to online sources that A-level students considered when they searched for information related to HE. The findings show that 48.9% of students read information about graduate earnings on Unistats and 31.5% read information about student loans and repayments on Money Saving Expert. There might be a survey design issue here. Although the answers might give the impression that the surveyed students are somewhat aware of the financial implications of going to university, these questions were included at the end of the questionnaire that was focused on the instrumental value of undergraduate degrees. The respondents might have felt pressure to demonstrate that they sought information related to the topic of the questionnaire.

To investigate the relationships between the predicted graduate premium and students' background characteristics I carried out a logistic regression analysis, where the dependent variable was equal to 1 if the students expected that their earnings will rise by at least 20% by

the time they are 30, and zero otherwise. As in the previous chapter, I used the forward stepwise selection, meaning Stata 15.1 started with an empty model (constant only) and then variables were added one by one based on whether they made a statistically meaningful difference to the model. The forward selection was completed, adding terms with 90% significance (p -values <0.1). Standard error, t and p are not reported because I am working with a convenience sample. To reiterate, the following variables were considered for inclusion: expected tariff points, being male, attending a private school, intending to apply to a Russell Group university, being confident or very confident in the graduate premium, predicting to pay off the student loan debt, being able to calculate the real value of debt, having read about graduate salaries on Unistats, and having read about student loans and repayments on Money Saving Expert. Based on the preliminary results summarised in Table 5.1, it was anticipated that being male would be excluded from the analysis. Table 5.5 reports the marginal effects from stepwise logit regressions for the dependent variable 'expecting the graduate premium of at least 20%'. Appendix J reports the log-odds-ratios for the same regressions.

Model 1 demonstrated that confidence in the expected graduate premium alone explains around 9.4% of the variation. The final model, Model 5, explains around 14.0% of the variation in the expected graduate premium. Being 'confident' or 'very confident' in the predicted graduate premium was positively associated with an increased likelihood of expecting a graduate premium of at least 20% (30.5%). There also was a positive association between expecting the high graduate premium and the predicted A-level grades (2.7%). One-unit change in the predicted A-level refers to the next higher step within the grade. Interestingly, students who expected to repay their student loans in full were less likely (-16.0%) to expect the graduate premium of at least 20%. The most probable explanation is that the surveyed students were aware that only a small proportion of graduates repay student loans in the UK. Consequently, they thought that they are unlikely to repay theirs even if the degree of their choice was associated with the high premium. Being able to calculate the real value of debt was positively associated with expecting the graduate premium of at least 20% (7.1%). A-level students' university preferences matter for the analysis. Intending to apply to a Russell Group university was positively associated with expecting a high graduate premium (7.6%).

Table 5.5 Marginal effects from logit regressions on expecting a graduate premium of at least 20% (forward stepwise selection)

	Model 1	Model 2	Model 3	Model 4	Model 5
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Confident in graduate premium	0.351	0.317	0.311	0.306	0.305
Predicted A-level grades		0.041	0.038	0.035	0.027
Repay student loans in full			-0.173	-0.167	-0.160
Calculated real value of debt				0.078	0.071
Applying to Russell Group					0.076
Pseudo R^2	0.094	0.122	0.132	0.137	0.140
Increase in pseudo R^2	0.094	0.028	0.010	0.005	0.003
$N=1,574$					

In addition to the stepwise method, I selected variables manually. The same set of explanatory variables was considered for inclusion. Table 5.6 presents the results of Models 1 to 5 where the dependent variable is equal to one when the student predicted that their earnings will rise by at least 20% by the time they are 30, and zero otherwise. Model 1 includes only one variable - predicted A-level grade, which can predict around 4.4% of the variation. Model 2 also accounts for the type of university the respondents want to study at. The pseudo R^2 increased to 5.0%. In Model 3, being 'confident' or 'very confident' was added. It is the strongest predictor of expecting the graduate premium of at least 20%. Introducing the variable representing those who thought they will be able to repay their student loan in full increased the predicted variation to 13.6%. Adding one more financial literacy factor - 'calculated real value of debt' - increased the explained variation to 14.0%.

Table 5.6 Marginal effects from logit regressions on expecting a graduate premium of at least 20% (manual selection)

	Model 1	Model 2	Model 3	Model 4	Model 5
Predicted A-level grades	0.053	0.042	0.031	0.029	0.027
Applying to Russell Group		0.100	0.092	0.083	0.076
Confident in graduate premium			0.316	0.310	0.305
Repay student loans in full				-0.164	-0.160
Calculated real value of debt					0.071
Pseudo R^2	0.044	0.050	0.128	0.136	0.140
Increase in pseudo R^2	0.044	0.006	0.078	0.008	0.004
$N=1,574$					

Contrary to expectations, the type of school did not have a significant impact on students' confidence in the predicted graduate premium. That might be because this sample consists of high ability students, and their academic achievements are more important than the type of

school they attend. In addition, reading information on Unistats or Money Saving Expert did not seem to matter when students are asked to predict the size of the graduate premium.

5.5 Factors associated with the confidence in the expected graduate premium

Table 5.7 reports the marginal effects from stepwise logit regressions where the dependent variable is equal to one of the students who are 'confident' or 'very confident' about their graduate premium, and zero otherwise. Appendix J reports the log-odds-ratios for the same regressions. One-third of students in the sixth form sample (28.9%) chose one of these two options. The forward stepwise selection method was applied to the list of explanatory variables. To reiterate, the following variables were considered for inclusion: being male, expected A-level grades, attending a private school, intending to apply to a Russell Group university, expecting a graduate premium of 20%, predicting to pay off the student loan debt, being able to calculate the real value of debt, having considered the information about graduate salaries on Unistats, and having considered the information about student loans and repayments on Money Saving Expert.

Model 1 only includes one predictor, expecting a premium of at least 20%, which can predict around 10.6% of the variation in confidence. Those who expect the highest returns to their degree tended to be more confident about their future earnings, which is not surprising (Dunning, Heath and Suls, 2004). Model 2 introduces 'being male', which increases the predicted variation to 12.4%. As demonstrated in the earlier analysis, male students were more likely to be confident or very confident in their financial expectations than female students (12.0%). I found a small positive association between predicted A-level grades and their confidence in the expected graduate premium (1.3%). The predicted variation increased to 12.8% in Model 3. Expecting a graduate premium of at least 20% was associated with an increased likelihood (26.1%) of being confident or very confident in the predicted graduate premium.

Table 5.7 Marginal effects from logit regressions on being 'confident' or 'very confident' in the predicted graduate premium (forward stepwise selection)

	Model 1	Model 2	Model 3
Expected premium of 20%	0.295	0.274	0.261
Male		0.130	0.120
Predicted A-level grades			0.013
Pseudo R^2	0.106	0.124	0.128
Increase in pseudo R^2	0.106	0.018	0.004
$N=1574$			

Table 5.8 presents the marginal effects from logit regressions where the dependent variable is equal to one if the students reported being 'confident' or 'very confident', and zero otherwise. Models 1 to 3 were constructed manually. Model 1 includes only one variable, being male, and it explains about 3.2% of the variation in students' confidence. Being male was positively associated with being confident or very confident in the predicted graduate premium (18.0%). Model 2 was expanded to include the predicted A-level grades. Including predictors related to the type of school that the student attended or the type of university where they intend to study makes little difference - adding these two variables would increase the pseudo R^2 by only 0.02%, so the decision was made to drop them. Next, the graduate premium of at least 20% was added to the regression. Adding it increased the predicted variation to 12.8%. Again, other financial literacy variables, namely expecting to repay their student loan and being able to calculate the real debt value did not have a significant impact on the model. Finally, the online information variables were not included because adding them to Model 3 would increase the pseudo R^2 by only 0.02%, which is not a lot.

Table 5.8. Marginal effects from logit regressions on being 'confident' or 'very confident' in the predicted graduate premium (manual selection)

	Model 1	Model 2	Model 3
Male	0.180	0.156	0.120
Predicted A-level grades		0.028	0.013
Expected premium of 20%			0.261
Pseudo R^2	0.032	0.047	0.128
Increase in pseudo R^2	0.032	0.015	0.081
$N=1574$			

5.6 Conclusion

This research has shown that male students, on average, tend to expect a higher graduate premium than female students. While a small proportion of male and female students reported that they expect negative returns to an undergraduate degree or that it would have no impact on their future earnings, approximately a half of male students thought that they will be earning at least 20% more by the time they are 30 if they went to university. Only one-third of female students had similar earnings expectations. These differences might be due to the fact that, in England, relative to males, female students appeared to see less instrumental value in university education (Agnew and Harrison, 2015). Contrary to previous studies where university students gave views on the graduate premium, female students in this study predicted that going to university will have a slightly smaller impact on their future earnings compared to what male students predicted. It should be reiterated here that the respondents were limited to nine answer options when they were asked about the expected graduate premium. It is possible that if they were asked an open-ended question or presented with a different set of options, their responses would have been different. Perhaps the respondents were not aware of the fact that the graduate premium tends to grow after the age of 30. The most recent analysis of returns to an undergraduate degree in the UK suggests that, on average, lifetime returns are close to 32.5% for women and 23.3% for men (Britton *et al.*, 2020). If the respondents assumed that returns to education do not change throughout life, the results should be interpreted differently: female students tend to underestimate returns to education, while the expectations of male students are in line with the actual returns.

The logistic regression analysis of factors associated with expecting the graduate premium of at least 20% explained 14.0% of the variation. Confidence in the predicted graduated premium is strongly associated with expecting the graduate premium of at least 20%. A-level grades that students expect to receive were also positively associated with the size of the expected premium. This might mean that student optimism in grades translated into optimism in the returns to degree education. Another interpretation is that students' expectations were rational. Students with high prior attainment tend to enjoy higher returns to education compared with students with low prior attainment even when they study the same subject or attend the same type of university (Belfield *et al.*, 2018). Whether the student intended to apply to a Russell Group university mattered to their graduate premium expectations. Previous research showed that graduates who attended a Russell Group university, on average, enjoy higher returns to

their degree compared with graduates who graduated from other universities (Chevalier and Conlon, 2003). In this study, participants intending to apply to a Russell Group university were more likely (7.6%) to expect the graduate premium of at least 20% compared to their peers who planned to study at a different type of institution.

Interestingly, students' gender was not an important factor predicting the expected graduate premium of at least 20%. The other two variables that appear not to be associated with the predicted graduate premium are variables representing the use of online information. The findings suggest that whether the respondents read about graduate earnings on Unistats or student loans and repayments on Money Saving Expert made little difference in terms of their financial expectations. This might be because the questions about online sources were too specific. The respondents might have done some research around graduate earnings and/or student finance but they found information elsewhere and the format of the survey questions did not allow them to report that. As a result, those two questions might not have captured accurate information about the students' information search behaviour.

In line with the previous research, where Year 11 students were asked about their confidence in the predicted graduate premium (Davies, Qiu and Davies, 2014), students' confidence was defined as their belief in understanding the potential financial impact of studying for an undergraduate degree. The findings here indicate that it is also possible that students' confidence in the predicted graduate premium is related to their self-confidence. Those who expected a graduate premium of at least 20% were more confident in their predicted earnings, meaning the more students expected from going to university in terms of private financial gain the more confident they were that studying for a degree is a good investment. Similarly, Dunning, Heath and Suls (2004) demonstrated that people, in general, tended to be overoptimistic about future outcomes, and they also tended to ignore the potential risks associated with their choices. In the context of future earnings, prospective students might feel overly optimistic about their future and signal overconfidence when their expectations are not realistic. Their future is uncertain, and their university choices predict very little with respect to the direction of their future careers. Both men and women tend to be more confident in their perceptions when they have limited knowledge about a given topic (Moore and Healy, 2008). That is exactly the case in the context of this study.

Male students were found to be more confident than their female counterparts in the predicted graduate earnings which is in line with previous research. There is extensive research

suggesting that there are two main explanations as to why that is the case. Overall, men tend to be more confident than women regardless of their knowledge of a given subject (Sarsons and Xu, 2016). Previous studies also showed that men tend to be more concerned than women about the financial side of various matters. This can be explained by the traditional societal expectations according to which men and women are supposed to specialise in different things (Smith, McArdle and Willis, 2010). Some suggested that women are less interested than men in financial affairs (Butters, Asarta and McCoy, 2012). As a result, female students may not identify as 'confident' or 'very confident' in their financial beliefs.

With regards to the university subject preferences, students that intended to study high premium subjects tended to be 'confident' or 'very confident' in their financial predictions. Such findings are in line with previous studies that showed an association between preference for a high premium subject and confidence in returns to an undergraduate degree (Brunello, Lucifora and Winter-Ebmer, 2004; Maringe, 2006). Davies *et al.* (2013) found that a preference towards a high premium subject was associated with rating salary and status of the job as very important motivational factors. In relation to students' confidence in the predicted graduate premium, the respondents might feel more confident than others because the private financial gain was an important part of their HE choice.

The role of expected grades was examined in the educational context. Svanum and Bigatti (2006) observed non-linear relationships between grade optimism and realism among US college students. They described two types of expectations: informed optimism and uninformed wishfulness. More accomplished students used their judgment and had more realistic aspirations, while less accomplished students also expected high grades, but their expectations were not realistic. In the context of this study, it is possible that two types of confident students coexist: those who appeared to have some knowledge about the financial implications of their university choices and those who simply assumed that going to university would be a good investment in themselves.

CHAPTER 6: UNIVERSITY CHOICES AND VALUE FOR MONEY

6.1 Introduction

Prospective students are expected to determine which courses and HE providers offer good value for money. As mentioned in the literature review, market-oriented HE reforms were based on the idea that if university applicants are given lots of information about their HE options, they would make sound HE choices. Specifically, Browne (2010) argued that student choice would drive up quality in HE provision because the returns to a degree matter to students who pay for their education. However, research on university choices has shown that students are often unaware of financial support that is available to them (Mangan, Hughes and Slack, 2010) and only a half of prospective students (48%) reported they had enough information about the financial implications of their decisions to apply (Universities UK, 2018). Such evidence imposes a challenge for a demand-led HE system.

This chapter explores financial beliefs and perceptions of first-year students at a Russell Group University. It focuses on how the financial implications of going to university relate to young people's perceptions of value for money in the context of their education. The chapter also examines students' understanding of, and attitudes towards, the student finance system. In doing so this chapter challenges the current political debate which tends to view students as misguided and ill-informed. The following questions will be explored in this chapter:

1. What sort of beliefs do students hold about the financial implications of graduating with a degree in England?
2. What do students know about student finance in England?
3. Focusing on the expected financial implications, how do students judge the value for money?

These questions are important to answer because prospective students face complex decisions regarding whether to go to university, what to study and where. In addition, the annual Advance HE-HEPI Student Academic Experience Survey indicates that university students tend to report that their course offers good value for money when their expectations are being met (Universities UK, 2018). That is why understanding more about prospective students' expectations is crucial for providing them with relevant information that helps to manage their expectations.

In this chapter, I analysed data from the focus groups with first-year students. These focus groups were held during the autumn term of 2019/20. A more detailed discussion of the design and methods can be found in Section 3.4.4. Using small-group discussions allowed to examine the complex relationships between students' financial beliefs, understanding of student finance and perceived value for money of their HE choices. It was important to explore these topics quantitatively because previous studies in this area tended to use quantitative research and made a distinction between factors that contribute to the perceptions of either good or poor value for money. Take tuition fees as an example. Previously, students reported that tuition fees represent poor value for money (Neves and Hillman, 2020). Another survey-based study suggested that paying fees was associated with a sense of entitlement which had a knock-on effect on academic performance (Bunce, Baird and Jones, 2017). A qualitative study, on the other hand, found that increased tuition fees motivated students to make the most of their time at university (Bates and Kaye, 2014a). In addition, previous attempts to explore the association between value for money and students' understanding of student finance are limited. This chapter attempts to explore students' attitudes towards the financial implications of going to university using thematic analysis of focus group data.

6.2 The perceived role of higher education

Students that participated in the focus groups framed their decision to come to university in several ways. The aim of this research was not to find out more about the students' degree choices per se, but rather to understand how much consideration students give to the financial implications of going to university. Eight students enrolled on a degree course that was not their first-choice option. All respondents who did not get an offer from their first-choice university accepted a place on a course that is related to their first-choice subject. Jane (Group 3) is the only exception to this rule. She enrolled on a degree course at a different college, and that course was in a completely different field from her first-choice degree.

During the discussion around HE choices, three main types of students were identified: (1) those who tended to refer to their degree as an essential requirement for their future career; (2) those who tended to look at their degree as an investment in themselves, and (3) those who did not explicitly link studying for a degree and the world of work but rather viewed their education as an experience that they wanted to have. A relatively high number of first-year students fall into the first or second categories. This pattern can be explained by the fact the participants

volunteered their time to talk about their university choices and their perception of value for money.

Many students who participated in the focus groups said that they need to have a degree for the career that they had in mind. In nine focus groups, the majority of participants expressed the view that they must study for a degree, including two groups where participants talked like one when discussing a career in Pharmacy (Groups 12), or in Physics (Groups 13). For example, Katie (Group 1), a White student studying at the College of Medical and Dental Sciences (MDS), explained:

So looking at courses originally, I knew my end goal. I wanted to work in IVF, assisted conception, and Reproductive Science. There was either two ways to get there: the first way was doing medicine, but the medical degree, the principles of the medical degree and the lifestyle that comes with that, I didn't want for myself. The second option is doing Biomedical, and then afterwards doing this thing called an STP, which is a training programme in which you can choose an area. You train in that for three years and then, I'd choose Reproductive Science to be trained in, after which I'd be a fully certified embryologist, which is what I need to be to work in IVF.

Katie described in detail how she decided to study Biomedical Sciences. It is clear from her account that she thoroughly researched her training options. Katie explained how her degree in Biomedical Sciences would work as a foundation for her career in Embryology.

Others talked about the degree as an investment. Compare to students who suggested that their degree is essential for their future career, these students tended to have less-defined career plans, but still had a career-driven mindset. For example, Alice (Group 7), an Asian student studying at the College of Engineering and Physical Sciences (EPS), shared her view on university education:

In my eyes, university is like an investment in myself to make me more employable so that I can go and get a well-paying job. That's how it works in my head, but for other people, they come to university for different reasons.

Clearly, Alice's decision to study at university was informed by economic pragmatism. She viewed her decision to study for a degree as an investment decision, mirroring the policy rhetoric of self-investment (Department for Business Innovation & Skills, 2011). However, as

Alice pointed out, other students might have different reasons for coming to university. Other members of the group supported Alice's view by saying "Yes" and "You're right".

Similarly, Becki (Group 3), a White student studying at the College of Social Science (CoSS), said she does not know yet what she wants to do after leaving university, but indicated that her degree course offers flexibility in terms of career after graduation:

It's not like medicine where it's like you're going to become a doctor, there's actually so many different routes that you can go down based upon the modules that you pick, but also just because it is so broad. You don't have to become prime minister.

It is reasonable to assume that Becki enjoys the fact her degree course offers opportunities in a range of professions as opposed to a very specific career path. This view is consistent with a dominant discourse, highlighting that the employment scene is changing at a fast rate and young people need to be able to adapt (MillionPlus, 2020).

The third type of students that contributed to the discussion around their decision to study for a degree tended to move away from their career plans and focused on either their interest in the subject or the university experience. Eight students (16%) said that their interest in the subject was the main reason for applying to university. These students were generally not concerned about the costs of studying at university and were far less engaged in the focus group activity that centred around graduate salaries. Three students in the sample reported that the main reason why they decided to study for a degree was the belief that it would be relatively easy to get a place on the course of their choice. This strategy is similar to loafing in decision-making (Skatova and Ferguson, 2014), an approach that provides the easiest route to one's goals.

What stands out during the discussion around the decision to study at university is that the majority of participants seemed to actively think of their life after university. This perhaps can be explained by the fact that students in the sample had some interest in this topic. Those students who had a clear career in mind were determined to "*get [their] money's worth* (Hope, Group 9)". Similar views were captured by other researchers (Bates and Kaye, 2014a). Others, who did not have a clear plan, appeared to hold positive views about the value of their degree suggesting that their degree would lead to attractive employment opportunities. This is in line with findings from Pitcher and Purcell (1998), which was published before the notion of value for money was widely discussed in the context of university education. The third type of

students seemed to be largely unaware of the discussion. In their HE choices, they tended to be guided by their academic interests and were largely unaware of their privileged position. It was possible to draw this conclusion because these students came from families where both parents went to university, and many mentioned their interest in experiments, research and science as motivation for applying to university. Research career involves a lot of time in training, which needs the right support system. The third type of participants had failed to see this connection.

6.3 Employability

There was a huge change in the policymaking environment over the last two decades. By including employability in the Teaching Excellence Framework (TEF), an assessment introduced for recognising high-quality teaching and student outcomes in HE, the Government highlighted that it was looking for universities to do more in terms of helping their students get into the kind of work where their knowledge and skills are needed. The launch of the LEO dataset was set to transform the HE sector. The LEO dataset allows a detailed overview of how graduates are doing one, three, five and ten years after they graduate. A recent report by the IFS offers an analysis of the LEO data. It concludes that the impact of attending university is different for specific groups of students who study different subjects (Belfield *et al.*, 2018). That report explicitly states that it aims to provide more information on the value of university education for prospective students. It is difficult to say whether they would find information about early-career earnings either accessible or useful in terms of subject choice or, indeed, provider choice, which also plays a role in terms of lifetime earnings (Drydakis, 2016; Sullivan *et al.*, 2018).

In the context of this study, information about employability refers to information that is published on university websites or any other sources of information. This information is concerned with the number of graduates in work or in training after an undergraduate degree, the course's reputation among UK employers and work experience opportunities. From talking to students in the focus groups, it appears that graduate employability matters to them. More than half of the students said that they looked, or looked briefly, at the employability information specific to their degree course. It was perhaps unsurprising that respondents in ten focus groups said that they decided to apply to this University because the statistics on the course employability was appealing to them. However, the relationships between their employability, career aspirations and value for money are more nuanced than it appears in the literature.

Some students had read about employability but did not connect it with the perceived value for money. Instead, these students talked about employability as a characteristic of their preferred course that gave them some reassurance. For example, in Group 4, where all participants study at the College of Arts and Law (CAL). Chloe, Hubert, and Rosie looked at the employability metrics after they chose their course. Rosie commented: *"I think they're first for their department in the country. It's really good because I don't associate Creative Writing degrees with a job, so I'm very happy"*. Later in the discussion, Rosie said that her degree offers poor value for money. When explaining her point, she did not refer to the employability metrics but focused on the lack of intellectual engagement and the fact that she had little contact with academic staff outside lectures. Rachel, another student in Group 4, said that she did not read about employability at all. When asked about her perception of value for money, Rachel commented: *"the money is worth it [because of] the interaction, human interaction, you have loads of contact hours"*. Like Rose, Rachel focused on her time at university and the social aspect of it when discussing what value for money means to her.

Among respondents who looked at information about their employment prospects, nine students mentioned that the University's links with industry and employers were important to them. For example, Alex (Group 2), a Black student studying at the CAL, said that she is thinking about a career in Corporate Law but she does not have any professional connections. She reported that the University has links with top law firms in the country and *"mixing with the right kind of people from early on"* should help her make the best start in her career. Likewise, Amelia (Group 5), an Asian student studying at the LES, said the opportunity to work for some industry partners over the summer helped her to make up her mind about the course since she had originally wanted to study Medicine but did not get the grades she hoped for. The fact that she will have an internship with an industry partner during the summer contributed to her perception of good value for money.

Some students did not consider information about employability but reported seeing good value for money in their degree courses. For instance, in Group 8, Ingrid and Yasmin, two Black medical students studying at the MDS, said that they did not read about employability. Yasmin did not read about employability before coming to the university because *"healthcare professionals are something that's never going to change. You're always going to need them"*. Yasmin reported that she chose to study Pharmacy because she is interested in science and not motivated by how much she could make as a pharmacist. Her friend Ingrid shares the same

view suggesting *"a pharmacist is something that's always going to be needed"*. Likewise, Paul (Group 9), a White student studying at the EPS appeared to think that *"a fairly decent job afterwards"* is guaranteed because *"people are always looking for engineers"*. What these students have in common is that employability metrics is not important to them because, in their view, their degrees would lead to in-demand jobs, and therefore their courses offer good value for money.

Five students admitted that their employability was not a part of their decision-making because they believed there is enough time to think about things they can do after graduating from university. For example, Abi (Group 11), a working-class student, who has older siblings studying at university, hoped that *"university would buy a bit of time"* before she needed to think about her future career. This is in line with previous studies looking at career decision-making of working-class students which found that students from less socially advantaged backgrounds tend to delay their career planning and tend to consider only limited career options (Greenbank and Hepworth, 2008). When asked about value for money, Abi indicated that for some people *"it is a worry"* but she seems to be content with her course: *"Just because I know it's going to get covered, and I know I'm quite good with money"*.

Overall, when students were discussing employability as it relates to their degree course, they often referred to it in the context of the HE choices. It appeared to give the participants more confidence in their preferred course. Employability was not mentioned as one of the elements that offer value for money. This is an interesting observation because, from a human capital perspective, employability should be taken into consideration. In reality, the participants focused on more immediate aspects of their degree, such as contact hours, opportunities with industry partners and financial help in the form of student loans.

6.4 Graduate salaries

It is in the interests of university applicants and students to have realistic expectations about their job prospects, including graduate salaries in related fields. Using the British Social Attitudes (BSA) survey from 2010, researchers found that 39.4% of respondents believed that people who went to university will not end up better off financially (Cook, Watson and Webb, 2019). Davies *et al.* (2013) looked at motivation and subject choice at degree level and concluded that male and non-White applicants were guided by salary and status of the job more than female and White students.

When students were asked about graduate salaries and their role in decision-making, a complex picture emerged. The majority of respondents reported that they looked, or looked briefly, at information about graduate salaries. Students who indicated that they considered information about salaries tended to search for this information online. There was only one student who reached out to people in her immediate circle. Gloria (Group 14), an EU-born student studying at the EPS, talked to her family friends, Chemical Engineering graduates, about their careers. Getting some insight into how much they earn positively affected Gloria's decision to study at this Russell Group University, but, according to her, it was not the main reason why she applied. Two other students in Group 14 looked surprised that Gloria talked to her family friends about salaries but chose not to comment on her experience. In contrast to Gloria's account, Vera (Group 12), a British Black student studying at the MDS, mentioned that her family friend was a pharmacist. Vera reported that she wants to work in healthcare and avoided asking her family friend about her earnings. These two examples highlight the cultural differences surrounding the topic of graduate earnings - British students felt uncomfortable talking to people about earnings and resorted to online sources if they were interested in learning more.

When talking about graduate salaries, some students indicated that they did not search for the salary information purposefully. They looked for careers related to the degree of their choice and found information about graduate salaries in that way. For example, Amelia (Group 5), an Asian student studying at the College of Life and Environmental Sciences (LES), described how she found information about graduate salaries:

Not, I didn't particularly go out of my way to look for the pay of a biochemist, but I just, out of curiosity looked up, what could you do with a biochemistry degree, the whole clinical scientist programme came up. Then just casually, as I was reading through the sign, it started talking about salaries.

Amelia pointed out that she did not search for information about graduate earnings, but she accidentally came across some numbers while reading about careers associated with her degree. Other members of her group, echoed after Amelia that information about salaries did not affect their decision-making. Rihanna pointed out: *"I like the content that they did here, so that's the main reason, not the salary"*. This can be interpreted as the tendency to think about one's interest in the subject and future earnings as mutually exclusive.

When talking about value for money, the participants tended not to mention graduate salaries, or how much they hope they would be earning. Instead, those who linked good value for money with their future careers described the financial benefits of studying for a degree in more general terms. For instance, Nicole (Group 7), an Asian student studying at the MDS, explained: *"you go to uni to get a good degree, so you can get a better job and with that better job, you get paid more"*. Without referring to graduate salaries, Nicole argued that some degrees reduce one's earnings potential because they lack clarity in terms of the graduate prospects. She continued:

Things that require, I don't know, a lot of the core subjects like Maths, Science, Computer Science, stuff like that get paid more than if you do like flowy subjects. I call them 'flowy' but obviously they're not flowy! They've got proper syllabuses like Arts, yes, English, Languages, yes. I mean, there is no clear career path.

The above comment shows Nicole has a somewhat simplistic idea about STEM and non-STEM subjects, according to which STEM degrees lead to higher earnings than non-STEM ones. She found comfort in this dichotomous typology because she was convinced that she will be earning more than students who chose to study *"flowy"* subjects.

Students who plan to continue their education beyond the first degree did not think that information about graduate salaries was relevant to them. For example, Karina (Group 9), an EU-born student studying at the CoSS, said that she wants to work in academia, like other members of her family, and that *"[She doesn't] know how much money [she] would like to earn, [she] just want get a PhD"*. Similarly, George (Group 9), an EU-born student studying at the LES, said that he hopes to become a researcher:

My father owns an environmental reserve in Brazil, and he is always with scientists around him, and there are always scientists visiting us, and I just feel I want to do research. I like dinosaurs; I like fossils, so I would discover things. I don't really care about money, I just said I want to be a researcher.

Both Karina and George showed an indifferent attitude toward money and that might be a result of coming from affluent families. George' father owns an environmental reserve in Brazil where George developed an interest in science and decided to become a scientist. When George heard Paul, a member of the same focus group, saying that going to university will help Paul to *"get a better job"* George commented that the main purpose of the university is not to give

someone a job but rather to become a scientist. Students from more affluent backgrounds, like Karina and George, seemed to stand on a 'glass floor' that their families built for them. They tended to give little consideration to the financial implications of going to university because money was not a concern for them.

6.5 Career plans

As a part of the focus group discussion, the respondents were asked about their career aspirations. While some respondents appeared to have very clear career plans (N=23), others reported that they did not think about a specific career, but they were confident that they will be able to secure employment with their degree (N=14). For instance, Alexandra (Group 8), a White student studying at the LES, like some other students in this study, did not have a clear plan career plan but was aware of a range of careers she might go into after graduation. She commented:

I don't know if I'll stay in the biology field; I might branch out. At the moment, I'm like going towards something animal/plant related, maybe like in a teacher role. I'm not entirely sure. I think I'll probably work it out as I go along.

In the pre-focus group survey, Alexandra reported that both her parents work in academia. She concluded that her course offers a variety of rewarding careers after talking to her parents. She believed there is enough time to find something she would like to do after her undergraduate degree. Some other students had more concrete plans for their future. For example, Lola (Group 12), an EU-born student studying at the MDS, described an area where she wanted to work. Not only Lola was able to determine the area in which she wanted to peruse her career but also mapped out where this career could lead her long-term:

I want to do clinical pharmacy, but I want to work my own way up to being a consultant in oncology, that's what I would like to do, and find a new cure for cancer and stuff like that.

Interestingly, a relatively high number of students were thinking about further study. Nearly one in four students reported that they considered continuing their education beyond their undergraduate degree. Eight of them were enrolled on the integrated courses at the Medical School. Three students reported they were planning to apply for a master's degree and three other students said that they were thinking of a doctorate. Most of these students indicated that they would like to specialise in an area similar to the subject of their undergraduate degree,

while one student, Gloria from Group 14, was thinking of an MBA programme because early in her undergraduate degree she realised that she would like to acquire a more diverse set of skills.

The respondents who were thinking about further education can be divided into three groups based on what drives their intention to stay in education. Some students said that continuing their education is a must for achieving their career goals (N=8); these students are enrolled on integrated medical courses. Others were driven by their interest. An example of someone who is passionate about a degree subject was Karina, an EU-born student studying at the CoSS. She explained her decision-making:

Okay, my first degree is in Education and the reason why I chose it is because from when I was a teenager I wanted to work with people with special needs. I would like to become an academic, to be honest, because we have a lot of academics in our family and I would like to become either an educator, special educator, or a psychiatrist. So, my grandfather, who was an academic, helped me, helped me in terms of online research. So, we decided that completing this degree and then doing a Master's in Special Education is the best choice.

Karina seemed to have a keen interest in Special Education, and she appeared to be driven by a willingness to make a difference in the field. When describing her career aspirations, Karina thought of studying for a degree as a normal part of life. Being surrounded by family members who work in academia, she seemed to heavily rely on their support and guidance. Karina appeared to be unaware of her privileged position, but Hope, an Asian first-generation student, drew everyone's attention to the fact that Karina's background is very different from hers. Hope commented: "*So you're very lucky actually. You had that mentoring*". Hope went on to explain that she had to make her HE choice on her own because her parents did not attend university.

Some students tended to think that a postgraduate qualification would give them a competitive edge in the graduate job market. For example, Joab (Group 3), an Asian student studying at the LES, explained his view on staying in education:

I think after my undergraduate I personally want to do a masters degree, because I think just the employability of an undergraduate on its own or a BSc, a lot of subject[s], as useful as it is, I don't feel like psychology I'm going to be able to do as much as I want to do with just a bachelors. So, I'll hopefully go into a masters degree, and then see what happens from there.

Joab appeared to think that his career options would be very limited if he graduated with a first degree, but then he continued:

Then maybe I'll want to get a job, maybe, or whatever, but we've got another three years to decide, so we don't really have to jump into anything yet right now.

Joab suggested that he does not know yet what he will be doing after his undergraduate degree. Staying in education seemed to be an attractive option because, in his view, it offers a competitive edge. Joab did not seem to be concerned about being at the risk of becoming overqualified. This approach becomes increasingly common among graduates when the HE system transforms into a universal one. When the HE sector expands, university education tends to lose its value while the earnings gap with non-graduate persists. Some students choose to stay in education as a mitigation measure (Marginson, 2016).

6.6 Student finance system

The 2011 White Paper highlighted that "putting financial power into the hands of learners makes student choice meaningful (Department for Business Innovation & Skills, 2011, p.5)". This implies that, when considering going to university, prospective students are expected to make thoughtful and informed decisions about their education, thus they drive change in the sector. Previous studies of financial literacy often find that many school students have limited capacity to make sense of financial matters and they may make poor decisions about HE. Davies, Syed and Appleyard (2016) examined the secondary school students' understanding of the financial system and concluded that the students in the study do not have a coherent knowledge of the financial system. The qualitative comments showed that the school students had unrealistic beliefs about how bank and government systems operate.

Another study focusing on university applicants' understanding of the financial system showed that the majority of the applicants do not take into account the financial support available to them when making decisions about their HE (Mangan, Hughes and Slack, 2010). The findings show that the applicants often start looking for funding only after a university offered them a place. As a result, many prospective students who have a good chance of receiving financial support from either the government or university miss out on the opportunities because they are not aware of or, believe they are not eligible for, any financial support (Mangan *et al.*, 2010).

During the discussion around the student finance system, it became clear that the majority of the study participants understand how students finance works in England. The level of detail that students could provide varied, they were able to articulate the difference between a loan from the SLC and a consumer loan. Explaining the point about what makes student loans different, the participants in different groups talked about good and bad debt. Overall, they tended to think that student loans were good. This is how Alex (Group 2), a Black student studying at the CAL, rationalised her positive attitude toward her student loan:

The way people portray it in the media and stuff like that is like, 'Oh, you have to pay back all in one go or something like that,' but you're only paying maybe like £100, maybe when you earn over £25,000, I think you pay, that's when you start to pay and it's a small amount from your salary, so you barely notice it. So I think it's quite good. It's a very expensive, if you look at Scotland but if you look at America, they're paying 40,000, 50,000 which is way higher than this, so I guess it's good for what it is basically. It's not a bad system. It's not the best, but it's not a bad system.

Alex appeared to view her student loan as a good thing because she was not forced to pay the money back and it was possible for her to pay back gradually. She then went on to explain that the context is important. In her view, students in England are worse off compared to those who attend university in Scotland, however, student finance in England is much better than the equivalent system in the US.

This is how Ami (Group 7), explained their position:

At first I was influenced by the idea that university is going to suck out every single bit of money that I have and it's going to leave me in so much debt, but then I looked on a couple of economy websites and there was an article on how these myths aren't as true as they are. When you finish uni you will be left with, say, £60,000, but it won't be like you're expected to pay that, and it will be deducted, like, the interest will be deducted. Every single year it will be an affordable amount and you will not even know that it's anything substantial.

Ami described how she at first was fearful of debt but, after reading on the topic a bit more, she became to understand student finance better. In her view, student loans were affordable. A recent study conducted among Year 13 students living in Oxfordshire and Buckinghamshire suggests that, contrary to a popular opinion, students are not afraid of student debt. The

participants accept the possibility of taking out student loans, with some of them having mixed feelings about the student loan debt and others being more positive because of the access opportunities that student loans provide (Esson and Ertl, 2016). The current analysis, therefore, focuses on two main points: whether students understand the student finance regime in England and how they perceive it.

The overwhelming majority of the respondents had some knowledge of the terms and conditions of their student loans. Five students highlighted the difference between a consumer loan and the loan that is provided by the SLC. A few students described the student loan debt as *different* and pointed out that having a student loan would not affect their chances of getting a mortgage, for example. Jenny, a White student studying at the CoSS, said that a credit card provider would not turn down an application just because someone has a student loan - "*it [the student loan debt] is not held against you in any way*" - she explained.

Students often said that their student loan debt does not feel like one because they are "*removed from the money*". Rosie (Group 4), a White student studying at the CAL, described how she felt:

If you had to pay money at the beginning of every lecture, if you had to hand over £36, I think that would connect you a lot more to what you're actually getting for that money whereas it all comes out in one lump sum and then it's gone. You don't really think about it so much. You don't think about what the money is actually corresponding to.

Rosie suggested that she feels removed from the money because she doesn't make payments directly to the University. She imagined that if she saw the physical money being paid to her lecturers, she would have felt more connected with her student loan. Rosie only mentioned payments to her lecturers which means she was not aware of how her tuition fees are being spent by the University. This is in line with a recent study that found that the respondents are largely unaware of how their fees are used to fund HE (Trendence UK, 2018).

Another example is Leyla (Group 11), an Asian student studying at the MDS. She also appeared to be disconnected from her debt. She explained that she did not think about it yet and, in her imagination, she will have to face it when she starts repaying her student loan debt. She did not seem to be looking forward to it. Her thinking illustrates a cognitive bias where an individual's perception of the present self is different from the future self. With more time between the two, people tend to find it hard to relate to their future selves and think of themselves in the future

as someone abstract (Pronin, Olivola and Kennedy, 2008). Leyla has not thought about her loan, but she anticipated it will be hard for her to pay back the money:

I think there's a lot of student debt afterwards which - like I haven't really thought about it yet, but it will probably be not that nice when it gets to it, because it is very expensive, and it builds up over how long the course is, but, yes, I haven't fully thought about it yet, but I think it will be hard when we have to start paying it back and stuff.

The majority of the students accepted their student loan debt. Among things that helped them to come to terms with their financial obligations, the respondents mentioned that they do not feel pressured to pay the money back and many participants thought that the student loan is affordable. Many of them said that having a student loan does not bother them because everyone has it now. Having a student loan has become an inseparable part of being a university student. For example, Rihanna (Group 5), an Asian student studying at the LES, noted that having a student loan is a normal part of being a university student. It is clear from her account that her teachers in college helped her a lot with accepting her situation:

I remember in college, my teachers were talking about the financial side and student finance and everything, and it kind of got me thinking. Most people if they go to uni and they have it, and they're fine, they just pay it off. I think after 30 years you don't have to pay the rest off or something, so I'm like, everyone else does it, so I will as well. So it's not a big worry to me, I don't really think about it much.

According to Rihanna, her teachers in college helped her to understand the conditions of her student loan. She appeared to hope to pay the money back, like everyone else, and was not concerned about the fact that the remaining debt will be wiped out after 30 years. Similarly, Leah (Group 11), a Mixed-race student studying at the CAL, described how taking out both loans made it possible for her to go to university:

I have to say, in terms of tuition, I think it's a fantastic idea. It's a difficult one as to whether it's flawed in the sense that very few people pay it back, but I suppose it's like I've always said, it is an investment into the future. It is for the future lawyers, doctors, writers, everything, psychologists, so yes, in terms of the tuition loan. Maintenance loan, I have no idea what I would do without that maintenance loan. I mean, I banked up... I was lucky enough to be working pretty much until A-level, so I had my own funds. I thought that I would just stick to

my own funds, but the rate at which it's all dwindling away, I'm so grateful for the maintenance loan to keep everything afloat really.

Unlike Rihanna, Leah suggested that far not everyone pays their student loan back. What comes through their responses is that they both seemed to accept the idea that they might not be able to repay their loans in full. They did not seem to be concerned about this prospect. In addition, as it became clear from the discussions that neither Rihanna nor Leah had clear career plans. This is worrying given that the student loan system is designed in such a way that graduates are expected to start repaying their loans when they can afford to do so. Leah's position appeared to be even more confusing when she suggested that her degree is an investment in her future. Perhaps she used this phrase the same way her parents did:

I think they've definitely always seen [education] as an investment. Perhaps not in a... I mean, obviously, in a financial sense, but I think they've seen it more as metaphorical in that they are investing...

Another possible explanation is that Leah indeed viewed her degree as an investment but she did not think of her fees as a part of her investment decision. Her sense of investment was related to her future career. With two European languages, as well as the ability to practice law in another country Leah felt confident that she will find a fulfilling job after graduating from university.

Furthermore, students with older siblings, who went through fee-based university education, found reassurance in the experiences of their older brothers and sisters. Ryan (Group 13), an Asian student studying at the EPS, talked about his older brother who started a rewarding job in IT shortly after graduation and was happy for a little money to be taken from his salary. Like his brother, Ryan appeared to hold positive attitudes toward his student loan debt and thought it is going to be easy for him to repay it.

Some students learned to accept their student loan but felt resentful about having to pay the money back. Lydia, an EU-born student studying at the CAL, commented: *"There is an awful lot of money involved, so, yes, I think, you kind of learn to accept it and because, no one else really questions it that much, it is what it is really"*. Her resentment towards her student loan debt appeared to be fuelled by fact that her degree course involves a lot of self-directed study time, which she did not expect. At first, Lydia did not know how to tell her parents about the limited contact hours, but then she accepted her situation and came to terms with her student

loan debt. Another example is Nicole (Group 7), an Asian student studying at the MDS, who was finding it difficult to accept her student loan debt. She thought: *"You go to uni to get a good degree, so you can get a better job and with that better job, you get paid more."* Simultaneously, she was concerned about *"a lot of debt"* that comes with her degree and concluded that her situation was *"a bit awkward"*.

Some students appeared to be resentful of their maintenance loans. While most of them seemed to be knowledgeable about the terms and conditions of the tuition fee loans, many of them tended to think that their living expenses, including accommodation, should have been covered by their maintenance loans. Since the participants did not know that their maintenance loan was designed in such a way that it was covering only a portion of their living costs and their parents were expected to contribute too, they grew frustrated about their circumstances. Sarah (Group 14), a Black student studying at the EPS, complained:

The only problem is the maintenance loan. I get a very low maintenance loan, so it doesn't cover my accommodation! My parents have to pay extra for that out of their own pockets. That's the only issue.

Clearly, Sarah's expectations of her maintenance loan did not match the reality. She thought it is not fair that her parents have to help her to pay for her accommodation. Sarah appeared to be aware that her student loan will be written off 30 years after her graduation and she did not like the idea that her parents needed to support her financially. Similarly to Lydia, who was mentioned earlier in this subsection, Sarah did not think she has to repay her student loan in full and did not appear to be concerned about potential consequences. Another example is Jason, a Mixed-race studying at the LES, described his current living situation as unsettling. Unlike Sarah, he did not ask his parents for financial help. He was worried about the prospect of being late on rent but explained that: *"that's just part of being an adult"*. Becki, a White student studying at the CoSS, seemed to be knowledgeable about her tuition fee loan, but was slightly annoyed by the fact her parents were helping her with money:

[SLC] don't tell you that your parents will have that issue, because we get a loan, we pay it back. If we don't pay it back in 30 years it's gone, whereas my parents are like, hmm, no money.

What comes through accounts of students like Sarah, Jason and Becki is that their understanding of the student finance system was fragmented. They appeared to understand that

their tuition fees are covered by their student loan, and they are expected to start repaying their loan after graduation. What is clear from their comments is that none of them knew that their maintenance loan is calculated based on the household income, including the income of their parents, so parents are expected to contribute towards a student's living costs. Becki, like many other students, did not seem to be concerned about the prospect of not paying back her student loan. She indeed pointed out in her argument that her maintenance loan will be written off in 30 years' time, whereas her parents' money will be gone.

Two students in the sample did not understand how the student loans from the SLC work. Although their circumstances were very different, it is hard to ignore the opportunities they had missed because of their limited understanding of the student finance system. Gloria (Group 14), an EU-born student studying at the EPS, did not apply for a student loan. She had a middle-class upbringing, and her family travelled a lot because of her father's job. Gloria commented that, up until the last moment, she did not know whether she will be classified as an international student or as an EU student. When she was offered to pay the EU fees, her family paid the fees as they could afford to do so.

A more worrying example is Monica (Group 10), a working-class British student, who chose to study at this University because it was local to her and she could not afford to move somewhere else. Still, very early in her degree, she was struggling to make the ends meet. She tried to apply for a hardship fund, but her application was rejected because she did not apply for financial support from the SLC. She found her situation very frustrating: *"You want me to get myself into more debt and then apply for your fund. That doesn't make sense. That fund doesn't cover that debt!"*. Unlike Gloria, who did not seem to be affected by her limited understanding of the SLC, Monica effectively lost the opportunity to receive any financial support from the University and was at risk of dropping out.

The majority of the focus group participants seemed to have some knowledge about their loans. Their discussion of the terms and conditions lacked some details. For example, nobody was able to specify the repayment threshold, or how deductions from their salary are calculated but, overall, there seemed to be a consensus that the student loans are different from other consumer loans, the payments are affordable, and they may not be able to repay the full amount. With that in mind, it was interesting to observe that some people still held resentment towards their student loans. In a way, some participants acknowledged that they receive money that nobody

was forcing them to pay back, and, simultaneously, these students were not happy about the fact that their parents still had to provide financial support to them.

Perhaps the language around student loans did not serve the participants when they were trying to describe the complex and sometimes confusing relationship with their student loans. The word *debt* stands out. The participants suggested that the student loan is different. They appeared to struggle with financial vocabulary but managed to explain how their student loan debt was different from other forms of consumer debt. Updating the terminology associated with loans from the SLC would probably help to change attitudes towards student loan repayment so that students would feel more responsible for it.

6.7 Value for money

When students were asked about their views on good value for money in HE, several students gave their own definition of good value for money. Gina, a Black student studying at the CoSS, interpreted value for money as "*everything is exceptional*". She seemed to be content with her decision to study at this University because, according to her online research, her department was one of the best Business departments in the UK. Alex, another student from Group 2 said that good value for money for her is a guarantee that she is "*going to be set on the right path for life*". Students in Group 5 came up with a list of things that represent good value for money for them, including subject-specific and transferrable skills, work experience during the degree course and secure employment after graduation. They also highlighted that meeting a variety of people at university was important to them. As a group, they agreed that their university experience should score high against each factor to make them regard their degrees as good value for money.

Two other students interpreted value for money as the add-ons that their university offers in terms of the course provision compared to similar degree courses at other universities. Others suggested that graduating from the Russell Group University would be better for them than graduating from a non-selective university. For example, Claudia, a White student studying at the EPS, pointed out that UK universities charge the same tuition fees:

I think here, because it's a Red Brick and it's been going for so long it's really worth the £9,250 but just compared to other colleges and universities that have been turned into universities

over the years but maybe aren't as well-established or get as high a grade compared to here, I think, it's worth it. Other places, I wouldn't so much.

In Claudia's view, her degree course offers a good value for money. She pointed out that she is paying the same fees as someone who study at a new university. She suggested that applicants with higher grades tend to apply to old universities, like the one where she studied. Unlike definitions of good value for money that were discussed earlier in this subsection, students like Claudia made a step back in their assessment and compared their degree course with a similar course at a different university. They concluded that their degree offers good value for money because they pay as much as anyone else at a different, less prestigious university.

Some students suggested that HE only offers good value for money to those people who are thinking of a career that requires a degree. For example, Leyla, an Asian student studying at the MDS, commented:

I've got people older than me who haven't been to university, and they're still in the same place in their job as people who have been to university. So I think maybe you don't have to go for every single thing. Like it's okay not to go, and save that money, and then you can start earning money faster as well, but also I think lots of people would want to come and have the experience too.

Leyla was aware that degree education is not essential for some careers and people who did not attend university can still have a successful career. At the same time, she seemed to be understanding of young people who want to go to university because they want to experience student life. Likewise, Alice commented on the difference between a traditional university degree and a vocational course. She suggested that not everyone need to go to university or would enjoy studying at university because "*not everyone is academic*" and some people may prefer hands-on training.

Other students (N=4) thought that when looking for good value for money, a degree subject area also matters. All of them made a direct link between the good value for money and career prospects after graduation. One of the students who shared this view was Paul, a White student studying at the EPS. He found it frustrating that some people do apprenticeships after their degrees:

You basically need [a degree] but people get things like there's more options of people who are doing apprenticeships and people finishing from university and then going into apprenticeships! For like in sixth form now, they're showing us, oh, there's other things you can do and you don't necessarily need a degree to be successful. But, yes, for what I'm doing, I think I needed a degree to go into engineering, yes.

He suggested that, depending on the field, doing an apprenticeship might be a better option for some people, and he thought it was counterproductive that some people do apprenticeships after they have already finished university. Paul also said that doing an apprenticeship in Mechanical Engineering was an option for him, but he always wanted to go to university and "*literally, everyone else in [his] family has gone to university*", so Paul admitted that he intentionally did not explore the apprenticeship route because he planned to go to university anyway.

When asked to share their perceptions of value for money, the respondents seemed to believe that they are getting good value for money. Many of them took a practical approach to their decision to study at university. Matt, a White student studying at the EPS, suggested that "*you do have to weigh up your options properly, to make sure it's correct for you, but I think it's still worth it for me, despite the cost*". Reflecting on her degree experience, Leah commented: "*Well, I suppose it's fortunate in some ways that my degree has the potential, if I obtain a good end result in my degree, then I have the potential to have a larger earning capacity*".

This belief commonly goes together with the assumption that there are not many things one can do without a degree. Some of the respondents said they do not know what they would do if they did not go to university. Three students studying STEM subjects admitted that doing an apprenticeship was an option for them, but they did not research how to apply for one because they wanted to go to university as everyone else in their families did. There was one first-generation student who also was determined to go to university and ignored the opportunity to apply for an apprenticeship. She decided to mitigate the costs of coming to the university by living at home with her parents and commuting.

Another common idea about good value for money was that a degree course offers good value for money through the university experience. Hope, an Asian student studying at the CoSS, commented: "*There are things that you learn about being human and you grow, definitely you*

grow. If you expose yourself to different things while you're at uni, I think you get a lot more out of it".

When talking about good value for money, many respondents find reassurance in the reputation of the University. They thought that a degree from this prestigious university provides good value for money: *"If you put that on an application, people are going to be, 'She went to the University X.' It's not like, there's a uni in town, Y Uni, it's not on the same level"*. This comment echoes signalling theory (Spence, 1973), which assumes that people pursue education to send a signal indicating their productivity to future employers, the respondents believed that they were getting good value for money because their potential employers would identify graduates from a prestigious university as more valuable candidates.

Those who were planning to study for a master's degree, or a PhD, also thought they could get good value for money from their first degree alone. Elliot, a white Psychology student, considering a career in Clinical Psychology, commented: *"You can't really go into research without a degree, but I don't know"*. According to Elliot, he needs to complete a master's degree to become a clinical psychologist. He added that he was open to other career options and, even if his career plan changed, his master's degree would offer him a comparative advantage in the graduate labour market.

Some students did not think their degree offered good value for money. Lydia, an EU-born student, recently arrived in the UK. She said that, at first, the differences between the education system in her home country and the education system in the UK made her doubt her decision to study in the UK: *"I was a bit shocked. I was worried to tell my parents, like, oh, how many actual classes I'm doing, because it was like a day for me in the past and now it's spread across a week"*. She still thought that coming to the UK was a good idea, but she was not happy about the limited contact hours. Not only Lydia had to adjust her expectations in terms of contact hours but also critically reflect on her career aspirations. She dreamt about acting but she realised that it was not realistic and now, a few weeks into her degree, she was open to other careers: *"You could go more into the English and literature side of things as well, like publishing, so I thought okay, that's another door. I liked the options and the flexibility"*. Luckily for Lydia, she was able to quickly reassess her situation and adapt.

Another student, Rosie, did not think she is getting good value for money because she was not satisfied with the course delivery:

I was lucky to go to a really good school and I feel like I'm operating at a standard that's possibly higher, and so I'm not finding these lectures particularly challenging, and for English I'm not actually learning very much at the moment, so it does feel like a lot of money that I'm pumping in.

Rosie calculated the price of each lecture based on the tuition fee for the first academic year and found that during the second term the price will go up because the number of lectures is expected to drop. Given that Rosie was not satisfied with her lectures in the first term, she did not like that, according to her calculations, lectures are going to cost more in the second term. She, like others, did not understand how her tuition fees are spent. When completing the questionnaire, Rosie indicated that she did not take the tuition fees loan or maintenance loan. Perhaps her perception of value for money would have been different if she took advantage of the student finance support.

Two other students were more critical about their university experience. Both of them attended the same college before coming to the Russell Group University and they were shocked by the lack of "*basic facilities*". According to these participants, at their old college, each student had an opportunity to borrow a laptop for the whole academic year. They did not expect that the Russell Group University does not have such a service. One of the students complained about her "*vintage*" computer and the fact that she does not have a budget for a new one. These two students seemed to be very dissatisfied with how their first year had started and they said that they did not feel that students are a priority for the university because, in their view, it was simply "*about money making*". Similarly, to Lydia, their expectations about their course have not been met. They found it difficult to accept their circumstances and felt very disappointed. When completing the questionnaire, both participants indicated they did not apply for maintenance loans. Perhaps their perceptions of value for money would have been different if the maintenance loan funding took some pressure off them.

Finally, two other students said that they are not getting good value for money because of the financial support that they receive from their parents. As mentioned earlier in the analysis, some respondents did not expect their parents will have to support them, which put them in a difficult situation because these students had hoped to become financially independent but could not achieve that position yet. When looking at their education as a whole, they did not feel their degree offers good value for money. What is interesting about this interpretation of

value for money is that their assessment is not limited to the degree or its outcomes, it branches out into the wider university experience.

6.8 Activity-based question about salaries

The focus group participants were given a list of degree subjects and asked to estimate how much graduates with different degrees earn 5 years after graduation. When everyone completed the table, the participants were presented with information about actual salaries in each degree subject. A bar chart was included on the same page to help the participants to interpret the information.

When discussing the results, the students were most interested in learning more about a subject area that was closest to the degree that they were studying. In twelve out of fourteen focus groups, the students were quite surprised to see the actual graduate salaries. Two degree subjects attracted the most attention, Law and Economics. For Law, the respondents typically overestimated graduate salaries. When prompted to explain how they thought about the average graduate salaries for someone with a Law degree, the students often said that they thought that lawyers are rich. When given some time to think about rich lawyers, students often said that they actually thought about barristers and solicitors. It did not take them long to realise that Law graduates need to complete additional training to become a barrister or solicitor. Since many students overestimated the graduate salaries for Law graduates, they expressed concern about prospective students who are thinking about going into Law. Another subject that was frequently discussed among the students was Economics. It became clear from the discussion that they did not know what people with a degree in Economics might do after graduation. Some even suggested that modern technology can make accurate forecasts and the need for Economists will be disappearing.

Six students compared their answers with the actual salaries and found the information reassuring and pleasantly surprising as they thought the actual average salaries were decent. For example, Laura explained why she and some other people did not consider information about graduate salaries when they were making decisions about their university education:

If you look at things like creative arts and design, if people really want to do it and they know the average is probably that, they would still do it. Because if you're passionate about your subject, you're so tunnel-visioned, I think. If people are unsure, and if they think they only

reason they're going into it is for financial reasons, then yes. Otherwise, I think it's common sense.

Being a Creative Arts student herself, she recognised that graduate salaries is probably the last thing she thought about. She was pleased to find out how much graduates with a degree in Creative Arts and Design earn 5 years after graduation.

Two students were not very involved in the discussion. Gina, a Black student studying at the CoSS, admitted that she was not interested in knowing how much graduates could make. She explained that she wants to become an entrepreneur and did not think that this activity is relevant to her situation for that reason. One more student, Karina, did not engage in the activity as much as others because she did not believe in statistics, and she said she did not know who participated in the LEO survey.

No one said that information in the activity could have affected their HE choices if they had this information before. Some students opposed the idea of including the information about graduate salaries in the sources about degree education. Respondents expressed a concern that such information might be off-putting for degree subjects with lower than the average graduate earnings because everyone is paying the same tuition fees. Becki explained her position on informing prospective students about graduate salaries:

Looking at what you earn wouldn't change what I want to do because I'm not really thinking about that, it's just what I wanted. I wouldn't do something just because I'm going to get a higher-paid job, I wouldn't enjoy it.

Her perspective on the role of salaries in the HE choice is similar to observations from a recent study that looked at attitudes towards the current student finance regime. Only 10% of respondents there thought that prospective students should make their HE choices based on graduate earnings alone (Brown, 2019). At the same time, some focus group participants said that this information might be useful for university applicants and their families, especially for those who do not know what to do next. This comment seemed to be somewhat counterintuitive because, in this sample, those students who searched for information about graduate salaries did so only when they identified a degree that they would like to study. Based on the findings from this study, it is difficult to think of a prospective student who would choose their degree course based on information about graduate salaries alone. The participants also said that they

found the activity useful as it made them think about their own graduate earnings and, in some cases, made them think about their future careers earlier than they planned to do.

6.9 Talking about money

Money was a part of the discussions around university choices, student finance and value for money. In addition to the direct interest in these topics, it was also interesting to observe how the participants approached the discussion around money matters. Especially, since people tend to avoid talking about finances in British culture.

Interestingly, two British students found it challenging and refreshing to discuss money matters in a group because, according to the way they were raised, money is not something they were encouraged to talk about. Leah, one of these students commented: *"I've always been taught never to really speak about money, but in terms of... Just in case it's... Not bragging but puts you in a bad light or anything like that"*. Although Leah was brought up to think that people are not supposed to openly discuss money matters, she actively participated in the focus group. She appeared to think about the financial implications of studying for a degree a lot. Nicole, on the other hand, said that she did not want to discuss the financial side of applying to university with anyone because it is *"not all about the money"*. When her group discussed their career aspirations, it became evident that Nicole enrolled on a course that was not her first-choice option. She found a way how she still can get into the career that she dreamed of. Nicole seemed to be interested in the focus group discussion around future careers, but when sharing her views, she did not talk about future earnings.

Overall, students appeared to be comfortable talking about money within the focus group setting. When talking about their life as university students, five participants commented that they are not worried about the immediate financial future. Two of them said that they were not motivated by future salaries or career opportunities but rather by their interest in the subject. This is a bit unusual as both talked at length about their passion for science and both were thinking about a research career. Three students said that they do not think much about money because both their tuition fees and their accommodation were covered by the student loans. Those students who had some money concerns tended to talk openly about things that frustrate them. In conclusion, talking about money in relation to university education did not seem to be a taboo topic for students who were willing to take part in this study.

6.10 Conclusion

The findings here indicate that the relationships between students' understanding of the student finance system, their HE choices, and perceptions around the value for money are more complex than previously thought. Most students appeared to have a fragmented or somewhat distorted understanding of student finance. Overall, they seemed to be clear about the student loan repayment plan, most importantly that their student loan debt is forgiven after 30 years. Students often did not know how their student maintenance loan was calculated. To address the gap between the awarded amount and their needs, some worked part-time, while others asked parents to help them with day-to-day expenses. They also were not sure how the student fee income was used by universities. In some instances, that lead the respondents to think their education is expensive and does not offer good value for money. At the same time, students appeared to have no issues with the prospect of not paying off their student loan debt. Some recent studies also found that some young people did not feel obliged to repay their student loan debt (Budd, 2017; Esson and Ertl, 2016), however it was not clear to what extent students understand the financial implication of receiving a loan from the SLC. This study showed that students are vaguely aware of the consequences of taking a student loan and are not concerned about their loan responsibilities.

Students came up with different interpretations of good value for money. They tended to focus on immediate impressions from their degree. For instance, a low number of contact hours and inconvenient timetable were associated with poor value for money, while access to facilities that other universities did not have or modules that students were interested in were associated with good value for money. Students tended not to mention the tuition fees when they believed that their degree offers good value for money, but they emphasised how much they paid for their degree when they thought their degree offered poor value for money. It was clear at the pilot stage that some students are not familiar with the notion of value for money. During the main stage of data collection, some students have not heard about this notion before and were provided with an explanation. Future nationwide surveys need to be clear about what they refer to as value for money in the context of HE.

CHAPTER 7: DISCUSSION AND CONCLUSIONS

7.1 Introduction

This chapter brings together the findings from Chapters 4, 5, and 6 by revisiting the research questions. Each research question is addressed in turn. This chapter also reminds the reader about the limitations of this study and suggests areas for future research.

7.2 A-level students' graduate salary expectations

This study sought to answer the following research questions:

1. What are factors associated with predictions of the graduate salaries?
2. Are there gender differences in salary expectations?
3. How do salary expectations of A-level students relate to the actual graduate salaries?
4. Is there an association between the preferred degree subject area and the accuracy of graduate salary expectations?

The study makes a significant contribution to the literature by improving the understanding of prospective students' financial expectations related to HE participation. This research is original in that no existing piece of work has examined prospective students' expectations of the average graduate salaries by subject as well as students' expectations of their own future salaries. This is in contrast with some other existing research in the area: for instance, the studies by Chevalier (2011) and Walker and Zhu (2011) examine average earnings of graduates from different subjects and the studies by Jerrim (2011) and Fernandes, Huber and Vaccaro (2021) compared university students' expected salaries with salaries of similar graduates. The data on a preferred degree subject made it possible to see whether students' expectations related to their subject of interest are more accurate than their expectations for any other subject.

To answer the first research question about the relationships between expected graduate salaries and students' characteristics, I used OLS regression analysis on a dataset of A-level students in English sixth form schools. Among other results, I found that the expected average salaries were positively associated with reading about student finance. This could be attributed to a positive outlook on the student finance system. Prospective students might think that the average earnings of university graduates are high enough to facilitate the smooth functioning of the student finance system. However, the student loan repayment rate has been low with

only 25% of current full-time undergraduate students being expected to repay their student loans in full (Bolton, 2021). This result is also consistent with human capital theory where reading about student finance informs students' perception of the graduate labour market, making studying for a degree an attractive option in the eyes of prospective students. The OLS regression results also indicate an important role of being able to calculate the real value of debt. To provide the correct answers, the surveyed students needed to understand how inflation works. Those who were able to answer the question about the real value of debt correctly tended to expect a lower average salary, which means their expectations were closer to the reality of the graduate labour market. This adds to the literature on financial literacy by indicating that general financial knowledge helps prospective students to interpret information about the financial implications of HE.

In the context of the salaries that students hope they would be able to earn if they were to hold a degree, neither reading about student finance nor being able to calculate the real value of debt appeared to matter. Instead, factors that could be broadly attributed to students' optimism were found to be positively associated with the expected graduate salaries. Students with high expectations of their A-level grades were more likely to expect higher salaries for themselves. That might be because students' grade optimism related to their academic performance has extended to their salary expectations. In addition, students who reported being confident in the predicted graduate premium, or the impact that holding a degree would have on their future earnings, tended to expect higher salaries. This suggests that the human capital explanation of the financial expectations interacted with self-belief, and human capital explanations are less important when young people think of their own future earnings. One possible mechanism is that prospective students think of studying for a degree as a sensible human capital investment, but their thought process becomes less analytical when they are asked about their own future salaries. These results have implications for policy towards HE participation, which is informed by human capital and consumer sentiments.

I did find significant association between expected graduate salaries and students' gender. The OLS regression results showed a negative association between being male and the expected average salary on one hand, and a positive association between being male and one's own expected salary on the other. The subtle difference between male and female students in the expected average salaries might be due to the tendency of female students to see more value in university education than their male peers. For example, in Sammons, Toth and Sylva (2016)

study on Year 9 students' aspirations, girls appeared to be more positive about going to university than boys. The researchers found that 64.9% of girls and only 57.6% of boys thought that going to university is very important. It is possible to see how in this study young women's positive attitudes towards university education could translate into more optimistic perceptions of the average graduate salaries. Conversely, it could be that male students reported expecting lower average graduate salaries because of the format of the question related to salary expectations. The surveyed students were asked to record their expectations of average graduate salaries by subject as well as their expectations of their own earnings. There was also an example statement suggesting that the average graduate earns roughly £30,000 by the time they are 30. Since male students in this sample, on average, tended to expect that they would be earning more than the average graduate with the same degree, they might have reported expecting lower average salaries because they thought they would be paid more than others but wanted to keep their responses in line with the above-mentioned example statement. A further study could ask students about their salary expectations without providing them with the example statement from the question. That would help to prevent unintended impact of such a statement on the survey responses.

This research showed that a gender pay gap exists in salary expectations: female A-level students held biased beliefs about their own earnings potential relative to others. They expected to earn, on average, 6.7% less than what male students expected they would earn if they were to study at university. In addition, female students consistently expected that they would earn 6.8% less than an average graduate who studied the same degree subject. The findings from this study are new in the sense that both students' beliefs about the average salary as well as their own likely earnings were examined. They encourage us to question why the pre-career gender gap exists. Previous research has mainly focused on how much respondents expect to earn upon graduation (Schweitzer *et al.*, 2014; Taylor, 2007; Jerrim, 2011; Delaney, Harmon and Redmond, 2011) but it did not examine beliefs about the average graduate earnings. Previous studies showed that women often expect lower earnings than their male counterparts.

The gender differences in pre-career salary expectations could be attributed to a complex interplay of social expectations and individual preferences, and perceptions of equity. As mentioned in the literature review, there are psychological differences between the genders whereby young men have a more positive view of the self than young women (Sáinz and Eccles, 2012). Men also appear to be more confident than women in their expectations at

different ages and in different contexts (Perry, Davies and Qiu, 2018; Sarsons and Xu, 2016). These gender differences have social explanations, meaning men and women are socialised differently. The same goals, beliefs, and motivations are considered more appropriate in different settings: men are expected to be assertive in work and sport situations, while women are expected to be more assertive in home and health situations (Mendoza-Denton, Park and O'Connor, 2008). At work, for example, women in leadership positions are perceived differently from men in similar roles (Okimoto and Brescoll, 2010). When women and men work in the same field, women have lower chances for career progression (Cikara and Fiske, 2009). Another possible explanation for the gender-based patterns at work is different career priorities. As explained in the literature review, young women are less likely to indicate, than young men, that they are motivated by future salaries in their choice of degree subject (Davies *et al.*, 2013). Women are also more likely than men to choose career opportunities with better work-life balance and flexible arrangements over those offering advancement. This can be partially attributed to the fact that women expect to take on greater caring responsibilities than men (Chevalier, 2007). Alternatively, it is possible that young women are aware of discrimination against them in both the family and work environment (Cikara and Fiske, 2009). In keeping with this perspective, female prospective students might expect to earn less than their male peers because they have realistic perceptions of gender inequality. In this study, when students were asked about the salary they expected if they were to study various subjects at degree level, female students reported they expected to be paid less than their male peers and the average gender-neutral graduate. This implies that female students are aware of the gendered inequality and undervalue themselves, which, in turn, contributes to a persistent disparity in promotions and pay.

When students were asked about their salary expectations related to the degree subjects that they are interested in, female students thought that they will be earning, on average, 2.3% more than the average graduate with a similar degree. At the same time, they expected to be paid 10.4% less than male students. Essentially, when the analysis focused on those who indicated which subject they wanted to study at degree level, female students believed that they will be paid slightly more than the average person with the same degree but they still predicted to be paid less compared to male students. Male students, on the other hand, appeared to be even more optimistic about their future salaries as the gender pay gap expanded from 6.7% in the general scenario to 10.4% in the choice-sensitive scenario. The observed gender gap in salary expectations is still smaller than the actual one. A new HEPI report revealed the overall pay

gap between men and women persists five and ten years after graduation. Ten years into their career women tend to earn 24% less than men (Cornell, Hewitt and Bekhradnia, 2020). The observed gender pay gap is concerning given that the sixth form sample consists of high-achieving students, with 62.7% of them attending private schools. On average, they expected to graduate with high A-level grades: AAA. Despite this, female students appeared cautiously optimistic in their salary expectations and thought they would have a slight competitive advantage in the graduate labour market.

Average salary expectations hide substantial subject-level differences in the predicted earnings. Both male and female students have similar expectations in relation to how much they would be paid if they studied for a degree in Art, Education, History or Languages. However, male students expected that they would earn significantly more than their female counterparts if they were to study Engineering, Physics or Chemistry, Maths and Computing at university. When the analysis focused on those, who reported which subject they intend to study at university, a large overall increase in differences between the female and male students was observed. Engineering, Physics or Chemistry, and Maths and Computing were no longer the top three subject areas with the largest gender pay gap. Engineering, Law, and History became the subject areas where the salary expectations of male and female students are very different. There were also differences between male and female students in their perceptions of degrees associated with highest paying jobs. Overall, male students thought that Law, Medicine related, and Maths and Computing lead to the highest earnings, whereas female students thought that a degree in Medicine leads to the highest paying jobs, followed by Maths and Computing and Law. The order of the subjects associated with high earnings was therefore different in the choice-sensitive scenario. Art was considered the degree with the lowest earning potential by all students in both general and choice-sensitive scenarios. Art was followed by Education. Interestingly, Education was no longer one of the lowest-paying degrees when female students intending to study for a degree in Education reported how much they think they would be paid. In the choice-sensitive scenario, History became the second lowest-paying degree. According to the most recent analysis of graduate earnings in the UK, Medicine, Economics and Maths are the three highest-paying subjects for all graduates in the UK. In practice, women with a degree in Education are at the lower end of the earnings distribution, while men with a degree in Education are in the middle of the earnings distribution (Britton *et al.*, 2020). The findings from this study indicate that prospective students had already formed beliefs about the graduate salaries for graduates from different courses. They were correct to expect that Medicine and

STEM-related degrees would lead to high paying jobs, but they tended to wrongly assume that a degree in Law would do the same. Looking at the observed patterns, it seems safe to assume that A-level students reported their salary expectations that are based on their assumptions rather than their knowledge of the graduate salaries. This assumption was tested through the focus groups with first-year students. Information about future salaries was not important to university students during the HE choice process, but some reported that they came across such information in the past. Most of the focus group participants found the activity-based discussion around the salaries of graduates from different courses useful because it prompted them to think about their future. At the same time, none of the participants thought that having this information at hand before they had applied to university would have affected their HE choices.

In addition to examining patterns in prospective students' salary expectations, I compared prospective students' expected salaries with the actual salaries of graduates in each field of study. The sixth form dataset allowed the comparison of students' expectations of average graduate salaries by subject as well as their expectations of their own earnings with earnings of similar graduates from the LFS. The comparison showed that A-level students expect average graduate salaries that are 12.3% higher than the actual average salaries of similar graduates. With regard to beliefs around students' own likely earnings, male (female) students predicted they would be paid, on average, 7.8% (8.5%) more than equally qualified male (female) graduates. These findings are unique because no other study based on the UK data compared both students' expectations of average graduate salaries as well as their expectations of their own future salaries with actual graduate earnings. For example, Jerrim (2011) compared UK undergraduate students' expectations of their own starting salaries with the salaries of similar UK graduates who had a degree in the same field of study. Jerrim reports that undergraduate students overestimated their own starting salaries by an average of 15%. The results in this study are slightly different: when prospective students are asked about their expectations for their own salaries, the gap between the predicted salaries and actual salaries of similar graduates is half that of the gap observed by Jerrim (2011). The difference should be interpreted with caution because the participants in this study were asked about their salary expectations related to the degree subjects that they are interested in as well as other degree subjects that they have little interest in, whereas Jerrim's study (2011) only focused on the former. Most recently, Briel *et al.* (2022) examined salary expectations of university applicants who have just submitted their applications to a university in Germany. That study focused on

comparing students' expected average salaries with the actual average starting salaries in their field of study. Briel and her colleagues found that female students expected average salaries that were 12% lower than the average salaries predicted by their male peers; female students also expected their own salaries to be 17% lower than what their male peers predicted they would earn if they were to study the same subject at degree level. The findings of my study are different in that prospective female students expect average graduate salaries that are slightly higher than the average graduate salaries that male students expect.

When the analysis was restricted to the responses of students who intended to study one of the subjects at degree level, the relationships between the expected graduate salaries and actual salaries of similar graduates were different. The gap between the expected average salaries and actual average salaries was 15.9% rather than 12.3%. As for students' beliefs around their own likely earnings, male (female) students predicted they would be paid, on average, 25.8% (19.0%) more than equally qualified male (female) graduates. These findings contradict human capital explanations of HE choices, which, as previously stated in Chapter 2, assume that prospective students take money into consideration. According to human capital theory, prospective students make economically driven decision to study for a degree. If they did, they would have had reasonably accurate beliefs about their potential earnings. Instead, their salary expectations are farther away from the actual graduate salaries when they are asked about the degree subjects that they are interested in. Looking at the findings, it is possible to conclude that prospective students do not behave in the way anticipated by human capital theory. These students are rather more optimistic about their potential earnings when they are asked about their expectations related to the subject of their choice.

The findings from the first empirical chapter challenge human capital and consumer explanations of decision-making towards HE. The regression analysis of factors associated with the expected average graduate salaries demonstrates that student financial literacy helps prospective students with labour market information, making their salary expectations more comparable to how much university graduates are paid, on average. At the same time, financial literacy does not appear to be important when it comes to how prospective students form expectations of their own future salaries. Instead, their expected A-level grades and confidence in the graduate premium are positively associated with students' future earnings. In other words, students' optimism informs their financial expectations, rather than their knowledge of the graduate labour market. The theory reviewed in Chapter 2 and the findings of this empirical

study provide novel evidence for the view that prospective students' expectations are not formed in the way anticipated by human capital theory. Overall, prospective students tend to think that graduate earnings are higher than they are, and they appear to be more optimistic about graduate salaries for the subjects that they want to study at university. The graduate salaries are assumed by students, and do not seem to result from their understanding of the graduate labour market. In addition, female students hold biased beliefs about their own earnings potential relative to others and appear to be less optimistic about their position in the graduate labour market. My findings highlight that prospective students do not approach HE as critical decision-makers who make an informed assessment of their options.

7.3 Graduate premium and confidence in these predictions

The second empirical chapter focused on the following research questions:

- What expectations do A-level students have about the difference going to university would make to their annual earnings by the time they are 30?
- What is the level of student confidence when they are asked about their earnings prediction?
- What are the characteristics of those expecting the graduate premium of at least 20%?
- What are the characteristics of those who indicate high levels of confidence in their predicted earnings?

The findings from this study suggest that the majority of the A-level students expected that going to university will have a positive impact on their future earnings, with male students expecting a slightly higher graduate premium than their female counterparts. This does not come as a surprise as Davies, Qiu and Davies (2014) also found that male Year 11 students tended to expect the graduate premium of a larger size. That being said, the returns to HE are higher for women relative to men (Dougherty, 2005). In this study, about half (49.6%) of male respondents and one-third (33.3%) of female respondents predicted that going to university would increase their annual earnings by at least 20% by the time they are 30. These findings should be interpreted with caution. There is no data available on whether the surveyed students were aware of the fact that the size of the graduate premium fluctuates over time. For example, Anchor *et al.* (2011) asked university students to estimate the impact of their degrees on their earnings right after graduation and 10 years after. In contrast, Menon *et al.* (2017) asked

prospective students about the expected rate of return to university education without a specific reference to the respondents' age in the hypothetical scenario or years after graduation. The sixth form questionnaire makes a specific reference to the age of the graduates, which might mean that the premium fluctuation was built into the question. Under this assumption, one can conclude that male students tended to overestimate the impact of HE education on their potential earnings: on average, they expected a graduate premium of 15%, which is three times the size of the actual graduate premium for men at age 30 in the UK. Female students, on the other hand, tended to underestimate the impact of holding a degree on their potential earnings as they, on average, expect a graduate premium of at least 15%, while the most recent report IFS report suggests that women see a 25% increase in their earnings at age 30 (Britton *et al.*, 2020). An alternative interpretation of the graduate premium question would assume that prospective students are not aware of the graduate premium fluctuation, so it would be appropriate to compare the predicted graduate premium with the lifetime returns to HE. Following the second interpretation of the question, students, on average, tended to underestimate the impact of holding a degree on their potential earnings because men receive an average lifetime graduate premium of 23% while women receive a premium of 33% (Britton *et al.*, 2020). No matter which interpretation one chooses, the findings here highlight that prospective students have a limited understanding of the instrumental value of a degree. This raises an important question of whether they make an effort to learn about the financial implications of their HE choices. It is possible that they do not, and rather make their calculations based on internalised assumptions about the instrumental value of their preferred degree.

Differences in confidence were observed in the two groups: 36.3% of male students and 18.7% of female students reported being 'confident' or 'very confident' about the predicted size of the graduate premium. Students' confidence in the potential success in HE and how useful or enjoyable they perceive their degree are important for their HE choice. The perceived value of a degree therefore might consist of its utility value and intrinsic value. Utility value refers to the future graduate labour outcomes, including graduate earnings. The intrinsic value refers to prospective student's interest in a degree subject (Diamond *et al.*, 2018). Confidence in the financial predictions might mean that the respondents thought of studying for a degree as a worthwhile investment. What is perhaps more interesting is that 24.2% of male students and 42.4% of female students indicated that they are 'not confident' or 'very unsure' about their answers to the question about the size of the graduate premium. The observed confidence gap

is in line with the previous research that demonstrated lower levels of confidence among women (Marianne, 2011; Samek, 2015; Sullivan, 2006). The only study where female respondents were more confident than their male counterparts about their future earnings was conducted in the US among students studying for a degree in Finance (Schnusenberg, 2020).

There seems to be a link between the returns to education and A-level students' confidence in their predictions. Overall, those who intended to study a high premium subject were more likely to be more confident in their financial beliefs than those who had different plans, that is 37.1% vs. 25.9%. This pattern can be attributed to the normal process of perception where people look at future outcomes with optimism (Dunning, Heath and Suls, 2004). Perhaps students planning to study a high premium subject tended to be more confident because the instrumental value of their degrees was important to them, and they wanted to believe that they were making the right choice. This association, however, turned out to be too weak to be included in the regression analysis that is discussed next.

The logistic regression analysis of the expected graduate premium explained 14.0% of the variation. Those who intend to apply to a Russell Group university had higher expectations of the difference that their degree would make to their future earnings. Walker and Zhu (2013) demonstrated that men and women who graduated from a Russell Group university earn, on average, 16% and 9% more than similar graduates who graduated from a 'New' university. They argued that the observed differences can be explained by admissions practices, where higher-ability students have higher chances of being accepted to a Russell Group university. Most recently, Britton *et al.* (2020) found that whether the graduate attended a selective university or not had an impact on the earnings of male graduates only. The situation in other countries is different. Evidence from the US suggest that attending a selective college affects graduate earnings of all students (Witteveen and Attewell, 2017). Students' predicted A-level grades were positively associated with expecting a graduate premium of at least 20%. As suggested above, these results might indicate that students' grade optimism translated into optimism related to their financial expectations, including the size of the graduate premium.

The relationships between the predicted graduate premium and the factors related to financial literacy are difficult to interpret because the extent to which the surveyed students were knowledgeable about student finance remains unknown. Students that were able to calculate the real value of debt tended to expect a higher graduate premium. This can be explained, at least in some part, by their ability to interpret information related to the financial implications

of studying for a degree. It is also possible that the respondents assumed that going to university is a good investment decision. The data suggest that expecting to repay the student loan debt is negatively associated with the predicted graduate premium. These results might indicate that some respondents were aware of the fact that only a quarter of current full-time students are expected to pay off their student loan debt (Bolton, 2021), so they adjusted their responses accordingly. It is difficult to interpret the relationships between these variables when information about students' knowledge of the student finance system is not available.

The discussion now turns to factors associated with students' confidence in their graduate premium. The logistic regression analysis, where being 'confident' or 'very confident' and zero otherwise was the dependent variable, explained 12.8% of the variation. Expecting a graduate premium of at least 20% was positively associated with the confidence in the predicted graduate premium. As discussed earlier in this chapter, male students tended to be more confident in their graduate premium expectations than female students (12.0%). Students' predicted A-level grades also matter. Predicting higher A-level grades was associated with an increased likelihood of being confident or very confident in the predicted graduate premium (1.3%). The confidence in the predicted graduate premium can be at least partially explained by students' academic self-confidence. Students expecting to do well in their A-levels could also be confident that they will do well later in life compared to those who are less optimistic about their academic performance. It is also possible that students expecting higher grades were able to interpret information about the instrumental value of their degree options more efficiently than others (Davies, Qiu and Davies, 2014).

As discussed in earlier chapters, there is a number of limitations to this study. First, the question about the size of the graduate premium is open to interpretation. The results can be interpreted very differently depending on whether the question was meant to refer to the graduate premium at age 30 or the lifetime returns to an undergraduate degree. In addition, the dataset lacks information on students' knowledge of the student finance system. Without such information, it is difficult to suggest to what extent the observed confidence in the graduate premium is related to students' understanding of the financial implications of their HE choices or their naive optimism. However, if one considers these findings together with findings from the first empirical chapter, the similarities between the two, namely that the salary expectations do not line up with the actual salaries of similar graduates and female students tend to hold beliefs about the labour market that put them in disadvantaged position compared with others, make

it possible to conclude that prospective students have spent limited time, or no time, on collecting information about the financial implications of HE choices. It seems that their calculations are based not on previous knowledge but on their assumptions about HE.

Since the question of the nature of students' expectations related to the financial implications of HE participation could not be examined in detail by looking at the sixth form dataset alone, it was felt necessary to extend the analysis further. The focus groups with young people who recently started their first degree were used to probe more deeply and look at current issues given the date of the sixth form dataset and relevance to current decision-making of students. The focus group data allowed exploration of participants' attitudes and opinions related to their HE choices which were not revealed in the secondary data analysis. The findings are discussed in the next section.

7.4 University choices, student finance and value for money

The limitations of the first two empirical studies prompted me to extend my project further and explore the below research questions:

- What sort of beliefs do students hold about the financial implications of graduating with a degree in England?
- What do students know about student finance in England?
- Focusing on the expected financial implications, how do students judge the value for money?

This section begins with a discussion of students' beliefs about the role of their degree education. The way students perceive their degree is important for understanding their beliefs around the financial implications of studying at university and how they define value for money. In this study, students described their degree as an essential requirement for their future career, as an investment or as a desirable experience. The first two roles are related to the instrumental value of education, while the third one is related to its intrinsic value. Contrary to the previous research suggesting that prospective students tend to view a degree as a natural step (Which?, 2014) or adopt their parents' assumptions about the financial side of HE (Harrison *et al.*, 2015), first-year students that participated in the focus groups tended to be more active in their decision to go to university. The high number of students who felt that their choice was associated with the instrumental value of their degree might be due to

convenience sampling, where students with an interest in the research topic were inclined to join the study. The discussions with first-year students did not offer evidence of gender-based patterns in student orientations. Instead, student career aspirations, or lack thereof, played a dominant role in shaping students' views on their education.

The first category of students in the typology of student orientations views their degree as an essential requirement for their career. Students in this category tend to have a clear idea of what they would like to do upon graduation. They tend to be enrolled in STEM or Medicine related courses. Their family background is diverse, with some choosing to follow their parents' career paths, and others being first in their family to go to university. Students in this category shared views on employability, graduate salaries, and value for money. The findings here confirm that employability and career aspirations are important to first-year students transitioning into HE (Mullen *et al.*, 2019). According to students in this category, the fact that the degree course of their choice had good employability metrics gave them some reassurance and helped a few individuals to narrow down their choices. These students did not look for information about graduate salaries and explained this by their choice of studying for a degree that leads to in-demand jobs. They comment that the information about graduate salaries was already there when they looked for other kinds of information about their degree. When asked about value for money in relation to their degree, students who view their degree as an essential requirement report that their degree provides good value for money.

The second category of students describe their decision to study for a degree as an investment, which is again in line with human capital theory. These students also have a career-oriented approach to their education, but their career plans are less defined compared with the plans of students in the first category. This group of students study a wide range of degree courses, and it is difficult to confine their description to a specific college within the university. They also come from diverse backgrounds. When asked about their awareness around employability, some students reported that they came across information about it, whereas others said that they did not know much about employability specific to their degree course. When prompted to explain why they did not search for this information, they suggest that their career plans have not crystallised yet and they were not sure how to interpret the information about graduate employability and to what extent it is relevant to them. These students often report that they did not look for the information about graduate earnings. Similarly to their comments related to graduate employability, they seem to think that this information is not relevant to them

because they have not decided yet what they are going to do upon graduation. Only one student shared that she talked about graduate earnings to her family friends who hold degrees in the same subject that she applied for. That student lived abroad before moving to the UK for her undergraduate degree which could explain why she took a different approach. Overall, there is a mix of views on the perceived value for money. Some students believe that their degree offers good value for money because it opens doors to many opportunities, whereas others do not think that they receive good value for money. Their dissatisfaction is related to instances when their expectations have not been met. For example, a few students expected that there will be more contact hours. Others expected that their maintenance loan would cover the costs of their accommodation and appeared to be frustrated that there is not enough funding, and they had to think about alternative sources of income, such as personal savings, part-time work, and parental contributions.

The third category of students describe studying for a degree as a desirable experience. These students tend to be enrolled in courses based at the CAL or CoSS colleges. Importantly, these students come from families where at least one parent holds a degree. The decision to study at university was driven by their academic interests or a belief that getting accepted onto a course would be easy. When asked about whether they considered information related to employability, these students said that they have not. They also did not look for information related to graduate salaries. One student reflecting on her decision to study for a degree suggested that prospective students have 'tunnel vision' when they think about their degree and are not concerned about their career prospects. A couple of individuals even looked down on other members of their discussion groups, who shared the view that their education offers knowledge and skills for work, and that commented that education is not about jobs. There was a mix of views on value for money in relation to their degree. Social and wider personal benefits of studying for a degree were attributed to good value for money. Poor value for money was rare and came from unfulfilled expectations related to the contact hours.

The findings here suggest that students with different orientations have different approaches to their HE and engage, or do not, with the information about employability and graduate salaries. The literature suggests that perceptions of value for money are dynamic with applicants, current students and graduates focusing on different aspects of their degree (Brown, 2019). The focus group findings demonstrate that the picture is more complex as the perceptions of value for money vary within this study's sample. Overall, students tended to focus on their day-to-day

experience when discussing their perceptions of value for money. Those who viewed their degree as an essential requirement for their career or an investment sometimes linked employability with their perceptions of good value for money, pointing out they will be able to make a smooth transition into work. Contrary to the human capital explanations of HE participation, students in this sample did not actively search for information related to employability or graduate earnings but rather assumed the economic value of their degrees. These findings also challenge the consumer-oriented approach to HE because first-year students did not search for information about graduate earnings. A recent IFS report states that it examined the impact of undergraduate degrees on early career earnings "to improve information on the value of HE degrees"(Belfield *et al.*, 2018, p.5). It is not clear though who would benefit from the improved information provision since some young people in this study are basing their HE decisions upon assumptions, not available information, related to their HE options. Views of students who sought to have a university experience and do not necessarily link their HE degree with labour market outcomes are particularly troubling for the human capital investment model of HE because the economic value does not appear to be important to this category of first-year students.

The lack of previous research that looked at both students' understanding of student finance and their perceptions of value for money created the opportunity to explore this relationship in this study. Most students have some knowledge about the student finance system. Only three out of fifty-one participants seemed to be unaware of the implications of taking out a student loan. Even though students tended to have gaps in their knowledge about student finance, specifically how the tuition funding might be used by universities, they understood that their student loan is different from any other consumer loan, and they thought they were not expected to repay the balance. Some students reported feeling removed from their student loan debt and viewed their student loan repayment responsibilities as something they will think about later. While some students did not seem to be concerned about their student loan debt, others thought their education is expensive and they will be in debt for the rest of their lives. The situation where the participants indicated that there was no pressure to repay their student loan debt and simultaneously felt a psychological burden of student loan debt is unusual. This position was explained by the fact that the student loan debt will stay with them for 30 years. Participants were open to the abstract notion of being responsible for their student loan debt but could not articulate in concrete terms how they would act responsibly. It might be argued that the

terminology of student finance limits students' ability to express their attitudes toward the financial side of studying for a degree.

As mentioned earlier in the preceding chapter, students offered different definitions of value for money. While some suggest that their degree provides good value for money because their university experience was exceptional, others think that their degree provides good value for money in comparison to similar courses at other universities because of the things that other courses do not offer. An example would be an internship opportunity with an industry partner that was not available or was not advertised elsewhere. Other students mentioned that their degree provides good value for money because their degree would advance their career prospects or provided the foundation for their further studies. The views expressed by these students indicate that the notion of value for money is often separated from the tuition fees that have been frequently mentioned in the context of value for money for students (Browne, 2010; Department for Business Innovation & Skills, 2016a). When students are satisfied with their university experience, they do not mention any tuition fees. This might be because they assumed that they do not have to pay anything back. Conversely, it could be that students describe the student loan debt as affordable and it is not their immediate concern. However, when their expectations were not met, they tended to resort to a consumer narrative by pointing out how much they paid for their education. Specifically, one of the students calculated the price of each lecture based on the tuition fees for the first academic year. She was not happy about the price in the autumn term and a price increase in a spring term which she explained by a drop in the number of lectures. Tomlinson (2017) also demonstrated that some students attempted to measure the value of their degree by calculating the price of a lecture. What is novel about the current study is that these simplistic calculations are used by students to evidence the perceived poor value for money. Two other students were disappointed because they were not provided with laptops for their studies. Receiving poor value for money was also associated with the lack of understanding of how maintenance loan is calculated, with some participants being frustrated with the situation where their parents needed to support them financially.

Taken together, the findings from the first two empirical studies and this study show that both prospective HE students and first-year students have a limited understanding of the financial implications of their HE choices. They tend to assume that studying for a degree is an economically sensible option, or otherwise a desirable experience. Applied to educational

decision-making, human capital implies that money matters. It does for some students, but their accounts demonstrate that their HE decision-making is constructed in the way anticipated by human capital theory. Students in neither group act as informed consumers, which is problematic in the HE policy context with market imperatives. The implications of this research for the HE policy are discussed in more detail in the next section.

7.5 Implications for policy and research

7.5.1 Implications for policy

The funding system for HE in England has changed significantly over the past 30 years. It has evolved from an elite system to a universal one, which was accompanied by quasi-market funding reforms. Student finance for home undergraduate students went through radical changes: the introduction of upfront tuition fees of £1,000 and removal of maintenance grants in 1998 were followed by trebling of tuition fees and reinstatement of maintenance grants in 2006. In the same year, the decision was made to replace upfront fees with income-contingent repayment plans, which start only when a graduate earns over the repayment threshold. Some six years later the tuition fees trebled again reaching up to £9,000 a year. In 2017, eligible HE providers were able to raise their tuition fees to £9,250 a year.

In parallel, prospective students were reimagined as consumers who can drive competition in the HE sector and improve quality by making informed choices about their education. The OfS expressed its commitment to offering good value for money to students and taxpayers. That could be achieved by ensuring that degree education holds value over time. (Office for Students, 2019). This view on value for money seems to be problematic because of the nature of an undergraduate degree as a good. Neither prospective students are able to determine the value of a degree in relation to their university experience or future graduate outcomes nor is it possible to predict the value of different degrees for the changing graduate labour market. HE choices could be described as rational but limited by the knowledge and cognitive capacity of a decision-maker (Castillo *et al.*, 2011). Despite the apparent mismatch between prospective students' ability to fully understand the implications of their HE choices and the demand-driven system of HE funding, prospective students are expected to consider whether their degree offers good value for money. In this context, it is important to understand how they calculate value for money. It can be argued that their calculations are based on their expectations and prior knowledge.

The findings here suggest that A-level students hold optimistic expectations about graduate earnings. Overall, the expected average salaries were 12.3% higher than the actual graduate salaries of similar UK graduates. Male students predicted that if they were to study each of 11 subjects at degree level, they would earn, on average, 7.8% more than similar male graduates. Female students expected salaries that were 8.5% higher than the actual salaries of similar female graduates. The subject choice plays an important role in students' salary expectations: when students were asked about the average and their own likely salaries for the subjects that they are interested in, the gap between the students' expectations and actual graduate earnings increased compared to their responses related to subjects that they are not interested in. The gap between the expected average salaries and actual salaries increased to 15.9% when students were asked about subjects that they want to study at university. Respondents' own expected salaries were also much higher, with male (female) students predicting they would earn 25.8% (19.0%) more than similar graduates. These findings prompt the question of whether prospective students think rationally about the financial implications of obtaining a degree. From a market-oriented perspective, a quasi-market of HE can only operate effectively if the consumer is both well-informed and able to act upon the product of their decision-making process. Some argue that informed decision-making can be facilitated by providing prospective students with information about graduate earnings. One would expect that they know more about graduate salaries for a subject that they are interested in. Consequently, prospective students' salary expectations should be more in line with actual graduate salaries for the subjects that they intend to study at degree level. The findings here show the opposite trend. A-level students were more optimistic about the average earnings and their future earnings for the subjects that they wanted to study at degree level, meaning their expected salaries were further away from the actual salaries of similar graduates. These findings put into question the extent to which prospective students can be regarded as informed consumers, or rational investors.

Focus group discussions with first-year students provided more insights into the role of salary expectations in HE choices. During the activity-based discussion around graduate salaries, the focus group participants commented that they found information about salaries of graduates from different courses interesting and it made some of them think about their careers but none of the participants reported that having such information would have changed their subject choice. Simply providing prospective students with information about graduate earnings is unlikely to influence their HE choices. The findings show that first-year students tended to

think that studying for a degree would lead to a financially rewarding job in the future. Most first year students did not actively search for information related to graduate earnings, but rather assumed the economic return to a degree. Many indicated that they were not interested in their future earnings but wanted to have a career that would match their interests. Some suggested that they decided to go to university because they wanted to have the experience of attending a university. Once at university, these first-year students did not think that having information about salaries of graduates from different courses would have affected their HE plans. Taken together, these findings challenge the HE policy narrative where prospective students are thought to shape HE provision through the financial power given to them (Department for Business Innovation & Skills, 2011). It is clear from this research that young people do not appear to approach their decision to study for a degree as the government is expected them to. Young people's HE choices are more complex, and the economic return is often assumed and cost-benefit reasoning is often absent.

Turning now to the findings related to the subject-level expectations, prospective students appeared to have preconceived ideas about the distribution of graduate earnings. In general, A-level students tended to believe that a degree in Medicine, followed by a degree in Law, lead to a career with the highest financial rewards. Students also thought that STEM subjects offer high financial rewards. Most recent evidence suggests that Medicine is indeed the highest paying subject for both men and women at age 30. However, Law graduates, on average, earn less than some STEM graduates or those who studied Economics (Britton *et al.*, 2020). This is particularly important given that male A-level students who plan to study Law at university reported believing that a degree in Law leads to a career with the highest earnings. The findings from the focus groups with first-year students also suggest that students thought that Law degrees lead to high paying jobs. When it comes to the beliefs around careers with the lowest paying jobs, A-level students thought that a career in Arts comes with the lowest pay. These beliefs are in line with the recent nationally representative data. The focus groups with first-year students brought similar results whereby the participants viewed Law and STEM as fields leading to high paying jobs. Focus group participants appeared unaware of career prospects for graduates with a degree in Economics. As it stands, students in this study had a surface level understanding of the salaries of graduates from different courses and their own potential earnings. Though there are some gaps and misconceptions, but it would not be fair to conclude that they were completely unaware of the situation in the graduate labour market. As discussed

later in this section, these students apply the principle of value for money to their HE choices, but their future salaries often are not part of their value for money calculations.

First-year students appear to have a fragmented and somewhat distorted understanding of the current student finance regime. Despite this, their attitudes towards the financial implications of taking out a student loan seem to challenge popular 'debt-as-deterrent' narratives. Echoing Evans and Donnelly (2018), first-year students in this research appeared to not be concerned about their student loan debt. They described student loan as different from other types of consumer debt, affordable and something that everyone has. Another important implication for HE policy is that a large number of first-year students accepted the idea that they will not repay their student loan debt in full. They thought they would face no consequences because their student loan debt will be written off. This is concerning given that under the current student finance regime, only one quarter of the current undergraduate students are expected to repay their student loan debt in full (Bolton, 2021).

Some first-year students reported feeling frustrated about their maintenance loans because these loans did not cover all their living expenses, and their parents had to 'pay out of their pockets'. Similar views were expressed by Y13 students who suggested that the student loan debt balance was a concern of the Treasury (Esson and Ertl, 2016). To echo the Augar Review recommendations, the language of the student finance system needs to be changed to instil a sense of responsibility in those who benefit significantly from participating in HE (Augar, 2019). Whilst policymakers might prefer a market-orientated model of HE, such systems can only operate effectively if the individual is both fully informed and able to act upon the product of their decision-making process. Findings from focus group discussions with first-year students demonstrate that young people are not fully informed about student finance and the way they perceive their student loan responsibilities is somewhat troubling. For the current student finance system to become sustainable, there should be some incentives for graduates to take responsibility for their student loan debt.

My findings suggest that A-level students form financial beliefs about the graduate labour market that disadvantage women. While there is some evidence that the UK is moving towards better gender equality in the workplace, the findings here suggest that A-level students have already formed the views that graduate women earn less than graduate men. When A-level students were asked to indicate how much they think they would be able to earn at age 30 relative to the average graduate who holds a similar degree, female students consistently

reported to believe that they will be earning less than the average graduate (see Figure 4.3). The only exception was a degree in Education where female students thought they would earn slightly more than the average graduate with a degree in Education. This pattern changes when salary expectations of those who wanted to study a given subject at degree level were compared with the expected average salaries: female A-level students thought that they would be paid slightly more than the average graduate apart from those who planned to study Engineering, History, Law or Physics or Chemistry at university (see Figure 4.3). It is important to tackle the pre-career gap in salary expectations where women expect to be paid less than equally qualified graduates. Importantly, the findings of this study demonstrate that the gender gap in salary expectations is systematic: female students expected that they will be paid less than the average graduate when they did not plan to study a given subject at degree level. Female students expected that they will be paid more than the average graduate but still less than male graduates when they were asked about their future salaries for the degree subject that they were interested in. Such beliefs might become self-fulfilling as the previous research shows that professional women tend to have lower salary expectations than their male colleagues and are more likely to have negative views on salary negotiation (Gray *et al.*, 2019).

Furthermore, prospective female students have inaccurate beliefs about the financial returns to a degree. Education enables women to improve their financial circumstances, with the gender pay gap being smaller for university graduates (O’Leary and Sloane, 2005). In the UK, women with degrees gain more financially from going to university than their male counterparts. At 30, the average pre-tax returns are 5% for men and 25% for women (Britton *et al.*, 2020). In this study, however, both male and female students predicted that obtaining a degree would increase their earnings by an average of 15% by the time they are 30. This portrayal of the graduate labour market disadvantages women even more: not only did female students in this study expect that they would earn less than others upon graduation, but they also believed that the difference going to university would make to their earnings is smaller than it actually is.

These findings are particularly troubling given that the surveyed students attended schools with higher than average levels of achievement and lower than average proportions of students from lower socio-economic backgrounds. Gender stereotyping presents a serious obstacle to women, but it was given a low priority in the context of HE quasi-market reforms. While the empirical evidence of gender differences in salary expectations of young people grows (Reuben, Wiswall and Zafar, 2015; Schweitzer *et al.*, 2014; Taylor, 2007), HE policy has been focused on other

aspects of gender equality such as gender disparities in access to HE and gender gaps across degree subjects. This issue of the pre-career gender expectations gap appears to be muted in HE policy. While some might argue that the pre-career salary expectations gap should be discussed within the context of school policy, career advice at university could also be seen as a chance to influence gender-based biased beliefs.

Finally, the observed perceptions of value for money matter to HE policy. When first-year students were asked to reflect on value for money in relation to their degree course, they tended to focus on their university experiences (the course content, contact hours, and university facilities). Students did not mention their future salaries in the context of value for money, even though some thought that their degree is essential for their future careers. Students mentioned tuition fees when they thought that their degree offers poor value for money. This seems to be somewhat incompatible with their relaxed attitude towards student loan debt. The research evidence here raises the question of whether prospective students determine value for money of their education as they are expected to do in the current consumer-centred policy narrative. The Green Paper *Fulfilling Our Potential: Teaching Excellence, Social Mobility and Student Choice* (Department for Business Innovation & Skills, 2015a) links value for money calculations to quality of HE provision and student employability. By some, the difference in interpretation may be viewed as an attempt on the students' part to reflect on their own HE choices by looking at factors that are important to them. This does not seem to be a good enough rationale for continuing to use the value for money notion in the context of HE participation when different stakeholders interpret this notion differently. A common understanding is necessary in order to foster an effective dialogue between policymakers, HE institutions and students.

7.5.2 Implications for research

There are several limitations of this study which should be noted considering the robustness of the results. The study sample, while diverse in subject choice and student backgrounds, represents first-year students attending one Russell Group university. Another limitation related to the sampling strategy. Only first-year students who were willing to volunteer their time, took part in the focus groups. I recognise that first-year students who choose not to participate in this study or were unaware of it might hold views that are different from those that were discussed in this thesis. Therefore, the typology of student orientations needs to be

checked for consistency through a replication study to ensure that no other student orientations has been overlooked.

This research illustrated that first-year students tended not to worry about the prospect of not repaying their student loan debt. Some academics and commentators have already called for the changes to the current student finance system. Specifically, they called for use of a different language around student finance that would encourage more responsible behaviours. It is important to research how the language should be changed. Some first-year students appeared to be unaware of the parental contributions that their parents are expected to make towards their living costs under the current student finance regime. Whether or not the maintenance loans arrangements are fair and how to facilitate more responsible handling of the living costs support are important topics to research.

Evidence on prospective students' expectations related to graduate earnings and graduate premium demonstrate that male students expect that they will be earning more than female students expected they will. Both male and female students expected similar returns to an undergraduate degree and male students were more confident in their predictions. Nevertheless, more female students than male students choose to study for a degree in the UK. The reasons behind this trend need to be understood.

7.6 Conclusion

In many ways, prospective students and first-year students have fragmented or distorted perceptions of the financial implications of studying for a degree. At the same time, students appeared to view their degree as a sensible option which would improve their career prospects. Overall, A-level students in the sixth form sample held optimistic views about the average graduate earnings and how much they are likely to earn if they decide to study for a degree. Male students had significantly higher earnings expectations than female students did. Both male and female students thought they will be paid at least 15% more than non-graduates at age 30, which means they expected a similar graduate premium. Male students tended to be more confident than their female peers about the size of the predicted graduate premium.

The majority of first-year students were clear about the difference between their student loans and any other consumer loan which was associated with feeling less responsible for the student loan debt. There seems to be no point in making recommendations about how tuition fees

should be adjusted if students did not appear to think they are responsible for paying off their student loan debt. The findings from this study highlighted the limitations of the language around student finance and how unhelpful it could be when students describe their perceptions of value for money. Offering information about student finance might have helped some students to overcome their fears associated with the financial side of going to university. Voices of those students were not part of the discussion in this study. Instead, students in this study expressed no concerns about not being able to repay student loan debt and they were happy to be able to fund their studies through the student finance system. Students have not become passive consumers as it was previously thought. Many of them appeared to have a more rounded view of their university experience and tended to 'wear the customer hat' only when things did not go as they expected.

Having to work with secondary data, I realised how important it is to record information about the research process as accurately as possible. There are still some unknowns about the sixth form dataset that I have worked with. Nevertheless, the uniqueness of the information outweighs the shortfalls that come with it. To address the research question about students' knowledge and beliefs around the student finance system, I considered gaining access to prospective students. As detailed above, that was not feasible. First-year students were contacted instead. Although there were some gatekeeping issues with the recruitment of these participants, the final stage of this study was completed within the target timeframe.

This project emerged from an interest in the student finance system that I never personally had access to as an international student. As an outsider, I always thought that the decision to study for a degree in the UK is much harder to make compared to choosing to go to university in a country where high ability students are not expected to pay tuition fees. The purpose of this study was to examine the financial beliefs of students in relation to their HE choices. The findings indicate that in some ways policymakers and commentators are right to be concerned about the lack of informed decision-making. Prospective students were found to be overoptimistic about their potential earnings and overestimate the average graduate salaries. Their financial expectations are even more optimistic when students were asked about the subject area that they were interested in. But this is not the complete story. Even though students' understanding of student finance is fragmented, many of them do not feel responsible for the student loan debt that comes with studying for a degree in England. These findings highlight a tension between the promotion of informed choice and the governments' desire to

keep students accountable for their HE choices. While it is early to say if graduates would actively avoid any responsibility for paying off their student loan debt, I hope that this thesis provides a useful insight into the HE decision-making in the current HE environment.

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APPENDICES

APPENDIX A: Sixth Form Questionnaire

Student ID	
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UNIVERSITY OF
BIRMINGHAM

SIXTH FORM QUESTIONNAIRE (A)

The School is participating in a project run by the University of Birmingham and funded by the Nuffield Foundation. This project is looking at students' knowledge of the implications of their subject choices in school and university. The results of the study will help the school in its planning to assist students in making well-informed choices. It will also help national policy in showing how particular kinds of information can help students to make 'well-informed' choices.

We ask for you to give your name so that can match your answers with answers to the National Pupil Database and previous questionnaires in this project. Once your answers are typed into a database we will remove your name from the record so that each person is identified by a number only. It will not be possible for anyone to identify you from you from this record or from any report by the project.

If you later wish to withdraw from the study you will need to notify the research team in writing c/o Lily Ilic, School of Education, University of Birmingham, Edgbaston, B15 2TT by 15th April 2014..

PLEASE TICK THE BOX YES OR NO TO EACH OF THESE QUESTIONS	YES	NO
I have read the information explaining about this questionnaire and I understand that it is part of a research project.		
I understand that my answers will be held confidentially and that I will not be identified any reports by the research team.		
I am willing for my answers to be used in the research project		
I am willing for my answers to these questions to be matched up with the information (such as my exam results) which is held on the National Pupil Database		
I am willing for my answers to these questions to be matched up to information on my university choices held by UCAS		

Student ID	
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1. PERSONAL DETAILS				
First Name				
Family Name				
Date of birth				
Gender (tick box)	Female		Male	

2. PLEASE TICK YES, NO OR DON'T KNOW FOR EACH QUESTION					
4a. Has your mother ever been to university?	Yes		No		Don't Know
4b. Has your father ever been to university?	Yes		No		Don't Know

3. WHAT GRADES DO YOU EXPECT TO GET FOR YOUR ADVANCED LEVEL SUBJECTS?		
Subject (enter name of subject)	Type of Course (e.g. 'A' Level/ BTEC etc.)	My Expected Grade

4. FOR EACH SUBJECT YOU HAVE STUDIED IN THE SIXTH FORM INDICATE WHETHER YOU AGREE WITH THE STATEMENTS (UP TO 5 SUBJECTS)
--

4A. SUBJECT NAME (in space to right)					
Statement	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
I have been as successful in this subject as I expected					
The teaching has suited me well					
This subject has prepared me well for the kind of course I intend to do at university					
This subject has been good for helping me to get into the type of university I want					
I would not have chosen this subject if I had known more when I was choosing my subjects					

Student ID	
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4B. SUBJECT NAME (in space to right)					
Statement	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
I have been as successful in this subject as I expected					
The teaching has suited me well					
This subject has prepared me well for the kind of course I intend to do at university					
This subject has been good for helping me to get into the type of university I want					
I would not have chosen this subject if I had known more when I was choosing my subjects					

4C. SUBJECT NAME (in space to right)					
Statement	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
I have been as successful in this subject as I expected					
The teaching has suited me well					
This subject has prepared me well for the kind of course I intend to do at university					
This subject has been good for helping me to get into the type of university I want					
I would not have chosen this subject if I had known more when I was choosing my subjects					

4D. SUBJECT NAME (in space to right)					
Statement	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
I have been as successful in this subject as I expected					
The teaching has suited me well					
This subject has prepared me well for the kind of course I intend to do at university					
This subject has been good for helping me to get into the type of university I want					
I would not have chosen this subject if I had known more when I was choosing my subjects					

Student ID	
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4E. SUBJECT NAME (in space to right)					
Statement	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
I have been as successful in this subject as I expected					
The teaching has suited me well					
This subject has prepared me well for the kind of course I intend to do at university					
This subject has been good for helping me to get into the type of university I want					
I would not have chosen this subject if I had known more when I was choosing my subjects					

5	A person has a debt of £10,000 and has to pay no interest on their debt. If inflation is 5% every year, in 5 years' time the real value of their debt will be	Tick the correct option
A	5 times as much	
B	Roughly 25% more	
C	Exactly the same	
D	Roughly 25% less	

6 Imagine you are given each of the following options (A or B) which would you choose?		
Option A	Option B	Write A or B to show your choice
£100 today	£125 in a year's time	
£55 in a year's time	£50 today	
£100 today	£105 in a year's time	
£103 in a year's time	£100 today	

Student ID	
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7.A) HOW MUCH DIFFERENCE DO YOU THINK GOING TO UNIVERSITY WOULD BE LIKELY TO MAKE TO <u>YOUR</u> ANNUAL EARNINGS BY THE TIME YOU ARE 30? (TICK 1 BOX)								
At least 20% less	15% less	10% less	5% less	No difference	5% more	10% more	15% more	At least 20% more

7. B) HOW CONFIDENT THAT YOUR EARNINGS PREDICTION IN 13(A) IS ACCURATE? (TICK 1 BOX)				
Very unsure	Not Confident	Quite Confident	Confident	Very Confident

8 THE AVERAGE UNIVERSITY GRADUATE EARNS ROUGHLY £30,000 BY THE TIME THEY ARE 30. USING THIS FIGURE AS A BENCHMARK, WHAT DIFFERENCE DO YOU THINK THE SUBJECT OF A DEGREE MAKES?

In the Table below put AV to show how much you think the average graduate in that subject earns. Put an H to show how much you think a graduate just in the top quarter of earners for that subject would earn and an L to show how much you think a graduate just in the bottom quarter of earners for that subject would earn.

In the last column put a figure to show how much you think you might earn if you studied for a degree in this subject.

	Thousands of pounds in salary at age 30												
	15	20	25	30	35	40	45	50	55	60	65		
Example Subject 1				L		AV		H				£35,000	
(An average graduate in Subject 2 would earn £40,000, with someone just in the top quarter earning £50,000 and someone just in the bottom quarter earning £30,000. I think I would earn £35,000)												How much I think <u>I</u> would earn	
	15	20	25	30	35	40	45	50	55	60	65		
Art													
Business Studies													
Education													
Engineering													
History													
Languages													
Law													
Politics or Sociology													
Maths and Computing													
Physics or Chemistry													
Medicine Related													

Student ID	
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9. WHICH OF THE FOLLOWING STATEMENTS MOST APPLIES TO YOU? (PUT A CROSS AGAINST ONE OPTION)	
Options	(X)
I definitely intend to study for a degree	
I will probably study for a degree but not straight away	
It is unlikely that I will study for a degree	
I will definitely will not study for a degree	

10 WHICH OF THE FOLLOWING STATEMENTS ABOUT REPAYING LOANS FOR STUDYING AT UNIVERSITY IS MOST TRUE FOR YOU? (PUT A CROSS AGAINST ONE OPTION)	
Options	(X)
If I went to university I would gradually pay off the full loan	
If I went to university I would pay off the full loan quite quickly so I do not that much interest	
If I went to university I would expect to only have to pay off about <i>a half</i> of the loan	
If I went to university I would expect to only have to pay off about three-quarters of the loan	

11 IF YOU HAVE APPLIED TO GO TO UNIVERSITY PLEASE LIST THE COURSES YOU APPLIED TO		
Course Title (enter name of subject)	Name of University or College	Please put a tick beside your most preferred option

Student ID	
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12 HAVE YOU CONSIDERED THE INFORMATION ON UNISTATS ABOUT THE SALARIES OF GRADUATES FROM DIFFERENT COURSES? (PUT A CROSS AGAINST THE OPTION THAT BEST APPLIES TO YOU)	
Options	(X)
I have looked at this information and it has affected my choice of course	
I have looked at this information but it has not affected my choice of course	
I did not think this information was worth looking at	
I was not aware of this information and would have looked at if I had known.	

13 HOW DID YOU USE THE UNISTATS INFORMATION? (PUT A CROSS AGAINST THE OPTION THAT BEST APPLIES TO YOU)	
Options	(X)
I used the UNISTATS information to compare salaries and employment of graduates studying different subjects	
I used the UNISTATS information to compare salaries and employment of graduates studying the same course at different universities and colleges	
I used the UNISTATS information but I DID NOT pay much attention to the information about salaries and employment	
I did not use the UNISTATS information	

14 HOW USEFUL IS THE UNISTATS INFORMATION ON GRADUATE SALARIES AND EMPLOYMENT? (PUT A CROSS AGAINST THE OPTION THAT BEST APPLIES TO YOU)	
Options	(X)
The UNISTATS information on salaries and employment is very trustworthy and shows differences between courses that matter to me	
The UNISTATS information is trustworthy but the differences between courses seemed too small to matter.	
The differences between courses in the UNISTATS information on salaries and employment could be due to luck or who was recruited on to the courses.	
The usefulness of this information does not matter to me	

15 HAVE YOU CONSIDERED THE INFORMATION ABOUT UNIVERSITY LOANS AND REPAYMENTS ON THE WEB SITE 'MONEY SAVING EXPERT'?	
Options	(X)
I have looked at this information and it has affected my choice of course	
I have looked at this information but it has not affected my choice of course	
I did not think this information was worth looking at	
I was not aware of this information and would have looked at if I had known.	

APPENDIX B: Consent Form

Version 4 15/07/2019

FINANCIAL LITERACY AND HIGHER EDUCATION CHOICES

Consent Form for Participants in Research Study

Please complete this form after you have read the Participant Information Sheet and/or listened to an explanation about the research. If you willing to participate in this study, circle or highlight the appropriate responses and sign the form at the end.

- | | | |
|---|-----|----|
| • I have read the information sheet related to the "Financial Literacy and Higher Education Choices" and understand the aims of the project. | YES | NO |
| • I agree to take part in the project. Taking part in the project will include participating in a focus group. I am aware of the types of topics to be discussed in the focus group. | YES | NO |
| • I agree to have the focus group recorded using a dictaphone, so it can be transcribed after the focus group is held. | YES | NO |
| • I understand that my taking part is voluntary. I can withdraw from the study at any point during the focus group. It is possible to withdraw from the study after the focus group, this must be done no later than 20 working days after the date of the focus group. | YES | NO |
| • I am fully aware that data collected will be anonymised and stored securely, safely and in accordance with Data Protection Act (2018). | YES | NO |
| • I am fully aware that I am not obliged to answer any question, but that I do so at my own free will. | YES | NO |
| • I understand that my words may be quoted in publications, reports, web pages and other research outputs but my name will not be used. | YES | NO |

_____ Name of Participant	_____ Participant's Signature	_____ Date
_____ Name of Researcher	_____ Researcher's Signature	_____ Date

If you would like to receive a summary of the findings, please leave your email below:

Contact Information

This research has been reviewed and approved by the Birmingham University Ethical Review Committee (ERN_16-0671A). If you have any further questions or concerns about this study, please contact:

Researcher: Kristina Gruzdeva

Email: [REDACTED]

Tel: [REDACTED]

You can also contact the researcher's supervisor:

Supervisor: Prof Carol Evans

Email: [REDACTED]

APPENDIX C: Participant Information Sheet

Version 3 27/06/2019

FINANCIAL LITERACY AND HIGHER EDUCATION CHOICES

Participant Information Sheet for Focus Group Participants

You are being invited to take part in a study conducted by Kristina Gruzdeva at the University of Birmingham. Before you decide to take part, it is important for you to understand why the research is being carried out and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish.

What is the purpose of the study?

This study examines students' understanding of, and attitudes towards, the financial implications of higher education choices and relationships between students' financial beliefs, knowledge of the student finance options and choices in the context of English higher education. It seeks to do so at a point when the debate of the value of university education is on the rise.

Why have you been invited for this study?

You are being invited to participate in this study because:

- You are aged 18 or over;
- You are a UK/EU national;
- You are studying for your first degree at university;

If you do not meet all of these criteria, please contact the researcher immediately.

What does the project involve?

A literature review draws together previous research on students' attitudes and approaches to decisions about studying at university.

Secondary data analysis explores A-level students' beliefs about the financial consequences of studying for a degree, with a particular focus on students' graduate salary expectations and confidence in those expectations.

Primary research will be completed in June 2019 (during the Birmingham Project) and in October 2019 (during the Undergraduate Welcome Week). It will involve focus groups with current first year undergraduate students. The focus group will last for approximately one hour. The discussions will concern such matters as your higher education choice, your financial arrangements, and the way in which you think about the financial implications of university education.

What are the benefits of taking part?

Your views hold significant weight within the context of this study, the purpose of which is to explore how students make sense of the financial implications of their higher education choices.

What are the risks and disadvantages of taking part?

It is not envisaged that you will be exposed to any risk by participating in this study.

What will happen with the information you provide to the study?

Please be aware that the focus group will be audio recorded using a dictaphone, so it can be transcribed after the focus group is held.

This Participant Information Sheet is accompanied by a consent form and pre-focus group questionnaire. After returning the questionnaire, you will be assigned a pseudonym. When you participate in the focus group, you will be given a badge with this pseudonym on it. All notes produced by the researcher will refer to your pseudonym and your name will not be mentioned in any records from the focus group.

The discussions held during the focus group are confidential and will be anonymised in any written outputs of the study. As a participant, please ensure that you keep the identity and contributions of fellow participants confidential.

Information you provide to the study will be held confidentially and securely for a period of 10 years.

Are you free to withdraw from the study?

You may withdraw either verbally during the focus group itself, or afterwards by contacting the researcher.

If you wish to withdraw from the study after the focus group, please confirm this by emailing Prof Carol Evans [redacted] or Kristina Gruzdeva [redacted]. Within your correspondence you will need to provide your pseudonym to enable me to identify and permanently delete your pre-focus group questionnaire and to remove any information you shared as part of the focus groups from my records. I will not be able to identify your information without this pseudonym.

If you wish to withdraw from the study after the focus group, this must be done no later than 20 working days after the date of the focus group.

Do you need money advice and support?

There are a number of services in the University that offer financial support and advice, from debt management to paying your tuition and accommodation fees.

If your financial situation interfere with your academic work, please contact your [Welfare Tutors/ Wellbeing Officers](#).

[Funding, Graduation & Awards](#) provides information and advice about financial support available for students.

- Telephone: 0121 414 7391 (Please note that hours are from 09:00 until 17:00).
- Email: fga@contacts.bham.ac.uk

[Guild Advice](#) offers free, impartial and confidential information, advice and representation on a full range of student issues including finance.

- Telephone: +44 (0)121 251 2400
- Email: guildadvice@guild.bham.ac.uk

[LIVING](#) offers safe and informal student accommodation to suit your budget. LIVING will clarify any points regarding your University accommodation contract.

- Telephone: +44 (0)121 414 8000
- Email: living@contacts.bham.ac.uk

You can also seek advice from external organisations.

Student Finance England

- Website: www.gov.uk/student-finance
- Telephone: +44 (0)300 100 0607

The Money Advice Service

- Website: www.moneyadviceservice.org.uk
- Telephone: +44 (0)333 321 3434
- Email: enquiries@moneyadviceservice.org.uk

NASMA - National Association of Student Money Advisors (student section)

- Website: www.nasma.org.uk/students

Bank accounts survey by Save the Student

- Website: [Save the Student](#) - Bank accounts survey

APPENDIX D: Pre-focus Group Questionnaire

Version 3 5/7/19

FINANCIAL LITERACY AND HIGHER EDUCATION CHOICES

Individual Questionnaire

Name	
Course title:	
School:	
College:	College of Social Sciences
Demographic Data:	
Gender Identity	
Nationality	
Ethnicity	
What is your age?	☐ Under 18 ☐ 18-21 ☐ 22-25 ☐ 26-29 ☐ 30+
Parental Background:	
Has your mother ever been to university?	☐ Yes ☐ No ☐ Prefer not to say ☐ Don't know
Has your father ever been to university?	☐ Yes ☐ No ☐ Prefer not to say ☐ Don't know
What is your mother currently doing?	☐ Working full-time ☐ Working part-time ☐ Not working, but looking for job ☐ Other (e.g. home duties, retired)
What is your father currently doing?	☐ Working full-time ☐ Working part-time

	☐ Not working, but looking for job ☐ Other (e.g. home duties, retired)
What is your mother's main job? (e.g. school teacher, nurse, sales manager) <i>If she is not working now, please tell us her last main job</i>	
What is your father's main job? (e.g. school teacher, nurse, sales manager) <i>If he is not working now, please tell us her last main job</i>	
Financing your degree	
Have you taken a loan from Student Finance England to cover your Tuition Fees?	☐ Yes ☐ No ☐ Prefer not to say ☐ Don't know
Have you taken a loan from Student Finance England to cover your living costs?	☐ Yes ☐ No ☐ Prefer not to say ☐ Don't know
Have you received a grant from Student Finance England to cover your living costs?	☐ Yes ☐ No ☐ Prefer not to say ☐ Don't know
Financial consequences of studying for a degree	
What sort of salary do you expect to be earning in the first job you take once you have graduated? <i>For example, £ 20,000.</i>	
What sort of salary do you expect to be earning by the time you are 30? <i>For example, £ 20,000.</i>	

APPENDIX E: Focus group discussion schedule

Version 4 04/07/2019

FINANCIAL LITERACY AND HIGHER EDUCATION CHOICES

Focus Group Schedule

Introduction

1. Provide information sheets and consent forms to the study volunteers.
2. Collect the consent forms and give badges with pseudonyms to individuals who choose to participate in the study
3. Give the pre-focus group questionnaire to the participants.
4. Summarise the key points of the Participant Information Sheet, including the purpose of the study, how the participants' contributions will be used and how the participants' anonymity and confidentiality will be safeguarded.
5. Remind the participants that their participation is voluntary, and they have the right to withdraw from the study.

Main Part

Student decision-making

1. What factors influenced your choice of study?

Possible prompt questions:

Why Birmingham? How did you weigh things up? Did you consider things like the price of travelling to and from university? The prices of rent in Birmingham or nearby?

2. Can you give us an idea of the range of information sources you accessed when exploring your university options?
3. How much consideration did you give to information about graduate salaries and graduate employment?

Possible prompt question:

Do you recall any particular sources that you found particularly helpful?

Have you for information about graduates who studies the course you are on now?

4. I can pay for my education, someone else could pay for me or I could pay through tax. But someone has to pay because educating people takes a lot of resources. To what extend did you consider the cost of studying for a degree?

Student choice

5. There is lot of discussion in the media about the value for money in higher education, but how much thought did you give to the financial consequences of studying for your degree?
6. When deciding which degree subject to study, to what extend do you think your choice based on how much you think you will earn?
7. To what extend do you think you chose to study at the University of Birmingham based on the reputation of the university?

Employability

8. What are your aspirations for professional life?

9. How much do you think your degree would help you to achieve your career goals?
10. Do you think you will earn more through studying for a degree?
11. What skill sets do you think you need that will make a difference to your earning potential?
12. What difference do you think your degree will have made to your life in 10 years' time – compared to if you had not studied for a degree?

Activity with graphs

This activity is designed to draw participant's attention to the average differences in earnings of graduates with different degrees. First ask the participants to estimate salaries of graduates with different degrees, then show them data and discuss it with them

1. What do you make of this graph?
2. Is there anything that caught your attention?
3. Is there anything that needs clarification?
4. How does this information relate to your expectations for your graduate prospects?

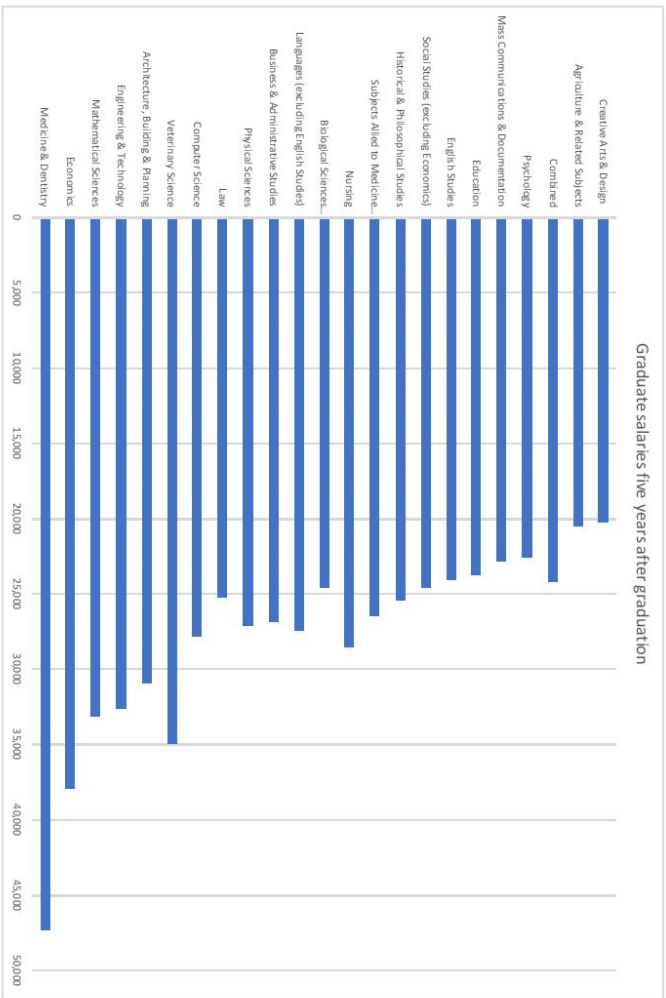
Closing Remarks

Thank participants for taking the time to contribute to the focus group discussion.
Ask if the participants have any questions.

APPENDIX F: Activity-based discussion

Subject	Five years after graduation
Medicine & Dentistry	
Economics	
Mathematical Sciences	
Engineering & Technology	
Architecture, Building & Planning	
Veterinary Science	
Computer Science	
Law	
Physical Sciences	
Business & Administrative Studies	
Languages (excluding English Studies)	
Biological Sciences (excluding Psychology)	
Nursing	
Subjects Allied to Medicine (excluding Nursing)	
Historical & Philosophical Studies	
Social Studies (excluding Economics)	
English Studies	
Education	
Mass Communications & Documentation	
Psychology	
Combined	
Agriculture & Related Subjects	
Creative Arts & Design	

Subject	Five years after graduation
Medicine & Dentistry	47,300
Economics	37,900
Mathematical Sciences	33,100
Engineering & Technology	32,600
Architecture, Building & Planning	30,900
Veterinary Science	34,900
Computer Science	27,800
Law	25,200
Physical Sciences	27,100
Business & Administrative Studies	26,800
Languages (excluding English Studies)	27,400
Biological Sciences (excluding Psychology)	24,500
Nursing	28,500
Subjects Allied to Medicine (excluding Nursing)	26,400
Historical & Philosophical Studies	25,400
Social Studies (excluding Economics)	24,500
English Studies	24,000
Education	23,700
Mass Communications & Documentation	22,800
Psychology	22,600
Combined	24,200
Agriculture & Related Subjects	20,500
Creative Arts & Design	20,200



APPENDIX G: Mapping from the LFS to Sixth Form Subject Areas

UK LFS	Sixth Form Questionnaire
Creative Arts and Design	Art
Business and Administrative Studies	Business Studies
Education	Education
Engineering	Engineering
Historical and Philosophical Studies	History
Linguistics, Classics and related subjects; European Languages, Literature and related subjects; Eastern, Asiatic, African, American and Australasian Languages, Literature	Languages
Law	Law
Social studies	Politics or Sociology
Mathematical and Computer Sciences	Maths and Computing
Physical Sciences	Physics or Chemistry
Medicine and Dentistry; Subjects allied to Medicine	Medicine related
Biological Sciences	-
Veterinary Sciences, Agriculture and related subjects	-
Technologies	-
Architecture, Building and Planning	-
Mass Communications and Documentation	-
Combined	-

APPENDIX H: Percentage of Missing Data for Key Items in the Sixth Form Questionnaire (N=1,574)

	Missing (%)
Date of birth	1.21
Male	0
Graduate mother	Not available
Graduate father	Not available
A-level expected grade Subject 1	Expected grade 4.26
	Feel successful 1.4
	Teaching suited well 1.27
	Good match with course 1.59
	Good match with university 1.72
	Regrets choice 1.27
A-level expected grade Subject 2	Expected grade 1.84
	Feel successful 0.57
	Teaching suited well 0.57
	Good match with course 0.95
	Good match with university 1.02
	Regrets choice 0.7
A-level expected grade Subject 3	Expected grade 3.18
	Feel successful 1.78
	Teaching suited well 1.78
	Good match with course 2.29
	Good match with university 2.41
	Regrets choice 2.35
Debt value calculated	3.3
Money today/in a year time	3.37
Graduate premium	1.72
Confident in graduate premium	6.29
Study for a degree	0.89
Repay student loan	3.49
First choice course	11.56
First choice university	11.82
Unistats	Read about salaries 3.94
	Compared salaries 4.64
	Useful 7.75
Money saving expert	Read about student finance 5.27
Expected average salaries	Art 12.77

	Business Studies	12.64
	Education	12.77
	Engineering	12.83
	History	13.47
	Languages	13.66
	Law	14.04
	Politics or Sociology	14.1
	Maths and Computing	13.47
	Physics or Chemistry	13.72
	Medicine related	13.85
Expected students' own salaries	Art	37.93
	Business Studies	30.43
	Education	30.88
	Engineering	32.21
	History	33.04
	Languages	34.63
	Law	32.08
	Politics or Sociology	32.53
	Maths and Computing	32.47
	Physics or Chemistry	33.42
	Medicine related	33.55

APPENDIX I: Characteristics of students participating in the focus group

	N	%
Gender		
Male	10	20%
Female	35	76%
Non-binary	2	4%
Nationality		
UK	46	90%
EU	5	10%
Ethnicity		
White	23	45%
Asian	18	35%
Black	7	14%
Mixed	3	6%
College		
Arts and Law	11	21%
Social Sciences	9	18%
Engineering and Physical Sciences	11	21%
Life and Environmental Sciences	10	20%
Medical and Dental Sciences	10	20%
Mother is graduate		
Yes	30	59%
No	21	41%
Father is graduate		
Yes	31	61%
No	19	37%
Don't know	1	2%
Mother's employment status		
works full time	25	49%
works part time	7	14%
not working, looking for job	1	2%
other (e.g. home duties, retired)	18	35%
Father's employment status		
works full time	45	88%
works part time	2	4%
not working, looking for job	0	0%
other (e.g. home duties, retired)	4	8%
Tuition fee loan		

Yes	43	84%
No	8	16%
Maintenance loan		
Yes	31	61%
No	17	33%
Don't know	3	6%

APPENDIX J: Reporting statistical significance for regression models from Chapters 4 and 5.

Table 4.2 Regressions of Log average expected salaries against A-level student characteristics (forward stepwise selection)

	Model 1	Model 2	Model 3
Calculated real value of debt	-765.75*** (-3.41)	-733.52** (-3.27)	-604.20** (-2.60)
Read about student finance		714.94** (3.14)	702.37** (3.09)
Male			-467.86* (-2.11)
Constant	35967.86*** (277.14)	35731.36*** (238.66)	35965.66*** (192.94)
R^2	0.007	0.014	0.016
Increase in R^2	0.007	0.006	0.003
$N=1,574$			

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4.3. Regressions of Log average expected salaries against A-level student characteristics (manual selection)

	Model 1	Model 2	Model 3
Male	-646.19** (-3.00)	-485.88* (-2.18)	-467.86* (-2.11)
Calculated real value of debt		-630.86** (-2.71)	-604.20** (-2.60)
Read about student finance			702.37** (3.09)
Constant	36090.14*** (219.39)	36206.86*** (213.32)	35965.66*** (192.94)
R^2	0.006	0.010	0.016
Increase in R^2	0.006	0.005	0.006
$N=1574$			

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4.4 Regressions of Log A-level students' expected salaries against their characteristics (forward stepwise selection)

	Model 1	Model 2	Model 3
Confident in graduate premium	3028.05*** (7.15)	2697.05*** (6.32)	2525.08*** (5.85)
Predicted A-level grades		399.94*** (4.67)	364.86*** (4.20)
Male			964.96* (2.42)
Constant	34049.80*** (149.41)	27123.08*** (18.07)	27224.90*** (18.16)
R^2	0.032	0.045	0.048
Increase in R^2	0.032	0.013	0.004
$N=1,574$			

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4.5 Regressions of Log A-level students' expected salaries against their characteristics (manual selection)

	Model 1	Model 2	Model 3
Male	1734.81*** (4.41)	1350.20*** (3.39)	964.96* (2.42)
Predicted A-level grades		432.87*** (4.98)	364.86*** (4.20)
Confident in graduate premium			2525.08*** (5.85)
Constant	33913.05*** (112.70)	26536.99*** (17.57)	27224.90*** (18.16)
R^2	0.012	0.028	0.048
Increase in R^2	0.012	0.015	0.021
$N=1,574$			

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.5 Logit regressions predicting likelihood of expecting a graduate premium of at least 20% (forward stepwise selection)

	Model 1	Model 2	Model 3	Model 4	Model 5
Confident in graduate premium	1.640*** (13.54)	1.545*** (12.50)	1.531*** (12.31)	1.517*** (12.14)	1.521*** (12.14)
Predicted A-level grades		0.199*** (7.63)	0.187*** (7.07)	0.172*** (6.41)	0.134*** (4.44)
Repay student loans in full			-0.852*** (-4.33)	-0.830*** (-4.22)	-0.798*** (-4.03)
Calculated real value of debt				0.385** (3.22)	0.355** (2.94)
Applying to Russell Group					0.377** (2.80)
Constant	-0.773*** (-12.02)	-4.266*** (-9.13)	-3.948*** (-8.34)	-3.814*** (-8.02)	-3.374*** (-6.74)
pseudo R^2	0.094	0.122	0.132	0.137	0.140
Increase in pseudo R^2	0.094	0.028	0.01	0.005	0.003
$N=1574$					

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.6 Logit regressions predicting likelihood of expecting a graduate premium of at least 20% (manual selection)

	Model 1	Model 2	Model 3	Model 4	Model 5
Predicted A-level grades	0.232*** (9.27)	0.185*** (6.57)	0.152*** (5.13)	0.144*** (4.82)	0.134*** (4.44)
Applying to Russell Group		0.439*** (3.52)	0.451*** (3.40)	0.412** (3.08)	0.377** (2.80)
Confident in graduate premium			1.548*** (12.47)	1.535*** (12.29)	1.521*** (12.14)
Repay student loans in full				-0.815*** (-4.12)	-0.798*** (-4.03)
Calculated real value of debt					0.355** (2.94)
Constant	-4.383*** (-9.79)	-3.845*** (-8.12)	-3.714*** (-7.51)	-3.459*** (-6.92)	-3.374*** (-6.74)
pseudo R^2	0.044	0.050	0.128	0.136	0.140
Increase in pseudo R^2	0.044	0.006	0.078	0.008	0.004
$N=1574$					

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.7 Logit regressions predicting likelihood of being 'confident' or 'very confident' in the predicted graduate premium (forward stepwise selection)

	Model 1	Model 2	Model 3
Expected premium of 20%	1.640*** (13.54)	1.562*** (12.75)	1.496*** (11.98)
Male		0.742*** (5.77)	0.685*** (5.25)
Predicted A-level grades			0.075** (2.60)
Constant	-1.735*** (-18.58)	-2.165*** (-17.28)	-3.428*** (-6.78)
pseudo R^2	0.106	0.124	0.128
Increase in pseudo R^2	0.106	0.018	0.004
$N=1574$			

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.8. Logit regressions predicting likelihood of being 'confident' or 'very confident' in the predicted graduate premium (manual selection)

	Model 1	Model 2	Model 3
Male	0.910*** (7.49)	0.800*** (6.46)	0.685*** (5.25)
Predicted A-level grades		0.143*** (5.27)	0.075** (2.60)
Expected premium of 20%			1.496*** (11.98)
Constant	-1.473*** (-14.67)	-3.946*** (-8.13)	-3.428*** (-6.78)
pseudo R^2	0.032	0.047	0.128
Increase in pseudo R^2	0.032	0.015	0.081
$N=1574$			

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

APPENDIX K: Developing Thematic Map

Figure 1. Initial thematic map, showing 18 main themes

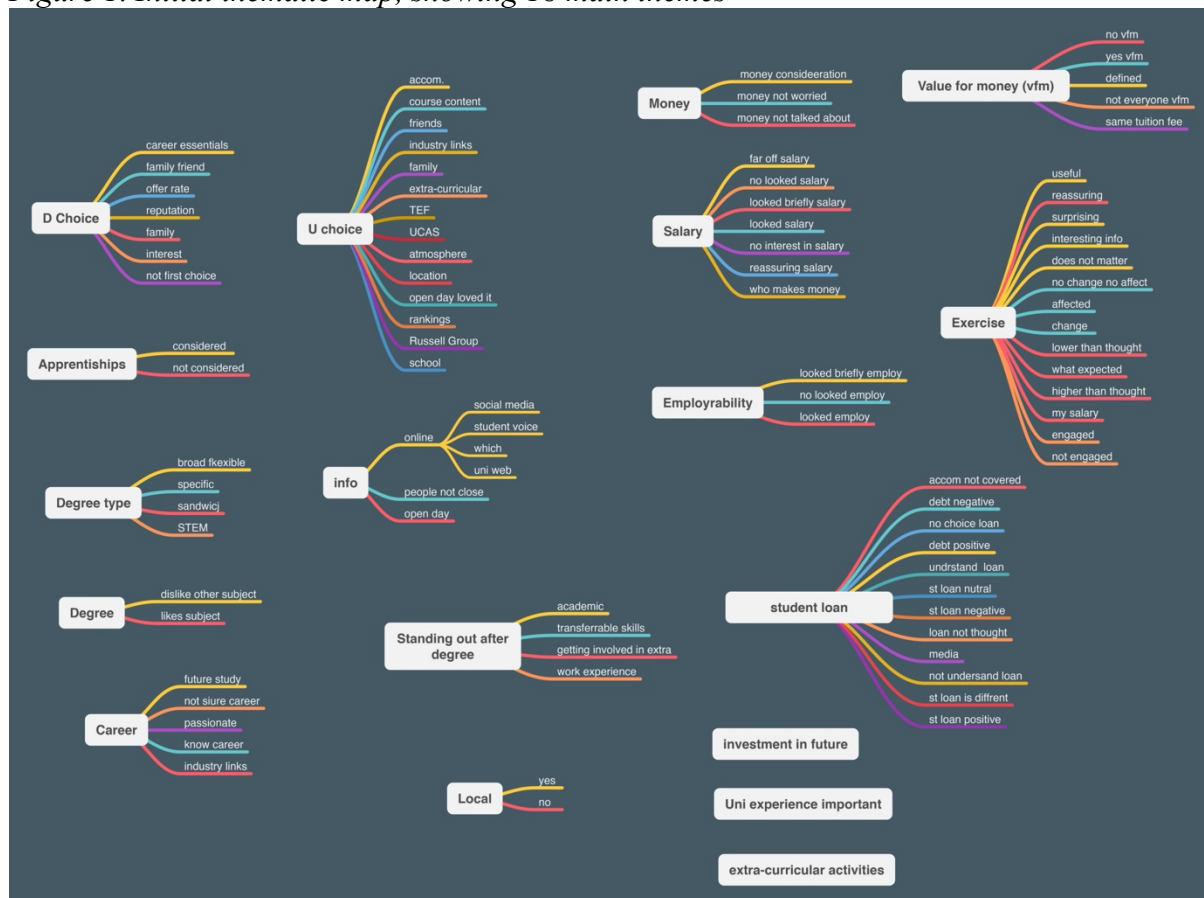


Figure 2. Developed thematic map, showing 6 main themes

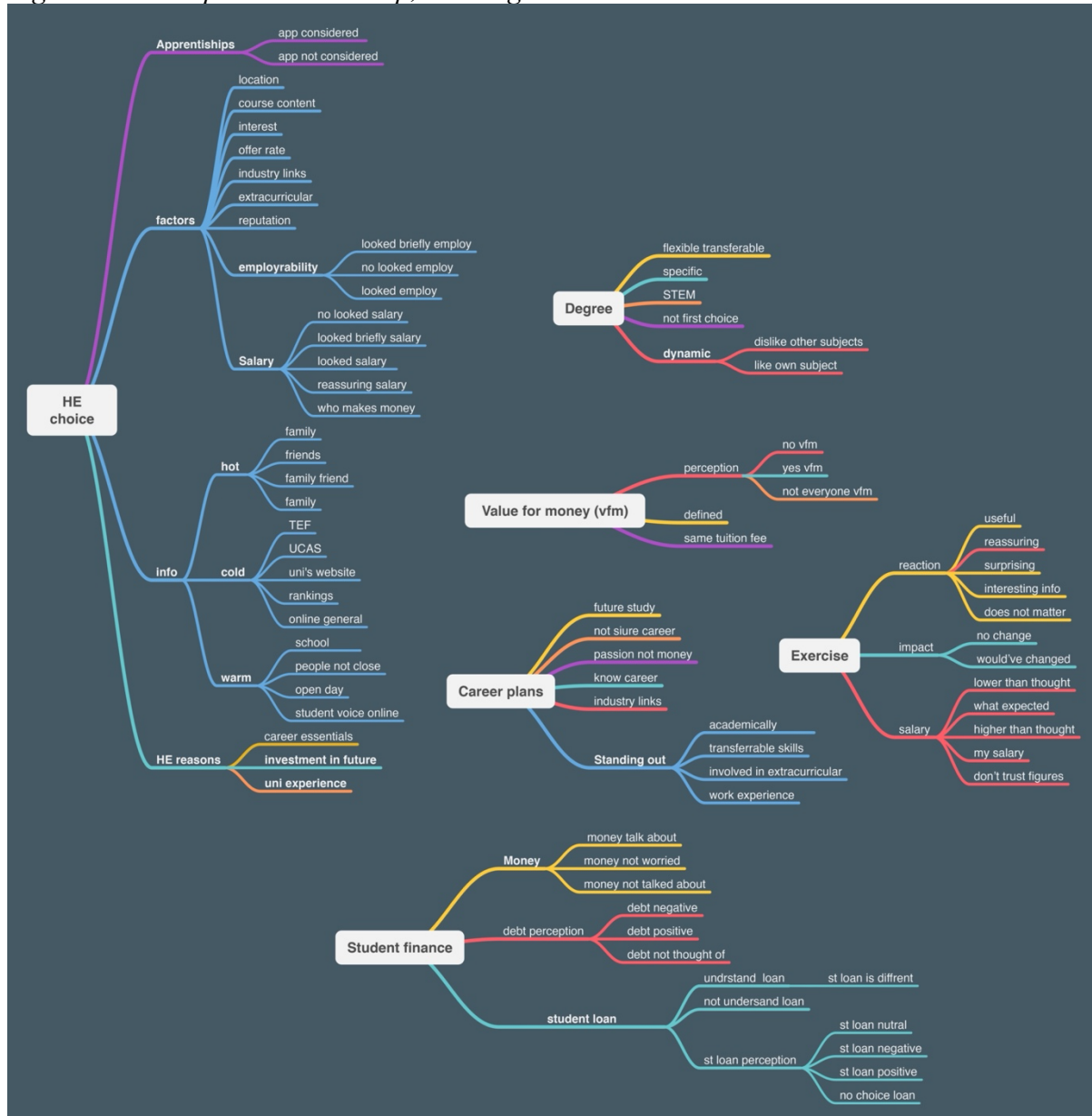


Figure 3. Final thematic map, showing 5 main themes

